

A COMPARATIVE ANALYSIS OF OUTCOME WITH  
VARIOUS PSYCHOTHERAPEUTIC METHODS

Thesis submitted in requirement for  
the degree of Doctor of Philosophy,  
University of Cape Town, April 1977.

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DECLARATION

I hereby declare that this thesis submitted in requirement for the degree Doctor of Philosophy to the Department of Psychology, University of Cape Town, is my own work and that it has not been incorporated in any thesis submitted for any degree to this or any other University.

.....  
D.A.F. SHAMLEY

April 1977.

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PREFACE

The University of Cape Town Child Guidance Clinic had never evaluated its efficacy as a community service nor its efficacy as a training ground for trainee clinical psychologists. Furthermore, client satisfaction with services offered had not been assessed. Hence this study was undertaken.

The unique features of this study are: two types of control groups are used, a non-referred, untreated group of children and a referred untreated group of children and not the problematic defectors extensively used. Inexperienced clinical psychology trainees and experienced registered clinical psychologists conducted therapy for the two experimental groups. A survey of the literature shows that when institutions survey their efficacy the majority of studies are ex post facto. Moreover, when child guidance clinics undertake either ex post facto or prospective investigations, professionals from varying disciplines and training backgrounds are included in the survey thereby confusing the controversial issue of efficacy even further. Therefore, it was thought only to assess the efficacy of psychologists.

Finally, the study gives a clear detailed description of the pitfalls of prospective research in a child guidance setting. Details are given of how research strategies had to be altered to take into account the various resistances and difficulties encountered.



A COMPARATIVE ANALYSIS OF OUTCOME WITH  
VARIOUS PSYCHOTHERAPEUTIC METHODS

The study consisted of: a school control, Control Group I; a waiting list control, Control Group II; a treated Experimental Group I, therapy conducted by inexperienced therapists; a treated Experimental Group II, therapy conducted by experienced therapists. Four types of treatment were carried out for the experimental groups.

Pre- to post-testing was carried out on Control Groups I and II and Experimental Group I on a diagnostic battery.

Follow-ups I and II were undertaken for Experimental Groups I and II. Therapists' attitudes were assessed for Experimental Group I.

Experimental Group I did not show a significantly greater improvement than Control Group I at the post-test stage.

At the Follow-ups I and II stages no single form of therapy emerged as superior.

The improvement of Experimental Group II was significantly lower at Follow-up I than the rates of Levitt's (1963) study, and the defector studies of Witmer and Keller (1942) and Lehrman (1949) but were significantly higher at Follow-up II.

INTRODUCTION

A quarter of a century ago Eysenck (1952) stated that psychotherapy was ineffective. The findings of this evaluative study sparked off an outcome controversy that has still not been abandoned.

As far back as the middle ages Paracelsus cited by Hall (1975) pinpointed the nature of the inefficacy of physicians. His observations might equally have applied to psychotherapy. Treatment of diseases was taking place without the understanding of the origins of the disease. Under those circumstances the most popular physicians were the ones who did the least harm, reminiscent of the helpful harmful hypothesis to be postulated by Truax (1968). Other physicians did serious harm which prevented their patients from recovery and which had drastic consequences for their patients.

A quarter of a century ago Eysenck (1952) claimed that two-thirds of all adult neurotics who undergo psychotherapy improve substantially within two years; furthermore, two-thirds of neurotics who never undergo psychotherapy improve substantially within a two year period, Landis (1937) and Denker (1947).

Truax and Carkhuff (1967) reviewed 19 controlled studies and came to a similar conclusion as Eysenck but their explanations differed. Eysenck seemed to suggest the improvement potential of the patient is more or less normally distributed. Truax and Carkhuff, on the other hand, suggested that the therapeutic ability of the therapist is roughly normally distributed.

Meltzhoff and Kornreich (1970) reviewed 101 controlled studies and could not convincingly conclude in favour of the null hypothesis.

Bergin (1971) emphasizes many points with regard to the evaluation of psychotherapy research: diverse criteria used for defining success; Eysenck's actuarial errors in his review; spontaneous remission might only be half of Eysenck's quoted two-thirds; more rigorously designed studies had more positive outcome; experienced therapists accounted for 71% of the negative studies; and this deterioration effect noted by Paracelsus in the middle ages is brought to light by Bergin (1971) that psychotherapy may make some patients worse.

Levitt's (1957) review caused him to throw down the gauntlet in the domain of child psychotherapy stating

"It now appears that Eysenck's conclusion concerning the data for adult psychotherapy is applicable to children as well" (p.193).

For control data, Levitt (1957) used the results of Witmer and Keller (1942) and those of Lehrman (1949). These two defector studies yielded a 72,5% improvement rate.

Levitt's (1963) survey of 22 evaluative studies using the above two studies again for control data leads him to conclude once more that psychotherapy is ineffective.

Levitt's (1959) evaluation of cases treated at a child guidance clinic using the clinic's defector population as a control similarly led to the conclusion that there was no significant difference on the outcome variables of the experimental and control groups.

The use of a defector as a control has been criticized by Hood-Williams (1960), Heinicke and Goldman (1960), Eisenberg and Gruenberg (1961) and Meltzhoff and Kornreich (1970) chiefly on the grounds of: differences in intensity of disturbance; differences in maturation for help/change; personality differences that lead a person to accept, the other to reject treatment.

Shepherd, Oppenheim and Mitchell (1966) undertook a controlled study of children between the ages of 5 to 15 years matched for presenting symptoms, severity, age and sex. They found that 65% of the experimental, treated group were rated as improved and 61% of the untreated control.

These results are once more similar to those of Levitt's, cited. Despite the fact that this was a prospective controlled study, the authors do not state: the type of treatment or the quality. The two year follow-up, Rutter (1970) feels is too long to assess disorders that have high remission rates.

Efficacy research is also complicated by the following general issues: difficulties in defining psychotherapy, the divergent opinions concerning the process(es) and goals of psychotherapy.

Furthermore, the field of child psychotherapy is fraught with further difficulties: children do not seek help of their own accord, help is sought on behalf of the child, this in turn affects motivation; the child is a growing organism.

AIMS AND HYPOTHESES

The general aim of the present study was to investigate factors attributing to the efficacy of different therapeutic techniques and more specifically to assess the efficacy of treatment in a child guidance clinic setting.

The Principal Hypotheses, based on pre- to post-test change score results, were:

Experimental Group I will improve significantly more than the two control groups;

Control Group II will improve significantly more than Control Group I;

Control Group II and Experimental Group I will improve significantly more than Control Group I.

Subsidiary Hypotheses, based on pre- to post-test change score results, were that there will be a significant difference on the factors:

Child Scales A(2) and B(2) designations, the Parent and Child Interviews and the four treatment groups, i.e. broad spectrum psychotherapy, broad spectrum behaviour therapy, short-term therapy and parental therapy, for Experimental Group I.

Child Scales A(2) and B(2) designations for parental therapy, Experimental Group I against Control Group I, Control Group II, and short-term therapy, broad spectrum behaviour therapy and broad spectrum psychotherapy in Experimental Group I.

Male and female subjects for Control Group I, Control Group II and Experimental Group I, respectively and combined.

Age groups 96-114 months and 115-144 months and the six social classes for Control Group I, Control Group II and Experimental Group I combined.

Hypotheses based on the results of Follow-ups I and II were:

Experimental Groups I and II respectively will improve significantly more at Follow-up II than at Follow-up I;

the greater the severity, the greater the improvement at Follow-up I and at Follow-up II respectively;

that there will be a significant relationship between client satisfaction and the degree of improvement;

male and/or female patients seen by male therapists will improve significantly more than male and/or female patients seen by female therapists;

younger patients, 96-114 months, will improve significantly more than older patients, 115-144 months, at Follow-ups I and II;

higher social class patients will improve significantly more than lower social class patients.

There will be a significant difference in the outcome:

between broad spectrum psychotherapy, broad spectrum behaviour therapy, parental therapy and short-term therapy for Experimental Groups I and II respectively;

of parental therapy versus short-term therapy, broad spectrum behaviour therapy and broad spectrum psychotherapy for Experimental Groups I and II respectively.

Hypotheses based on therapists' attitudes were:

therapists' attitudes will show interdependence.

Hypotheses based on therapists' attitudes and their relationship to Follow-ups I and II were that those patients whose therapists

- . experienced initial ease in dealing with their cases;
- . regarded the type of treatment the case had been assigned to be appropriate;
- . found it easy to work within the rigours of the research programme;
- . regarded the allocation of cases to a specific treatment programme to be morally justified;
- . preferred mode of treatment was the same as that which the case had been allocated;
- . regarded research in psychotherapy to be necessary;

will improve, feel satisfied with services received and attribute the improvement to the Clinic more than those patients whose therapists held opposing attitudes.

felt hostile to the treatment programme and as a result had difficulty in keeping the different therapy groups separate, will deteriorate, feel dissatisfied with the Clinic and attribute the deterioration to the Clinic significantly more than those patients whose therapists did not feel hostile.

METHOD

Subjects

The Ss were all white children between the ages of 8-11 years. Two hundred and forty-eight subjects were included in the study; 124 boys and 124 girls.

The following exclusion criteria was applied to both experimental and control groups: intellectually subnormal Ss; emergency referrals; diagnostic referrals; subjects showing hard neurological signs of C.N.S. dysfunction.

Groups

Control Group I (N 126), a non-referred, untreated control group in the community. This group was assessed and reassessed three months later.

Control Group II (N 6), a referred, untreated control group kept on the waiting list, after the initial psychometric assessment had been made and then reassessed three months later.

Each of the four therapy groups to be described for Experimental Group I had been planned as four separate experimental groups, but hostility mounted against the research project and viable numbers for each group were not met; in addition trainees had difficulty in keeping the different therapy groups separate, hence the four therapy groups were combined into one experimental group. Furthermore, it was felt that parental therapy was sufficiently distinctive to make a comparison with the other three therapy groups to be described in Experimental Group I.

Experimental Group I (N 64), a referred, treated group, therapy carried out by inexperienced therapists. This group was assessed and reassessed three months later. Six and nine months post initial assessment Follow-ups I and II respectively were carried out.

Broad spectrum psychotherapy: the usual eclectic psychotherapy (Phillips and Wiener, 1966) used with some variation at the majority of child guidance clinics. The number of Ss was 21.

Broad spectrum behaviour therapy: subjects are treated and managed according to behaviour therapy principles with emphasis on a broad spectrum approach (Lazarus, 1971). The number of Ss was 7.

Parental therapy: the children were assessed and only the parents were seen and guided to act as non-professional therapists to their children (Schofield, 1964; Truax, 1968). The number of Ss was 14.

Short-term therapy: after the initial diagnostic interviews and assessments, therapy and handling were restricted to five sessions, spread over a period of no longer than six weeks. The number of Ss was 22.

Experimental Group II (N 34), therapy conducted by experienced therapists. It was considered erroneous not to include experienced therapists in our assessment of efficacy, so Experimental Group II was set up consisting again of the four types of therapy described for Experimental Group I. Owing to the experienced therapists' hostility and resistance to research, no pre- to post-testing took place, nor were therapists attitudes evaluated. Only Follow-ups I and II procedures were used.

OUTLINE ASSESSMENT INSTRUMENTS, PROCEDURES FOR BASELINE ASSESSMENT, AND REASSESSMENT

Intellectual Assessment:

At Clinic: The Otis Quick Scoring Mental Ability Test:  
Alpha Form A, Beta Form A (Otis, S. 1937, 1965, 1936, 1969).

Personality Assessment:

At Clinic: The Junior Eysenck Personality Inventory (Eysenck, S.B.G., 1965).  
The California Test of Personality, 1953 Revision.

At Clinic: Primary Form BB, Elementary Form AA. (Thorpe, L.P., Clarke, W.W. and Tieggs, E.W., 1953).

Scholastic Assessment:

At Clinic: The Holborn Reading Inventory (Watts, A.F., 1944).  
Arithmetic: Test No.5 Miscellaneous Combinations (Schonell, F.J. and Schonell, E.F., 1960).

Cerebral Dysfunction:

At Clinic: The Benton Visual Retention Test, Revised Edition (Benton, A.L., 1963).

Instruments of Indirect Personality Assessment:

At Home: Maryland Parental Attitude Survey (Pumroy, D.K., 1966).  
Child Scale A(2). (Rutter, M., 1970, 1972).

At School: Child Scale B(2). (Rutter, M., 1970, 1972, 1975).

At Clinic: Parent Interview. (Graham, P. and Rutter, M., 1968).  
Child Interview. (Rutter, M. and Graham, P., 1968).

Medical Examination:

By own G.P.: Isle of Wight Survey: Medical Examination (Rutter, M., Tizzard, J and Whitmore, K., 1970).

Classifications:

A Tri-axial Classification of Mental Disorders in Childhood (Rutter, M., Lebovici, S., Eisenberg, L., Sneznevskij, A.V., Sadoun, R., Brooke, E. and Lin, T., 1969).

Social Class Classification adapted by Van der Spuy, H.I.J., from the Classification of Occupations and Directory of Occupational Titles, Volumes I-III, 1972.

Additional Assessment:

Therapist Assessment:

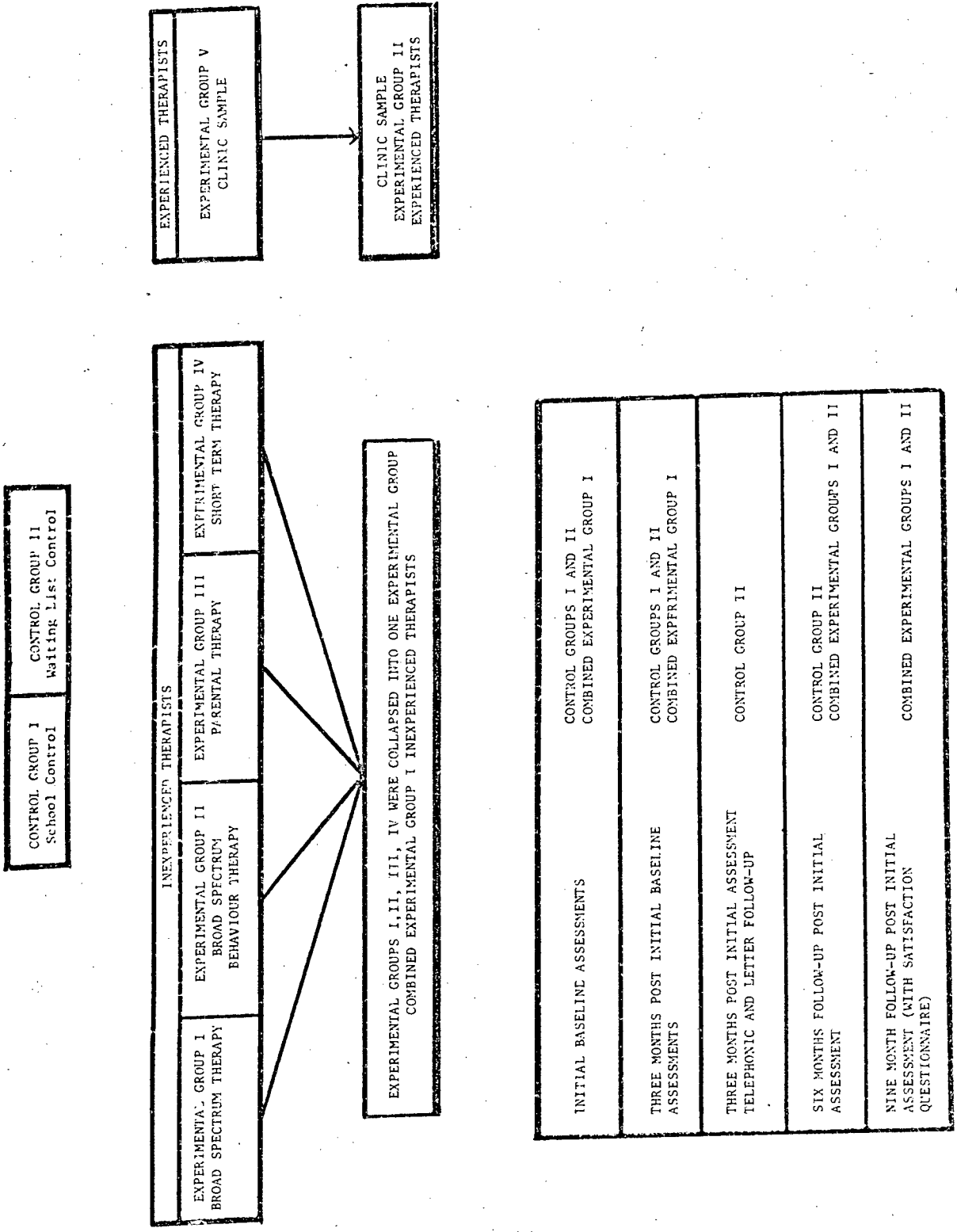
Follow-Up Procedures

Follow-Up I : Six months after initial intake.

Follow-Up II: Nine months after initial intake.

Specific Follow-Up:

This follow-up refers specifically to Control Group II: three months after failure to keep initial appointment.



INITIAL BASELINE ASSESSMENTS	CONTROL GROUPS I AND II COMBINED EXPERIMENTAL GROUP I
THREE MONTHS POST INITIAL BASELINE ASSESSMENTS	CONTROL GROUPS I AND II COMBINED EXPERIMENTAL GROUP I
THREE MONTHS POST INITIAL ASSESSMENT TELEPHONIC AND LETTER FOLLOW-UP	CONTROL GROUP II
SIX MONTHS FOLLOW-UP POST INITIAL ASSESSMENT	CONTROL GROUP II COMBINED EXPERIMENTAL GROUPS I AND II
NINE MONTH FOLLOW-UP POST INITIAL ASSESSMENT (WITH SATISFACTION QUESTIONNAIRE)	COMBINED EXPERIMENTAL GROUPS I AND II

Figure 1. Experimental Design.

Statistics

The 2 G test (le Roux and van Rooyen, 1972); a two-tailed t-test; and the analysis of covariance (Scheffe, 1957) were used.

Problems encountered

Problems encountered in the present study were not unique. The studies of Grace (1974), Santa Barbara, Woodward, Levin, Goodman, Streiner, Muzzin and Epstein (1974), and Candy, Balfour, Cawley, Hildebrand, Malan, Marks and Wilson (1972) reported similar difficulties.



## PRESENTATION OF RESULTS

### Principal Hypothesis

The null hypothesis was not accepted for all three principal hypotheses.

Control Group I improved significantly more than Experimental Group I and Control Group II respectively and combined.

Experimental Group I improved significantly more than Control Group II.

Thus no treatment is better than treatment, more treatment is better than less treatment.

### Subsidiary Hypotheses

The null hypothesis was accepted for all the subsidiary hypotheses. There were no significant differences between the younger and older age groups; between males and females and the six social classes for Control Group I and Control Group II and Experimental Group I combined and respectively for the male/female differences.

No one treatment condition, Control Group I, Control Group II and for Experimental Group I, short-term therapy, broad spectrum psychotherapy, broad spectrum behaviour therapy, and parental therapy included or versus the above treatments emerge as showing the greater improvement. Moreover, no psychotherapeutic approach could be labelled as superior.

### Hypothesis based on the results of Follow-ups I and II for experienced and inexperienced therapists

The null hypothesis was supported by the statistical analysis for experienced therapists, Experimental Group II. The experienced therapists did not improve significantly more at both Follow-ups I and II.

A significantly greater improvement was shown for the inexperienced therapists, Experimental Group I, at Follow-up II.

Both Experimental Groups I and II improved significantly more at Follow-up II than at Follow-up I confirming the alternative hypothesis.

The null hypothesis was accepted for the relationship the greater the severity of the problem, the greater the improvement.

There was a significant relationship between client satisfaction and the degree of improvement for the combined Experimental Groups I and II at the Follow-up II stage and not at the Follow-up I stage. The null hypothesis was accepted for Experimental Groups I and II respectively.

Male and/or female patients seen by male therapists improved overall significantly more than male and/or female patients seen by female therapists for Experimental Group I, inexperienced therapists, at Follow-up I and not at Follow-up II.

No significant relationships for the four sex pairings were shown for the inexperienced therapists at either Follow-up I or Follow-up II.

The null hypothesis was accepted for:

the younger age group did not improve significantly more at Follow-up I and at Follow-up II for either Experimental Group I or Experimental Group II;

the higher social class patients did not improve significantly more than the lower social class patients at either Follow-up I or Follow-up II.

There was no significant difference in the outcome of broad spectrum psychotherapy, broad spectrum behaviour therapy, parental therapy and short-term therapy, for Experimental Groups I and II respectively.

#### Hypothesis based on therapists' attitudes

There was a significant relationship between therapists' attitudes.

#### Hypotheses based on therapists' attitudes and their relationship to Follow-ups I and II

There was no significant relationship between the therapists' attitudes postulated and the results of either Follow-up I or Follow-up II except for those therapists who found it easy to work within the rigours of the research programme, their patients improved significantly more than those who found it difficult, at Follow-up I.

### DISCUSSION

It was postulated that parental anxiety might be a factor contributing to the null hypothesis for the principal hypotheses based on pre- to post-test results. The parents of the children of Control Group I felt no anxiety or concern about their children, despite the fact that they were found to have a disturbance score on either the Child Scales A(2) or B(2) or both and were underachievers. The parents of the children of Experimental Group I felt anxious and obtained immediate relief, whereas the parents of Control Group II felt anxious and obtained no relief but had to wait for three months. Hence no treatment is better than treatment as shown in this present study. If parents are anxious and seek treatment, then more treatment is better than minimal treatment, i.e. being seen for a diagnostic assessment and then put on a waiting list for three months. It was shown that Control Group I improved to a greater extent in IQ, reading and arithmetic than the referred,

treated, Experimental Group I. The implications of these findings might have far-reaching implications for remedial teaching.

The statistical analysis for the subsidiary hypotheses, based on pre- to post-test results, showed that no psychotherapeutic approach could be labelled as superior and is in accordance with the general body of published research in child psychotherapy which does not conclusively support the superiority of any one treatment method.

Not only were no psychotherapeutic approaches superior but also they did not emerge as superior to the two control groups.

The absence of significant differences between males and females; younger and older groups of children; are confirmed by the reviews of the literature for both adult and child studies (Meltzoff and Kornreich, 1970).

A significantly greater improvement was shown for the inexperienced therapists, Experimental Group I, at Follow-up II. At Follow-up I, the neophytes were relatively inexperienced. At Follow-up II, the neophytes had more experience, were receiving intensive training supervision and therapeutic and academic stimulation on multiple fronts. This was not so for the experienced therapists. Case conferences were the only means of discussion and stimulation.

However, both Experimental Groups I and II improved significantly more at Follow-up II.

For change to occur in an 8-11 year age group of patients is a period of nine months the critical time limit "to shorten the duration of the disorder" (Rutter, 1970, p.71)? To answer this question, Follow-up procedures would have to have been carried out for both Control Groups I and II.

The greater percentage improved was obtained from the category, not severe, supported by the findings of Barron (1953) and Katz, Lorr and Rubenstein (1958).

The greatest proportion of patients showed improvement irrespective of satisfaction for the combined Experimental Groups at Follow-up II. It was shown that this result was achieved as a by-product of amalgamating different patterns of improvement derived from Experimental Groups I and II respectively.

At Follow-up I, male and/or female patients seen by male inexperienced therapists improved overall significantly more than male and/or female patients seen by female therapists. It is suggested that the particular composition of male/female inexperienced therapists for this particular Clinic for the specific years of the investigation could be responsible for this occurrence.

There was no significant relationship between the younger age group and outcome at Follow-ups I and II. Meltzoff and Kornreich (1970) indicate that research studies do not show a clear cut relationship between age and outcome.

The higher social class patients did not improve significantly more at Follow-ups I and II than the lower social classes. This finding is supported by Albronda, Dean and Starkweather (1964).

It was shown that no one of the four treatment methods, i.e. broad spectrum psychotherapy, broad spectrum behaviour therapy, parental therapy and short-term therapy, was superior. These results were supported by the findings of the pre- to post-test differences and by the overall research findings which do not indicate the superiority of one form of treatment over another. Two possibilities may apply: the treatments are different but equally ineffective; the treatments are the same but labelled differently and are ineffective.

It was shown that therapists who viewed research in psychotherapy as unnecessary regarded the allocation to a specific treatment programme as immoral.

It was also suggested that hostility might be the result of anxiety about coping with different types of treatment and hence felt the allocation to be immoral. Those therapists who stated that they were indifferent to treating children within the rigours of the research programme, their very indifference might have been responsible for the difficulty they experienced in treating children within the rigours of the programme. The same argument might hold for those therapists who felt indifferent to the allocation of patients to a specific treatment programme.

Previously it was shown that improvement did occur, but one was led to believe that this was irrespective of therapists' attitudes. At Follow-up I, those therapists who found it easy to work within the rigours of the research programme did improve significantly more than those therapists who found it difficult. It was suggested that as this relationship was not maintained at Follow-up II that those therapists who found it initially difficult may have become more confident and proficient at the Follow-up II stage.

In conclusion, at the Follow-up I stage the percentage improvement for this study was significantly lower at the .01 level in comparison with the improvement rates of Levitt's (1963) survey and the defector studies of Witmer and Keller (1942) and Lehrman (1949); however, at Follow-up II the percentage improvement for the present study was significantly higher.

Eighty-six percent of the parents expressed satisfaction with the Clinic. Forty-seven percent of the parents felt the Clinic was mostly responsible and 43% felt the Clinic was partly responsible for the change.

It is suggested that the way for collaborative research be paved by overcoming the basic hostility to research programmes. In the paradigm envisaged research becomes an ongoing process incorporated as a primary function of the training institution. Participation in efficacy research becomes mandatory, a stipulation in the clinician's contract of service. The emphasis on research is supported by clinical accreditation boards which require a report of efficacy ratings for both clinicians and institutions. These ratings must meet an acceptable standard before registration or accreditation is granted. In addition the accreditation board requires that all institutions offering therapeutic services provide refresher courses for therapists at regular intervals.

Implementation of these suggestions may pave the way for collaborative research and simultaneously improve the clinical services to the community. Hopefully a new breed of psychologist will emerge interested in well-controlled efficacy studies.

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C H A P T E R 1

INTRODUCTION

1.1 General Aims of the Present Study

The present study aims to investigate factors contributing to the efficacy of different therapeutic techniques and to extract and examine factors which might affect improvement of psychological symptomatology in children between the ages of eight and eleven years.

Specific Aims of the Present Study

To assess the efficacy of treatment in a Child Guidance Clinic setting.

To compare the outcome of four different treatment regimes within the same setting with each other and with two matched control samples not receiving treatment.

The two control groups and four treatment groups are described:

School Control Group, Control Group I, consists of a group of children, who have never been referred for treatment, and who have been screened and assessed at the schools and then selected as having a similar pathology index to Experimental Group I. These children will be left and reassessed after a set period.

Waiting List Control Group, Control Group II, consists of a group of patients who are assessed and then simply remain untreated on the waiting list for a set period and then reassessed.



Broad Spectrum Psychotherapy Group, Experimental Group I, consists of a group of patients who are given a full diagnostic assessment, then given "Eclectic Insight Oriented Therapy" for a set period and then reassessed.

Broad Spectrum Behaviour Therapy Group, Experimental Group I, consists of a group of patients who are given a full diagnostic assessment, then given "Broad Spectrum Behaviour Therapy" for a set period and then reassessed.

Parental Therapy Group, Experimental Group I, consists of a group of patients who are given a full diagnostic assessment, then given "Parental Therapy" for a set period and then reassessed.

Short Term Therapy Group, Experimental Group I, consists of a group of patients who are given advice and emotional support as can be given in a report back interview and then reassessed after a set period.

## 1.2 Hypotheses

### 1.2.1 Principal Hypotheses

Hypotheses based on the pre- to post-test change score results.

- 1.2.1.1  $H_1$  It is hypothesised that those subjects who had received treatment, Experimental Group I, will improve significantly more than the two control groups after a set period. Pre- to

post-test change scores will be investigated.

1.2.1.2  $H_1$  It is hypothesised that subjects from Control Group II, waiting list control, will improve significantly more than Control Group I, the non-referred, untreated, school control. The rationale here is that the mere fact that someone has realised that outside help is required and has applied for it, may already have a beneficial therapeutic effect.

1.2.1.3  $H_1$  It is hypothesised that subjects from the referred, untreated, Control Group II, waiting list control, combined with the subjects who received treatment, Experimental Group I, would improve significantly more than those who had not been referred and treated, school control, Control Group I.

## 1.2.2 Subsidiary Hypotheses

Hypotheses based on the pre- to post-test change score results.

1.2.2.1  $H_1$  It is hypothesised that there will be a significant difference in the change scores from pre- to post-test on the factors Child Scale A(2) designation, Child Scale B(2) designation, Parent Interview, Child Interview and the four treatment groups, i.e. broad spectrum psychotherapy, broad spectrum behaviour therapy, parental therapy and short term therapy, for Experimental Group I.

1.2.2.2  $H_1$  It is hypothesised that there will be a significant difference in the change scores from pre- to post-test on the factors Child Scale A(2) designation, Child Scale B(2)

designation, for Parental Therapy, Experimental Group I, against all other types of therapy, Control Group I, Control Group II, and short term, broad spectrum behaviour, and broad spectrum psychotherapy in Experimental Group I.

1.2.2.3  $H_1$  It is hypothesised that there will be a significant difference in the change scores from pre- to post-test on the factors Child Scale A(2) designation, Child Scale B(2) designation for Control Group I, Control Group II, broad spectrum behaviour, broad spectrum psychotherapy, parental therapy and short term therapy in Experimental Group I.

1.2.2.4  $H_1$  It is hypothesised that there will be a significant difference in the change scores from pre- to post-test between males and females, subjects for Control Group I, Control Group II and Experimental Group I respectively and combined.

1.2.2.5  $H_1$  It is hypothesised that there will be a significant difference in the change scores from pre- to post-test between the age groups 96 to 114 months and 115 to 144 months for Control Group I, Control Group II and Experimental Group I combined.

1.2.2.6  $H_1$  It is hypothesised that there will be a significant difference in the change scores from pre- to post-test between the six social classes for Control Group I, Control Group II and Experimental Group I combined.

1.2.3 Hypotheses based on the Results of Follow-up I and II

- 1.2.3.1  $H_1$  It is hypothesised that patients seen by experienced therapists, Experimental Group II, will improve significantly more than those seen by inexperienced therapists, Experimental Group I, at both the Follow-up I and Follow-up II stage.
- 1.2.3.2  $H_1$  It is hypothesised that patients from Experimental Group I seen by inexperienced therapists, and those from Experimental Group II seen by experienced therapists will improve significantly more at the Follow-up II stage than at Follow-up I.
- 1.2.3.3  $H_1$  It is hypothesised that there will be a significant relationship between the degree of improvement and the severity of the problem. The greater the severity of the problem, the greater the improvement at the Follow-up I and Follow-up II stages respectively.
- 1.2.3.4  $H_1$  It is hypothesised that there will be a significant relationship between client satisfaction and the degree of improvement.
- 1.2.3.5  $H_1$  It is hypothesised that male and/or female patients seen by male therapists will improve significantly more than male and/or female patients seen by female therapists.
- 1.2.3.6  $H_1$  It is hypothesised that the younger patients, 96 to 114 months, will improve significantly more than the older patients,

115 to 144 months, at Follow-up I and at Follow-up II.

1.2.3.7  $H_1$  It is hypothesised that the higher social class patients will improve significantly more than those from the lower social classes.

1.2.3.8  $H_1$  It is hypothesised that there will be a significant difference in the outcome of the four treatment groups, i.e. broad spectrum psychotherapy, broad spectrum behaviour therapy, parental therapy and short term therapy, for Experimental Groups I and II respectively.

1.2.3.9  $H_1$  It is hypothesised that there will be a significant difference in the outcome of parental therapy versus short term, broad spectrum behaviour and broad spectrum psychotherapy in Experimental Groups I and II respectively.

#### 1.2.4 Hypothesis based on Therapists' Attitudes

1.2.4.1  $H_1$  It is hypothesised that the following therapists' attitudes will show interdependence:

- . therapists' initial ease in dealing with the case;
- . the appropriateness/inappropriateness of the type of treatment to which the case had been assigned;
- . therapists' ease or difficulty to assess or treat children within the rigours of the research programme;
- . therapists regarding the allocation of children to a specific treatment group as immoral;

- . therapists feeling research in psychotherapy to be necessary;
- . therapists' assessment that the difficulty they had in keeping the different therapy groups separate was caused by their basic hostility to the study.

1.2.5 Hypotheses based on Therapists' Attitudes and their Relationship to Follow-ups I and II

- 1.2.5.1  $H_1$  It is hypothesised that those patients whose therapists experienced initial ease in dealing with their patients will improve, feel satisfied with the services received and attribute the improvement to the treatment received at the clinic, significantly more than those patients whose therapists experienced initial difficulty.
- 1.2.5.2  $H_1$  It is hypothesised that those patients whose therapists regarded the type of treatment the patient/case had been assigned to, to be appropriate will improve, feel satisfied with the services received and attribute the improvement to the treatment received at the clinic, significantly more than those patients whose therapists regarded the type of treatment the patient/case had been assigned to, to be inappropriate.
- 1.2.5.3  $H_1$  It is hypothesised that those patients whose therapists found it easy to work within the rigours of the research programme will improve, feel satisfied with the services received and attribute the improvement to the treatment received at the clinic, significantly more than those patients whose therapists found it difficult to work within the rigours

of the research programme.

- 1.2.5.4  $H_1$  It is hypothesised that those patients whose therapists regarded the allocation of cases to a specific treatment programme to be morally justified will improve, feel satisfied with the services received and attribute the improvement to the treatment received at the clinic, significantly more than those patients whose therapists regarded the allocation of cases to a specific treatment programme to be immoral.
- 1.2.5.5  $H_1$  It is hypothesised that those patients whose therapists' preferred mode of treatment was the same as that to which the patient/case had been allocated will improve, feel satisfied with the services received and attribute the improvement to the treatment received at the clinic, significantly more than those patients whose therapists' preferred mode of treatment was different to that to which the patient/case had been allocated.
- 1.2.5.6  $H_1$  It is hypothesised that those patients whose therapists regarded research in psychotherapy to be necessary will improve, feel satisfied with the services received and attribute the improvement to the treatment received at the clinic, significantly more than those patients whose therapists felt research in psychotherapy to be unnecessary.
- 1.2.5.7  $H_1$  It is hypothesised that those patients whose therapists felt hostile to the treatment programme and as a result had difficulty in keeping the different therapy groups separate

will deteriorate, feel dissatisfied with the services received and attribute the deterioration to the clinic, significantly more than those patients whose therapists did not feel hostile.

### 1.3 Procedural Definitions and Aims of Psychotherapy

Although psychotherapy has been practised in various ways for centuries, it probably only attained formalization in the time of Freud. It has been over two decades since Eysenck's (1952) publication questioning the efficacy of adult psychotherapy and the controversy is still raging. Levitt (1957), investigating the efficacy of psychotherapy with children, came to the same conclusion as Eysenck did in 1952 concerning the efficacy of psychotherapy.

Eysenck found an inverse correlation between recovery and psychotherapy. This view was a challenge to traditionally held viewpoints and cast great doubts on the validity of methods used by most therapists up to this date. Eysenck claimed that he used as his baseline for recovery from psychoneurosis patients who received no psychotherapy. In fact he used Denker's (1946) results as a criterion for recovery without psychotherapy, but as these results refer to patients who have been superficially treated by their general practitioner, the assumption of no psychotherapy is erroneous.

Before examining the errors in detail, we will first investigate whether there is a consensus on what psychotherapy is or what constitutes psychotherapy.



The activities that have claimed the status of psychotherapy have ranged from formal psychoanalysis to Kleinian therapy, from non-Freudian therapies to the extensive range of counselling procedures, including pastoral counselling.

Although behaviour therapy has not been traditionally included in psychotherapy, it seems necessary to include behaviour modification techniques as well.

It is not deemed possible to find a definition gaining general consensus of all concerned at the present state of turmoil and schism.

However, a feasible procedure would be to examine a selection of procedural definitions by those who are conducting or researching into psychotherapy.

Are there common core elements or do they perhaps pursue a common goal?

Garfield (1974) views the dilemma of definition of psychotherapy as follows:

"Most psychotherapies consist of a therapist, a patient, some clinic office setting and some type of interaction that goes on between therapist and client. The client or patient, regardless of the orientation of the therapist, is seeking some type of help for his particular psychological difficulties. The therapist, whatever his theoretical persuasion, attempts to offer the patient a setting in which the latter may hopefully solve his problems, overcome his difficulties, and increase his level of adjustment.....

One important psychological aspect of any type of psychotherapy is the implication it has for helping the patient with his problems.....In initiating psychotherapy with a psychotherapist, the patient is being offered, directly or by implication, some hope for amelioration of his problem" (p.232).

Greenhill (1958), cited by Kiesler (1973), conceptualizes psychotherapy within an interpersonal paradigm:

"Communication is the rubric of the psychotherapeutic method. The psychotherapist is the expert in one-to-one communication and relies upon its devices to achieve his goals. Communication is so fundamental to the action of psychotherapy that I am herewith advancing the theory that movement and results in psychotherapy are largely dependent upon it more than any other factor" (p.31).

Frank (1961), in Kiesler (1973), supports the above by expressing similar sentiments couched within a broader base:

"Psychotherapy.....deals with interpersonal relationships, either as formulated by Freud, or more literally conceived by Rank or Sullivan. In that regard, all research that deals with the dynamics of any one-to-one interpersonal relationship, such as with hypnosis, non-clinical studies of attitude changes, etc., are relevant for an understanding of psychotherapy. One can reason that all these are but special instances of the dyadic relationship, therefore, the phenomena pertinent to one should be pertinent to the others. In addition, within the context of social psychology, psychotherapy may be viewed in terms of the communication process and communication theory" (pp.89-90).

Finally, Kiesler (1966) concludes on the basis of his reviews:

"In summary, then, the basic skeleton of a paradigm for psychotherapy seems to be something like the following: The patient communicates something; the therapist communicates something in response; the patient communicates and/or experiences something different; and the therapist, patient, and others like the change (although they may like it to different degrees, or for divergent reasons). What the therapist communicates (the independent variables) is very likely multi-dimensional (and the patterning of this multi-dimensionality needs to be specified), and may be different at different phases of the interaction for different kinds of patients. Similarly, what the patient communicates and/or experiences differently (the independent variables) is likely multi-dimensional (and the patterning of this multi-dimensionality needs to be clarified) and may be different at distinct phases of the interaction. The enormous task of psycho-

therapy theory and research is that of filling in the variables of this paradigm" (p.130).

The question still remains only partially answered. The above descriptions fail to specify the element that makes psychotherapy different from any dyadic interpersonal situation. Perhaps the unique element that differentiates the psychotherapeutic situation from dyadic interpersonal situation can be specified in terms of the goals of psychotherapeutic activity.

What are the goals of psychotherapy and what are their historical origins? According to Greenblatt and Levison (1967):

"Healing by means of the spoken word, or, more strictly, through a relationship between two people is, of course, as old as history. Psychiatry applies relationship therapy in many forms, some of which are customarily grouped under the rubric "psychotherapy".

Two features of the current practice of psychotherapy are relevant in this discussion: the effort to bring psychotherapy within the orbit of scientific medicine; and the fact that the domain of psychotherapy is being entered by a host of practitioners other than physicians - from fields as diverse as psychology, social work, nursing and theology.

We are concerned, in other words, not with psychotherapy as a method, but with the psychotherapist - the goals, responsibilities, and problematic decisions with which he must continually grapple as he intervenes in the lives and fortunes of those who seek his help.

We shall discuss four major goals that have stood the historical test of medical practice and that have, as we shall try to show, equal relevance for the practice of psychotherapy. They constitute the primary valuational imperatives in therapeutic work. The ultimate test of "sound clinical judgement" in the therapist is his capacity to weigh them in balance and to orchestrate them variously over the course of his efforts with every patient. The goals are, in the order of their priority:

1. As far as possible do no harm.
2. Relieve suffering.
3. Assist natural healing processes toward recovery.
4. Prolong life.

The order of priorities is important. It is often more important to avoid doing harm and to relieve suffering than to prolong life. It should also be noted that furthering the patient's recovery is by no means the only goal, and indeed it is given third rather than first priority. We wish further to emphasize the wording of this third injunction: the healer, medical or other, can only assist the healing processes given in the nature of the organism. He does not cure; he does not destroy illness or create health: at best he furthers the curative powers of nature. He must always be ready to consider that nature might heal without his intervention, and he must continually be careful lest he regard nature's benign course or accelerate its malignant direction" (pp.22-24).

Mahrer (1967) reviewing the general consensus of the contributors to The Goals of Psychotherapy summarizes under 'General Goals of Psychotherapy' :

"Reduction of Psychopathology.

- a. Reduction of symptomatology.
- b. Reduction of defences.

Reduction of Psychological Pain and Suffering.

- a. Reduced anxiety.
- b. Reduced hostility.
- c. Reduced meaninglessness.

Increased Pleasure.

Increased Experiencing.

Enhanced Self-relationship.

- a. Increased self-acceptance.
- b. Increased internal directedness.

Experienced Relationships.

- a. Increased closeness of interpersonal relationships.
- b. Increased competence of functioning.
- c. Increased ability to adjust.
- d. Increased social commitment" (pp.269-261).

Mahrer (1967) further points out that the above goals refer to individual treatment patients. Thus

"psychotherapy refers primarily to a single therapist and single patient rather than implying multiple-therapist techniques, group therapy, milieu treatment,

or other kinds of therapeutic procedures. Furthermore, the emphasis is upon therapy with adult patients rather than with children or adolescents.....For the individually treated adult, 'psychotherapeutic goals' refers to the long-range, ultimate aims and purposes, directionalities, and outcomes of therapy. The focus is not upon the working techniques of psychotherapy orienting the patient, interpretation, the development of transference, etc." (p.3).

How do individual adult goals of psychotherapy differ from that of the child? According to Lesser (1972), Anna Freud has always

"stressed the differences between child analysis and the analysis of adults, differences inherent in the immature psyche of the child and in his life situation.

To Anna Freud, the child patient differs in his motivation for analysis, in his capacity to free-associate, and in his difficulty in forming a transference neurosis. Most adult patients seek analysis because they are troubled by their anxiety or depressive mood, their thoughts, and/or their behaviour. The child, with his tendency to externalize and to act when painful feelings or thoughts intrude, does not for the most part recognise his distress as coming from his own affects and actions but rather sees in his stress a fault of his environment. Thus, the psychoneurotic adult is a distress to himself, whereas the psychoneurotic child distresses his environment" (p.849).

This latter statement contrasts with Ansbacher(1967) who indicates that children are too often perceived as reactors instead of actors "with purposiveness, goal directedness, unity, self-consistency and uniqueness" (pp.191-192).

Weinberger (1972) echoes the above sentiments and elaborates further:

"Children are invariably seen as 'victims'. Despite all the interest in 'parent-child interaction', the 'poor and innocent' child bias continues to dominate the field of child psychotherapy. The fact that the child can have profound effect upon adults, and contribute directly to the problem, is often ignored. Depending upon the sympathies of the therapist the villains may be either social forces (poverty), other institutions (the schools),

or the favorite scapegoat, the parents and their marital problems. Little time may be spent in delineating the nature of the child's problem and how the parents have tried to cope with it, but a great deal of time will invariably be spent upon the parents' marital relationship, especially in the sexual area. Since the child's problems are seen only as symptoms, one need not linger too long upon them, even though that is exactly why the parents sought help. If the parents should insist on doing so, this is treated as resistance on their part" (p.149).

Bryt (1972) referring to non-Freudian methods of psychoanalysis uses the term "non-Freudian.....to refer to psychodynamic theories other than the libido theory" (p.865).

He summarizes communal beliefs held by the non-Freudians:

"Non-Freudian analysts have attempted to distinguish between those aspects of child and adolescent development which seem to be genotypical phenomena and those which appear clearly phenotypical. The consensus at this reading seems to be that constructive tendencies for growth, development, and self-realization are inherent in human nature and can be counted on to make their effects felt in the analytic situation. There is agreement also on the special importance of sexual, genital urges and their effects on interpersonal relationships beginning with adolescence. All authors also attach importance to the conditions prevailing during the childhood years and their lasting effect on personality patterns" (Ibid., p.892).

Commenting on non-Freudian theories and clinical practice, Bryt makes the following observation:

"In child and in adolescent analysis, there seems to be only little reliable correspondence between clinical practice and the practitioner's commitment to one fundamental theory. The clear-cut development of distinctly individualized schools of practice seems to have spared child and adolescent analysis - except possibly for the Kleinians" (Ibid., pp.870-871).

Turning our attention to behaviour therapy we find a rather different emphasis from the postulates held by the Freudian and non-Freudian child psychoanalysts.

Ross (1972) states:

"The behavior therapist applies principles of learning in the treatment of psychological disorders. These can be roughly classified into two major groupings: deficient behavior and maladaptive behavior..... In either case, treatment involves learning, unlearning, and relearning; this corrective action has come to be referred to as behavior therapy.

Whether the problem behavior is deficient or maladaptive, the behavior therapist operates on the assumption that it can be modified by studying the CURRENT conditions under which this behavior occurs and planning remedial action on the basis of the information thus obtained. While the learning orientation logically includes the implicit acceptance of events as contributing to the development of the child's present difficulty, the behavior therapist considers a detailed knowledge of the child's history unnecessary to arriving at his treatment plans. The historical antecedents of a current problem are thus de-emphasized. Instead behavior therapy demands a detailed and intensive assessment of the current conditions under which the behavior in question takes place, or fails to take place, for behavior therapy consists of the modification of these conditions or of the client's reaction to these conditions.

The principles of learning which behavior therapists bring to bear on the analysis and modification of maladaptive behavior suggest that two basic kinds of conditioning affect the establishment and elimination of responses: respondent conditioning and operant conditioning" (p.901).

Behaviour therapy differs even further from the Freudian and non-Freudian psychoanalysis in that:

"the operant techniques can be described in relatively simple terms and their application taught in a short time, treatment using these techniques can be carried

out by non-professional people working under the direction of a professional person who has expert knowledge of the theoretical basis and works out the details of the treatment program....If behavior is to be modified, the modification must take place when and where the behavior manifests itself. This is rarely the therapist's consulting room, and as a consequence, behavior therapists working with children frequently find themselves working through the adults who are in a position to be present when the target behavior takes place and who have control over the contingencies of reinforcement. In case of children in schools or institutions, these adults are teachers, nurses and attendants. In the case of children living at home, the parents become the logical contingency managers and hence therapists" (Ibid., p.919).

Strupp (1973) states the difference between behaviour therapy and Freudian and non-Freudian psychoanalysis as "the exchange and modification of one set of maladaptive assumptions, behaviors and strategies for another" (p.21).

In summary, it is clear that there are a great number of views about what it is that constitutes psychotherapy and furthermore there is a general lack of agreement on this issue.

For the purpose of this study the intention is not to resolve the theoretical problems relative to what it is that constitutes psychotherapy, but rather to proceed from a pragmatic point of view, i.e. to accept all interactions between the professional staff members and patients at the University of Cape Town Child Guidance Clinic, which the professional staff members considered to be psychotherapy, as psychotherapy.



1.4 Review of Literature: Outcome Studies with Adults and Pertinent Issues

The main concern in this section will be to review the literature indicating change or "success" in psychotherapy.

Two types of strategy have been employed to measure change (Mintz, 1972): (a) explicit or implicit measures of change and (b) global assessments at termination of treatment in the form of improvement, success and satisfaction. The use of measures of success, improvement and satisfaction pose numerous problems, the first of which is that of psychometry with the accompanying hazard of the unreliability of change scores and the initial level effect (Manning and Dubois, 1962). The second is the "ceiling" effect (Mintz, 1972) which labels the problem of those subjects who on pretherapy measures attain relatively healthy levels and hence on the same post-therapy measures can only attain "small changes". The question now arises "how are 'small changes' at relatively high levels measured?" (Ibid, p.11). More generally, we can ask is any particular measure equally valid for all subjects in the study?

Luborsky, Chandler, Auerbach, Cohen and Bachrach (1971) indicate that with the wide use of global ratings, it becomes imperative to ascertain the combination of various elements that finally lead to a global success rating. There are in addition several inherent difficulties with global ratings:

"Most criticism suggest that these measures may be unduly influenced by bias, the commitments of the involved participants, or, in the case of an O's or friend's rating, lack of sufficient knowledge" (Ibid, p.12).

Bearing in mind these hazards of measuring change we focus on the

areas of adult and child psychotherapy research which until the mid-fifties was not seriously concerned with the validity of psychodiagnostic instruments, especially the projective type techniques and intelligence test:

"As manpower pressures opened up opportunities for clinical psychologists to perform psychotherapy, their interest in diagnostic testing diminished, as this took place, the eternal hunt for validity simply became irrelevant.

The very process that created this irrelevancy was destined, in the long run, to raise the validity issue again more forcefully and in different form.....In the mid-1950's there began to appear a trickle of research studies with disquieting implication that dynamic psychotherapy was - to a large extent - a waste of time" (Ibid, pp.203-204).

Eysenck's (1952) review of 24 articles, five psychoanalytic and 19 eclectic, encompassed 8053 cases. He claims that two-thirds of all neurotics who undergo psychotherapy improve substantially within two years, furthermore two-thirds of neurotics who never undergo psychotherapy also improve substantially within a two-year period.

However, Bergin (1971), re-examining Eysenck's (1952) "Summary of reports of the results of psychotherapy", details the difficulties encountered in attempting this type of re-assessment based on the 28 pot-pourri studies:

"The analysis of these studies creates many difficulties that cannot be satisfactorily resolved. These include (a) lack of precisely comparable cases across studies, (b) lack of equivalent criteria of outcome, (c) large variations in the amount of therapy received and in the quality thereof, (d) differences in duration and thoroughness of follow-up, (e) variation in nature of onset and in duration of disturbance, and (f) (where comparable cases and outcome estimates appear to be used) impreciseness of definitions of disorder and criteria for improvement, to the extent of rendering their reliability questionable. Perhaps most troublesome of all is the fact

that these early studies were not objective. There are no assessments of outcome made independently of the therapist's evaluations, and there are no checks on the reliability of the author's methods of tabulating the raw data.

To complicate matters further, it is frequently difficult to match the figures in the original reports with those in Dr. Eysenck's tables because (a) the original tables themselves often include flaws, such as incorrect addition and computation of percentages; (b) in order to examine the data on neurotics, one must extract figures from tables that include information on as many as 34 different diagnostic types! Deciding which are to be included as "neurosis" is not simple, especially when nearly every author has a somewhat different set of categories; (c) to make matters worse, Eysenck has also made some errors in transferring the original figures to his own table; (d) the confusion created in this area is further multiplied by small matters such as Eysenck's stating that "psychopathic states" are included in his calculations; whereas his figures can be matched with the originals only when psychopaths are excluded. It seems logical to exclude them from a study of neuroses, but it required many hours of labor to discover that this had been done in the original report; and (e) the ratings of outcome in different studies are based on different numbers of categories. Thus, in one study all cases may be categorized dichotomously as either improved or not improved, while another study may use as many as six different degrees of improvement" (Ibid, pp.218-220).

Re-evaluating the five psychoanalytic studies in Eysenck's survey, Bergin arrives at a figure of 83% overall average improvement while Eysenck's analysis of the same data records 44% overall average improvement.

Re-evaluating 19 studies of eclectic psychotherapy Bergin reports:

"Eysenck finds a 64 percent improvement rate, with a range from 41 to 77, and I find a 65 percent rate, with a range from 42 to 87" (Ibid, p.226).

Bergin comments:

"It is striking that we should agree so closely on the results of eclectic psychotherapies and differ so sharply on our evaluations of psychoanalysis. This could be due to the fact that the number of dropouts reported in the

psychoanalytic studies is large and Eysenck counts these as failures, whereas I do not. It could also be that the analytic results are thus based on more selected samples, which are therefore biased toward more favourable results. One might also argue that our biases differ regarding psychoanalysis and that they differentially influenced our reading of essentially ambiguous stimuli. This is difficult to support, however, since neither of us can be considered friendly toward psychoanalysis.

Another major problem with all of these percentages is the fact that they vary greatly across diagnoses and across clinics" (Ibid, p.226).

Bergin further distinguishes trends of the studies examined prior to 1952:

"It is of particular interest, however, that the longer and more intensive the treatment, the better the results. The eclectic therapy studies frequently involved very brief and superficial treatment. The least adequate therapy yielded the poorest results in these reports. Where the therapy was more intensive, the results were better; and in these latter instances, the improvement rates at the time of discharge were equivalent to those of psychoanalysis. These rates generally declined at long-term follow-up in the psychotherapy studies, whereas such follow-up studies were unavailable for the analytic cases. The difference in the overall rates for psychoanalysis and psychotherapy would thus probably disappear if the Time in Therapy and the Time of Evaluation were equated, suggesting that the same therapeutic factors operate across therapies irrespective of differences in theory.

In addition to the evidence of some therapeutic effect, there is also the valuable finding that results differ across personality types, crudely defined, and across therapists and clinics. This is clearly a lead into the notion of specific therapies for specific problems" (Ibid, p.227).

Eysenck used the findings of Landis (1937) and Denker (1947) to argue his point that therapy is "an unproved procedure" (Bergin, 1975).

Briefly, Landis (1937) investigated a discharge rate for the period 1917 to 1934 of hospitalised neurotics in New York State.

He found a 72% discharge rate and concluded that this figure was comparable to the results obtained from therapy studies up to 1937.

Denker (1947) on the other hand derived his 72% improvement rate gauged over a two year period from untreated life insurance disability claimants.

The deficiencies in the above two studies sparked off a heated debate (Rozenweig, 1954; Luborsky, 1954; Cartwright, 1955; Strupp, 1963, 1964; Meltzhoff and Kornreich, 1970; Bergin, 1975; and replies by Eysenck, 1952, 1955, 1964, 1965; and Kiesler, 1966).

However, at this point Bergin (1971) adds a footnote that throws further light on Eysenck's interpretation of the Landis 1937 data:

"It is impossible to resist the temptation to add one more critical observation to the tortured history of controversy over these two studies. I shall note it and then restrain the impulse to elaborate further upon this already overworked terrain. In tabulating his table of 24 studies on therapy outcome, Eysenck (1952) frequently found that authors reported results in only three categories, 'cured', 'improved', and 'not improved'. Since 'improved' could mean 'significantly' or 'slightly', Eysenck solved the problem by the expedient of splitting the improved group and calling half 'much improved' and half 'slightly improved'. The 'slightly improved' group were lumped with the 'unimproved' to arrive at the final improvement rates for these studies. Now, it so happens that the Landis data were reported in three categories; recovered, improved, and not improved. To be consistent, it is essential that the improved group be split in half and one-half labeled as not improved. The original figures were 32 percent recovered, 40 percent improved, and 28 percent not improved. Following Eysenck's procedure, Landis' true spontaneous recovery rate should therefore be 52 percent, not 72 percent: The conclusion

that Landis' 72 percent baseline is spuriously high is further supported by the fact that his rates for alcoholics and psychopaths were 64 percent and 75 percent respectively - figures way out of line with clinical reality. Naturally, I consider these to be the most devastating critiques of all regarding this issue; but, of course, it is irrelevant when the many new bits of data are pieced together" (Ibid, p.240).

In 1960 Eysenck reviewed four more studies: Teuber and Powers (1953), Rogers and Dymond (1954), Brill and Beebe (1955) and Barron and Leary (1955). Three of these did not reject the null hypothesis. Meltzoff and Kornreich (1970) comment on these three studies as follows:

"Four in number: Teuber and Powers (1953), Brill and Beebe (1955), Barron and Leary (1955), and Rogers and Dymond (1954). Three of these provided grist for the negative mill. The Teuber and Powers paper reported on the evaluation of a program of delinquency prevention and has long since been superseded by more contemporary research. The Barron and Leary study had enough design flaws to rule it out as good evidence. The Brill and Beebe study was badly misrepresented. It is an excellent and exhaustive follow-up of war neuroses that was not designed to be a study of the effectiveness of psychotherapy and cannot be used for that purpose. It is a careful and elaborate investigation that stands on its own merits and admirably serves the purpose for which it was designed. The small portion of data dealing with treatment is divided into two sections, treatment in the armed service and treatment since separation. Treatment in the service was categorised as either hospital routine, rest and sedation or psychotherapy of any type or duration. Treatment of mild cases was usually limited to rest and sedation. Individual therapy was more often given to the more serious cases. Still, a significantly favorable response was shown by 20 percent with routine hospital care, 31.3 percent of those with no treatment or rest and sedation, and 40.5 percent of those who received individual treatment" (p.72).

Thus on these four studies Eysenck bases his appraisal, Meltzoff and Kornreich emphatically state:

"In our review of the literature, however, we have found at least thirty controlled studies published by 1959 that

were presumably available to Eysenck at the time. Eysenck's 1960 conclusions were based upon a small and unrepresentative sample of the available material" (Ibid., p.73)

Five years later Eysenck (1960) reviewed an additional seven controlled studies; he concluded again on the ineffectiveness of psychotherapy, but what did emerge was new evidence for behaviour therapy. Extracts are given from 17 leading authorities who were invited to comment on Eysenck's findings:

"J.D. Frank argued that the remission of untreated cases is not necessarily as 'spontaneous' as Eysenck believes. Glover, cited by Eysenck as a leading psychoanalytic authority who had negative views about its efficacy, claimed that he was quoted out of context. Barendregt, whose study was used by Eysenck as supportive evidence of his position, stated that with few exceptions the patients in his research were treated by therapists who had very little experience. Meehl attributed the findings more to the patients and therapists than to any basic invalidity of the process. He argued that, at most, one-quarter of the patients in therapy are suitable cases and that one-quarter represents the upper bound of the proportion of therapists who are much good at their job. The joint probability, therefore, of a suitable patient getting to a suitable therapist is around .06. Wolpe referred to 'the still sedulously unpublished' report of the Central Fact-finding Committee of the American Psychoanalytic Association (1958). His own estimate of the success of traditional psychotherapy was 21.5 percent. Hyman and Breger concluded that, 'to try to reduce psychotherapy to the model of a scientific experiment will either result in reasonably objective results that are irrelevant to therapy or outcomes that will be meaningless and ambiguous at their best' (p.319). They thereby rejected the whole notion of research appraisal. Davidson seemed most convinced, judging from his semiwhimsical comment, 'One cannot examine the numerous studies offered by Eysenck without coming to the conclusion that maybe - just maybe - psychotherapy is a kind of a cult'. The American Medical Association (II.1 of the 1955 Principles of Ethics) has defined a cult as 'a dogma, tenet, or principle, based on the authority of its promulgator to the exclusion of demonstration and scientific evidence' (p.173)" (Meltzoff and Kornreich, p.73).

Eysenck (1967) was still adamant: "to date then, there is no real evidence for the effectiveness of psychotherapy" (p.27). Of Eysenck, Meltzoff and Kornreich (1970) state the following: "We are indebted to Eysenck for having thrown down the gauntlet" (p.74).

Bergin (1971) expresses similar sentiments:

"I would like to point out that Eysenck's critiques have had an extremely facilitative effect upon psychotherapy research. He has been a prime stimulant, if not irritant, pressing the field toward rigorous examination of its assumptions and procedures. For thus dramatically calling these issues to our attention, he is to be congratulated and not condemned as so many have been inclined to do. It is time, after all, that this field provide publicly verifiable evidence that its costly treatments have effects" (p.228).

Reviews on outcome research have followed in Eysenck's footsteps and have continued the actuarial method of assessing the efficacy of outcome studies. One such review was conducted by Gross in 1964, who found that six out of nine studies were favourable to psychotherapy. Bergin (1971) reviewing the same studies found ".....only one that approximated adequacy, and even that one is subject to criticism (Rogers and Dymond, 1954)" (p.229).

This review was added to by Dittman (1966). Adding five more studies he found four out of fourteen to be positive evidence for psychotherapy, and ten out of fourteen favourable to psychotherapy.

Bergin (1971) comments:

"Actually, only two of the studies indicate that psychotherapy has any effect, and neither of them would be generally acceptable as evidence (Bergin, 1967a). Thus, these authors claim strong support for the average cross section of therapy, whereas I would argue for a more



modest conclusion" (p.229).

Keller's (1965; 1967) perspectives on the efficacy of psychotherapy are best summarised by Bergin:

"He believes that psychotherapy has thus been shown to be effective under restricted, specific circumstances, but that general tests of therapeutic effects, though sometimes favourable, yield mostly ambiguity" (Ibid, p.229).

The review by Truax and Carkhuff (1967) yielded 19 controlled studies indicating that treated patients did not improve more than the controls and 18 studies claiming the opposite. They state:

"Thus the weight of the evidence, involving very large numbers of clients or therapists, suggests that the average effects of therapeutic intervention (with the average therapist or counselor) are approximately equivalent to the random effects of normal living without treatment...." (p.12).

They add further:

"If all the studies on outcome were to be averaged on the basis of the number of clients involved, it is clear that the overall result would be close to zero effect beyond that observed in comparable clients not receiving counseling or psychotherapy" (Ibid., p.14).

If one examines these results carefully, certain therapists have consistently better results than other therapists and only about one-third of the therapists succeed in achieving an improvement in their patients, another one-third seem to have no effect on their patients at all and the other one-third do their patients active harm. Although the overall conclusions of Truax appear to be in general agreement with that of Eysenck, the explanations

differ. Whereas Eysenck would seem to suggest that the improvement potential of patients is more or less normally distributed, Truax, on the other hand, suggests that the therapeutic ability of the therapist is, roughly, normally distributed. Meltzhoff and Kornreich (1970) comment critically on the Truax and Carkhuff review and point out their difference of opinion concerning the merits of the studies included, even those yielding positive results:

"Although these studies both positive and null, represent a meagre sampling of the experimental literature available for evaluation, from them alone we still arrive at an overall evaluation opposite of Truax and Carkhuff's. The disagreement is obviously due to a difference in our appraisal of the studies that comprise the evidence. Most of the studies seen by Truax and Carkhuff as presenting proof of the ineffectiveness of psychotherapy fail to meet acceptable standards of evidence from our point of view. We have reviewed these studies and have in each instance given the reasons why we believe this to be the case. Nor do we agree entirely on the evidence in favor of positive effects. As we have seen, there is congruence on only seven of eighteen studies. If we were to limit ourselves, then, to the studies selected by Truax and Carkhuff, we would find the positive evidence outweighing the null seven to one. They, however, found nineteen controlled studies claiming that treated patients do not improve more than controls, and eighteen claiming that they do. Even if we were to accept their appraisal this would hardly constitute overwhelming support of the ineffectiveness of psychotherapy" (p.177).

In 1970 Meltzhoff and Kornreich completed a survey of 101 individual investigations. They do not classify type of patient nor duration or type of therapy. Their major concern is for adequacy of research design and direction of outcome. These results are best summarized as follows:

	ADEQUATE STUDIES	QUESTIONABLE STUDIES	TOTAL
Positive	48	33	81
Null	9	11	20
Total	57	44	101

Summary of Outcome Research (Meltzhoff & Kornreich, 1970, p.174).

Reflected below are criterion measures that were used in the 101 controlled studies reviewed. The table indicates the percentage of studies falling within each category:

MEASURE	GOOD STUDIES	ALL STUDIES
Observed behaviour	53%	39%
Personality inventory or questionnaire	34%	27%
Rated behaviour	30%	27%
Projective technique	18%	19%
Q-sort	13%	10%
Objective performance test	11%	9%
Physical signs	9%	8%

Outcome Criterion Measures Used (Meltzhoff & Kornreich, 1970, p.60).

The authors spell out very clearly their criteria for adequate and questionable studies, positive, null and negative results:

"Adequate studies are those considered to fulfil the following criteria: (1) freedom from major design flaws that might invalidate the conclusions; (2) use of an appropriate control group and adequate sampling; (3) relative freedom from bias; (4) employment of reasonably objective, reliable, and valid criteria measures; and (5) presentation of suitably analysed and interpreted data. We are not seeking perfect studies, but

those that appear capable of replication, in which the principal experimental precautions have been taken, and that present results (regardless of direction) which merit a reasonable degree of confidence.

Questionable studies are those that, by design or the vagaries of research happenstance, do not meet the above standards in one or more respects. Included are those analogue studies that may be too limited to be generalized to clinical situations. In addition, there are otherwise good studies that were designed for purposes other than the evaluation of psychotherapy. They may have shortcomings as evaluation studies but present relevant data on the subject.

Positive results are those whose balance is distinctly in favor of the treated group. Null results are those which show no significant differences between the treated and control groups. Included in this category are studies in which some results are positive and some negative, but the balance of the findings does not show a clear advantage for either side. Negative results are those in which the balance is distinctly in favor of the untreated control group. Since studies in this category are practically non-existent, null and negative results are combined" (Ibid, p.76).

The authors conclude their overview of outcome section as follows:

"On the average, no demonstrable effects are based upon an incomplete survey of the existing body of research and an insufficiently stringent appraisal of the data. We have encountered no comprehensive review of controlled research on the effects of psychotherapy that has led convincingly to a conclusion in support of the null hypothesis. On the contrary, controlled research has been notably successful in demonstrating significantly more behavioural change in treated patients than in untreated controls. In general, the better the quality of the research, the more positive the results obtained" (Ibid, p.175).

However, Bergin (1971) referring to the Meltzhoff and Kornreich review, concludes:

"Nevertheless, assuming a viewpoint comparable to that of Cross and Dittmann, it may be surmised that this review similarly glosses over many deficiencies of method and consequent weaknesses in the evidence" (p.229).

Bergin was unable to elaborate further as the Meltzhoff and Kornreich reviews were still to be published and he was unable to ascertain the evidence on which they based their conclusion.

Bergin (1971) surveys 52 selected outcome studies published between 1952 - 1969. It was decided to construct a table that would most clearly illustrate Bergin's results:

Outcome	ADEQUACY OF DESIGN			Total
	1. Good	2, Fair	3, Poor	
Positive	5	12	5	22
Negative	3	9	3	15
In Doubt	2	4	9	15
Total	10	25	17	52

He summarizes:

"Of this cross section of 52 analyses from the literature, 22 are rated as positive, 15 in doubt, and 15 as negative evidence in relation to psychotherapy. Keller's review yielded a similar spectrum, as did Jonckheere's (1965) also. Thus, our comprehensive view of the literature must be considered more favorable than that of Eysenck's 1966 survey, although we certainly cannot point to more than a moderately positive, average therapeutic effect" (p.229).

However, in contrast with Keller (1967), Meltzhoff and Kornreich (1970) and Bergin (1971), Rachman (1971) presents his point of view:

"To sum up, it is disappointing to find that the best studies of psychotherapy yield discouraging results while inadequate studies are over-optimistic" (p.83).

One of the central issues to psychotherapy outcome research is that of the spontaneous remission hypothesis which postulates a tendency albeit general for individuals to recover from psychoneurotic as distinct from psychotic emotional states with the passing of a time span of about two years without any professional psychotherapeutic intervention.

Eysenck's (1952) formulation of the spontaneous remission hypothesis rested solely on Denker (1947) and Landis' (1937) inadequate uncontrolled survey data (Kiesler, 1966). In addition Levitt (1957) also cited several studies and reported a remission rate ranging from 43% to 97%. A rate of 41% to 77% improvement was cited by Eysenck, according to Subotnik (1972):

"Both Eysenck and Levitt rested their 'spontaneous remission' base rate (70%) on two reports apiece with dubious comparability to each other or to the reports of treatment" (p.156).

Bergin (1971) reviewing studies concludes on the basis of this review for spontaneous recovery from psychoneurosis a "median rate in the vicinity of 30 percent" (p.241). However, he cautions about these findings:

"Admittedly, these findings have weaknesses. They are not based upon rigorous, continuous observation of the long-term natural course of neuroses. They employ varying criteria and are based upon diverse, non-comparable samples. Thus, the rates vary from 0 to 46 percent, hardly a reliable index for any type of scientific work. The fact is that these figures, though, are based upon a much more solid base than the Landis-Denker data. They have their weaknesses, but they are the best available to date.....

It would be unfortunate if a new 30 percent figure were to be used as a baseline for neuroses, because the number is a mere abstraction that masks a heterogeneous collection of processes.....

Our new findings seem to square more closely with clinical observations of this fact" (Ibid., p.241).

However, Subotnik (1972) re-examines a further issue, namely, the widespread impression that control groups in this type of research have shown spontaneous remission. He finds that there is little evidence to substantiate such a claim. He thus concludes on the basis of Eysenck's (1952) and Levitt's (1957b) review of central recovery rates, the following:

"1. No general phenomenon of 'spontaneous remission' has been established. Existing reports suffer from contaminating artifacts and unvalidated clinical judgements. There is no evidence that improvement is a function of time, as the hypothesis requires.

2. Treated patients cannot be logically compared against a presumed remission rate derived from untreated patients, except in the context of a controlled study. Too many selective factors in patient characteristics and evaluation procedures distinguish treated and untreated groups in uncontrolled settings.

3. 'Push-out' patients, placed on a waiting list but never treated, the most commonly used comparison groups, may differ from treated patients on many factors, among which may be the one at issue; that is, they fail to follow through on treatment because they believe they are improving.

4. Any overall remission figure is an artifact" (p.168).

He postulates:

".....that psychological disabilities tend to fluctuate in severity rather than disappearing, a phenomenon that confounds both the attempts to evaluate spontaneous remission and to evaluate the effects of psychotherapy" (Ibid., p.157).

Subotnik finds support for stress or periodicity in the course of psychological disturbance (Lesse, 1964; Wilder, 1956; Wilder, 1956; Hoehn-Saric, Frank, Stone and Imber, 1969;

Pollitt, 1960; Giel, Knox and Carstairs, 1964; Robins, 1966; Fries and Nelson, 1942).

In addition he reports:

"There are those fluctuations that constitute a hallmark of the symptom picture as in cyclothymic personality disorders, in which depressed or hypomanic episodes or both are of limited duration but recur" (Ibid, p.167).

He further rallies evidence (Chassen, 1957; Lesse, 1964; Wilder, 1956) for fluctuations in response to external stress, which may act as a precipitator or exacerbator of psychological disorders. An additional source of fluctuation is the unreliability of psychological assessment techniques.

Subotnik concludes:

"In sum, until the course of psychological disorders is studied from a long-term perspective with attention to fluctuation phenomena, the evaluation of both 'spontaneous remission' and the effects of psychotherapeutic intervention will continue to be vulnerable to these confounding factors.....

Any adequate analysis of the course of treated and untreated psychological difficulties must take account of the fluctuation hypothesis, that is, cyclical manifestations of severity arising from exogeneous or endogenous factors" (Ibid., p.168).

A second central issue to the psychotherapy research outcome problem is that of helpful-harmful hypothesis. This phenomena is summarized by Bergin (1967):

"While some research studies reveal little difference in the average amount of change occurring in experimental and control groups, a significant increase in the variability of criterion scores appears at post-



testing in the treatment groups. This conclusion was drawn from seven (well-designed) psychotherapy outcome studies and was startling in that it directly implied that some treatment cases were improving while others were deteriorating, thus causing a spreading of criterion scores at the conclusion of the therapy period, which did not occur among the control subjects. Evidently there is something unique about psychotherapy which has the power to cause improvement beyond that occurring among controls, but equally evident is a contrary deteriorating impact that makes some cases worse than they were to begin with. When these contrary phenomena are lumped together in an experimental group, they cancel each other out to some extent, and the overall yield in terms of improvement (in these particular studies) is no greater than the change occurring in a control group via spontaneous remission factors" (p.247).

Bergin (1970) finds that (1) the deterioration effect is well established when based on a review of 30 studies; (2) that deterioration effect occurred in a "high proportion of cases studied and that occurrence was more evident in therapy samples than in control samples" (p.248). What brings about deterioration?

Bergin (1970) has the following suggestion:

"It seems likely that all therapists will occasionally encounter (in some patients) a deteriorating process which they cannot reverse and which does not tend to reverse spontaneously. On the other hand, there are probably two other classes of cases who deteriorate during a therapy period because of the therapist's intervention: (a) those who are deteriorating already and who can be helped, but the therapist is inept, and they continue to get worse; and (b) those who have already attained a neurotic equilibrium that is upset by the therapist, resulting in the initiation of a new cycle of deeper deterioration. Since no one would deliberately produce deterioration in an experimental way, it is difficult to demonstrate that therapists actually cause it or how it is caused. There is some naturalistic evidence on this, however, which will be discussed at a later point" (p.248).

Bergin (1970) proceeds to argue that measured deterioration is an artifact of criterion measurement error, explaining that the

deterioration effect is not common in the control sample. In addition, he argues:

"Also, it appears that the opposite of regression toward the mean is occurring, which makes the non-artifactual nature of the phenomenon seem more real" (Ibid., p.248).

To support his hypothesis he quotes the research findings regarding therapist behaviours that significantly correlate with improvement or deterioration.

These therapist behaviours have been identified and labelled as genuineness, non-possessive warmth and accurate empathic understanding based on the pioneer research of Betz (1963a & b); Whitehorn (1964), Whitehorn and Betz (1954) and the theoretical considerations of Rogers (1957) and Halkides (1958). Studies by Rogers (1963), Truax (1963), Truax and Carkhuff (1963), Truax and Carkhuff (1967), Rogers, Gendlin, Kiesler and Truax (1967) and Truax, Wargo and Silber (1966) comparing differential levels of genuineness, non-possessive warmth and accurate empathy led Truax and Mitchell (1971) to conclude:

"These studies taken together suggest that therapists or counselors who are accurately empathic, non-possessively warm in attitude, and genuine, are indeed effective. Also, these findings seem to hold with a wide variety of therapists and counselors, regardless of their training or theoretic orientation, and with a wide variety of clients or patients, including college under-achievers, juvenile delinquents, hospitalized schizophrenics, college counselees, mild to severe out-patient neurotics, and the mixed variety of hospitalized patients. Further, the evidence suggests that these findings hold in a variety of therapeutic contexts and in both individual and group psychotherapy or counseling" (p.310).

Bergin (1971) suggests that the deterioration effect does not

appear to be due to temporary regression similar to that experienced in the psychoanalytic process prior to reconstructive change. He feels that this is not what indications of deterioration measure at termination and follow-up, whether it be for brief therapy or long-term classical psychoanalysis. However, Bergin does not distinguish which of these two types of treatment yield the same or differential deterioration rate. Bergin explains the phenomenon of deterioration occurring more often on some criteria than on others as being attributable to the fact that personality change is multi-dimensional. He further suggests "that the more fragile and disturbed patients are the best candidates for getting worse" (p.250).

As mentioned previously, Truax (1968) attempted to explain the deterioration effect in terms of the effect of inefficient therapists. He mentioned that we were to believe that good therapy was powerful enough to have a beneficial effect on patients; it is thus reasonable to believe that "bad" therapy should have a detrimental effect.

The most distressing aspect is that no less than one-third of professional therapists appear to have a detrimental effect on their patients. Truax thought this was due to poor selection and training of professional therapists, which he felt could be rectified.

It is clear that Bergin sees the whole problem of the deterioration effect as infinitely more complicated than does Truax. Perhaps Truax's point of view is too simplistic, even so this does not necessarily mean that his views hold no validity.

Rachman (1971) re-examines the evidence on which Bergin (1971) bases

his deterioration hypothesis, and states that Bergin,

".....is perhaps a little uncritical in his use of the data. In particular he seems satisfied with the results obtained from a variety of tests and other measures which are either inappropriate or not known to be reliable or valid.....

In sum, then, the evidence in support of Bergin's contention is scanty. At best, the 'deterioration phenomenon' may provide a partial explanation for some of the so-called average psychotherapeutic outcome figures; it fails to provide a complete explanation. It has already been shown that even untreated patients show deterioration and, furthermore, such deterioration varies between different diagnostic groupings. The possibility that improvements and deteriorations in psychotherapy are determined, at least to some extent, by the effectiveness of the therapist is discussed by Bergin and has, of course, been the subject of extensive research by Truax and his colleagues. Lastly we should add that another determinant of therapeutic outcome (and probably the most important) is the selection of an appropriate and effective method of treatment for the particular disorder concerned.

The fact that Bergin's explanation is, at best, incomplete is, in a sense, a reassuring evaluation. Acceptance of his point of view as a complete explanation would imply one of the two following combinations mentioned above: psychotherapy is harmful as often as it is helpful and/or psychotherapy is conducted by therapists who are harmful about as often as they are helpful" (pp.85-89).

#### 1.5 Review of Literature : Outcome Studies with Children

The bulk of efficacy research in the field of child psychotherapy consists of reports by clinics and therapists of recovery rates. These studies do not use control groups. Reports of effectiveness are merely pooled and the mean results are compared with a "control" (consisting of defectors from Child Guidance Clinics) study acting as a baseline for children undergoing psychotherapy. Levitt's (1957, 1963) surveys are of this nature. These two surveys of Levitt's encompass reports on 9 359 cases including 5 140 cases

that were evaluated at closure of treatment and 4 219 were evaluated at follow-up.

Both these surveys span a 35 year period of child psychotherapy up to 1960. He arrived at the following findings:

- "1. About two-thirds of all cases are seen as improved to a noticeable extent at close of treatment.
2. This figure holds, approximately, for children classified as psychotic as well as those who are seen as having 'neurotic' disorders. 1
3. Children with acting-out symptoms have an improvement rate of only 55 percent.
4. At follow-up, nearly 80 percent of all cases are regarded as improved" (Levitt, 1971, p.475).

These two studies by Levitt merit a detailed analysis and will be discussed separately.

Levitt's 1957 survey of the results of psychotherapy: thirteen of the reports furnished data at close of therapy, twelve supplied results at follow-up only, and five gave data both at close and at follow-up. At close of therapy, studies combining percentages in the categories "much improved" and "partially improved", yielded a percentage improvement of 67,05%. Follow-up studies yielded an average percentage improvement of 78,22%. The studies combining data at close and at follow-up showed an average improvement percentage of 73,98%.

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1 Diagnostic categories based on adult patients do not hold clearly for children and adolescents. For purposes of rough communication, "neurotic" refers to a child who has not been diagnosed as psychotic, or as having a primary behaviour disorder or a special symptom. (Ibid, footnote, p.475).

For control data Levitt uses the results of Witmer and Keller (1942), and that of Lehrman (1949). These investigators followed up "defectors" from child guidance clinics. The term "defectors" being attributable to those patients who are accepted for treatment but break off their contact with the clinic without ever receiving treatment.

These so-called defector studies by Witmer and Keller (1942) and Lehrman (1949) yielded a 72,5% improvement rate.

Levitt compared his results with the percentage improvement of these "control studies" (72,5%) and indicated that improvement in the Witmer and Keller (1942) and Lehrman (1949) studies was higher than improvement at close and slightly lower than at follow-up.

Levitt (1957) comments:

".....it would appear that treated children are no better off at close than untreated children, but that they continue to improve over the years and eventually surpass the untreated group" (p.192).

When all the results of all the cases surveyed by Levitt are pooled, a 73,27% improvement was obtained, which more or less equated the 72,5% improvement rate for the controls. Levitt (1957) thus concluded:

"It now appears that Eysenck's conclusion concerning the data for adult psychotherapy is applicable to children as well. The results do not support the hypothesis that recovery from neurotic disorder is facilitated by psychotherapy" (p.193).

Levitt's 1963 survey: using 22 evaluation studies with the defector rate of improvement at 72,5%, he divides the studies into five diagnostic categories yielding the following improvement rates:

	<u>MUCH IMPROVED</u>	<u>PARTLY IMPROVED</u>	<u>OVERALL IMPROVED</u>
PSYCHOSIS	25%	40%	65%
SPECIAL SYMPTOMS e.g. enuresis, tics, school phobias	54	23	77
ACTING OUT Aggressive behaviours antisocial acting out	31	24	55
NEUROSIS	15	46	61
MIXED DIAGNOSIS	20	48	68
TOTAL	26,2	39	65,2

The baseline rate of 72,5% improvement for defectors is significantly higher than the overall improvement rate of 65,2%. Following his 1957 survey and eliminating two categories, that of psychosis and acting out, the overall improvement rate is 68,3%, which does not differ significantly from the defector rate of 72,5%. Levitt attributes the 5% discrepancy between this corrected rate and the pooled rates of his 1957 survey to differences in treatment, procedures, evaluation and sampling methods.

Thus once again Levitt is led to the conclusion that psychotherapy is ineffective in expediting recovery from emotional illness in children. Despite the fact that there are differential improvement rates between diagnostic categories Levitt cautions against a conclusion based on this data that might indicate that therapy is

more or less successful with any diagnostic group.

The rationale for using defectors as a base is indeed questionable.

Levitt (1971) rationalizes the use of defectors to provide a baseline for spontaneous remission rates as follows:

"Defectors appear to be the most appropriate medium for estimating the so-called spontaneous remission rate, provided that the group is properly selected. It should consist of cases which (a) have been subjected to the same diagnostic procedures as the treated cases; (b) have been accepted for treatment, and (c) have never had any formal therapy sessions.

The use of defectors as a baseline control is the salient hypostasis of the case for the unproven efficacy of child psychotherapy.....

However, when the defector sample conforms to the description in the previous paragraph, objective comparisons reveal no meaningful differences between treated and defector children" (p.475).

The Lehrman (1949) study merely concluded a one year follow-up of children accepted for treatment at a clinic but who had been withdrawn by the parents. This one year follow-up yielded an improvement rate of 70%, while Witmer and Keller (1942) had an 8-13 years follow-up and reported an improvement of 78%.

Furthermore, 76% of this sample were no longer children but were 18 years of age. Subotnik (1972) states that Witmer and Keller's report does not indicate why these children were diagnosed only and not treated. Despite these two reports differing in time sequence of follow-up and the difficulty of measuring change in the "status of disturbances in children, since symptoms may shift considerably with development to become more age appropriate" (Subotnik, 1972), Levitt, ignoring these differences and difficulties, does not even allude to them in his review of research in psychotherapy with children in 1971, but merely comments as



follows:

"The defector control has been sharply criticized, primarily on the grounds that defectors and treated cases are originally dissimilar on certain dimensions, such as intensity of disturbance, which render the defectors a biased control group" (p.475).

The use of defector control has been criticized by Hood-Williams (1960); Heinicke and Goldman (1960) and Eisenberg and Gruenberg (1961) chiefly on the grounds of dissimilarity on certain initial variables between defectors and treated cases, e.g. intensity of disturbance. In addition, Meltzhoff and Kornreich (1970) indicate the lack of control in monitoring variables such as motivation for help/change "and personality characteristics that lead one person to accept treatment and another to reject it" (p.22).

Heinicke and Goldman (1960), following in the tradition of Eysenck and Levitt, analysed the findings of 10 reports on the effectiveness of eclectic psychotherapy with children at follow-up, and again used the Witmer and Lehrman studies as controls. They obtained the following results:

<u>OUTCOME STATUS</u>	<u>TREATMENT MEDIUM</u> %	<u>GROUP MEAN</u> %	<u>CONTROL GROUP</u> %
Successfully adjusted	55	57	37
Partially improved	26	24	36
Overall improved	81	81	76

An 81% overall improvement rate is similar to Levitt's findings of 78,22% at follow-up. Heinicke and Goldman (1960) indicate that in a comparison of the control group with the children who received

treatment, the latter show a significantly higher percentage of successful adjustments as opposed to partial improvements. The authors opt on the side of caution as they fully realize that these control groups have serious flaws.

On returning to Levitt's (1959) study, in a different vein, it is found that he evaluates the cases treated at a child guidance clinic. Using more specific and stringent control to his survey, he evaluates the effectiveness of psychotherapy at one specific child guidance clinic; provides definition as to treatment, e.g. at least five one-hour therapy sessions and that more than one-half of the sample were treated by inexperienced therapists; in addition, he employs similar measures for outcome for both experimental and control groups.

The aim of Levitt's (1959) study was to compare the present psychological adjustment of a sample of cases treated during the period 1944 - 1954, with untreated defector type control groups, consisting of cases who had been accepted for treatment during the same period, but who had spontaneously terminated contact without having received treatment. Random samples of untreated (control group) and treated (experimental group) cases were drawn from the records and the cases were located. He eliminated defectors who had received professional help elsewhere after breaking contact with the clinic and thus their final sample for the experimental group was 237 cases and 93 for the control group. A total of 26 individual variables of five different types, listed below, was used:

- (a) Objective psychological tests - a short form of the MMPI, Barron Ego-Strength Scale, Taylor Anxiety Scale (TAS),

Bendig-Pittsburgh - short form of TAS.

- (b) Objective facts like marriage, service in the armed forces, institutionalization, etc.
- (c) Parents' opinions and evaluations of the child and his symptoms.
- (d) Statements about himself and his feelings by the child.
- (e) Clinical judgements of the child by the interviewers who collected the data.

An analysis on the data on the 26 variables revealed that there were no significant differences on the outcome variables of the experimental and control groups. Treatment is then re-defined as at least 10 interviews, and even then it was concluded that "the data from this study indicates that there is no difference at follow-up between the adjustments made by treated and untreated child patients" (p.345).

The most impressive of the studies employing a control sample matched for age, sex and symptoms was the Buckinghamshire study by Shepherd, Oppenheim and Mitchell (1966). The study comprised a treated experimental group of 50 randomly selected neurotic children aged between 5 and 15 years; and seen at the Buckinghamshire County Child Guidance Clinics for the period 1961 and 1964. A random sample of over 6 000 children who had never had psychiatric assistance was selected for control purposes and was matched for presenting symptoms and severity, age and sex.

Outcome ratings based on interviews with parents were taken in 1962 and 1964 by clinicians. The results obtained indicated that in the treated experimental group 65% were rated improved and in the untreated control group 61% received the rating improved.

In the experimental group 16% were rated as worse and only 9% of the control group. Thus 19% were rated as unchanged for the experimental group and 30% for the control group.

Levitt (1971) draws attention to the similarity of these results to his own two surveys (Levitt, 1957; 1965) and concludes:

"The Buckinghamshire investigation is impressive, despite the relatively small samples, as a rare instance of true random sampling. Its results suggest strongly that the so-called spontaneous recovery rate lies somewhere between 60 and 70 percent, no matter how it is estimated" (p.476).

However, Rutter (1970) in a less optimistic vein commenting on the Buckinghamshire research points out numerous methodological flaws:

"It assesses the effects of therapy of an unknown type and unknown quality on a group of children with disorders of largely unknown diagnosis. The groups were ill-matched, in that the clinic group included significantly fewer children with mild disorders (48 percent in the controls and 26 percent in the cases<sup>1</sup>) and significantly more from homes where the father was absent and the mother mentally ill. Furthermore, the follow-up period was two years, too long to assess the effects of treatment on a disorder with a high remission rate. In these circumstances treatment is to be assessed, not in relation to 'cure' but rather in terms of its power to shorten the duration of disorder" (p.71).

In conclusion there are divergent opinions concerning the process(es) and goals of psychotherapy; this was highlighted in the previous

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1 The  $X^2$  in the paper was not significant owing to the separation of moderate and severe disorders. However, the severe category was very small and if the  $X^2$  is repeated after combining these groups the difference is significant.

section which reviewed the efficacy research.

The Latin expression 'quot homines tot sententiae' seems most appropriate and in this case referring to reviewers and researchers, i.e. that there are as many opinions as there are reviewers and researchers.

Different investigators reviewing the same studies draw different conclusions. These different conclusions are often the result of reviewers superimposing their particular interpretational structures on the same data. Furthermore, most major researchers have employed the actuarial method to the results of post hoc studies.

The field of psychotherapy research has lacked a concerted organised controlled collaborative research programme which might offer solutions albeit limited to the present problems. The lack of this type of research exists for a variety of reasons set out by Bergin and Strupp (1972). Some of these reasons are: the lack of and motivational unwillingness of leading researchers and clinicians to design, execute and cope with the demand of the meticulousness of large scale research; the cost attached to the setting up of large scale administration facilities that collect and process data; the lack of control that this organisational structure might have and thus being unable to satisfactorily conclude the project. However, large scale collaborative research might only shed light on the superiority of one technique over another but not provide information on the exact mechanisms that are involved in the change process, nor might collaborative research yield information

regarding the contribution made by specific techniques to change or specific techniques applicable to specific patients.

Strupp and Bergin (1972) indicate directions for research other than large-scale collaborative studies; they feel that there is a necessity for research on the basic mechanisms of psychotherapy, naturalistic observations of psychological change, and intensive study of single cases in systematic manner.

Thus the reasons for the present confused state of efficacy research appear to be multiple.

Maybe as far back as the middle ages Paracelsus pinpointed several important considerations to be taken into account when dealing with recovery. Although he deals with physicians, what he has to say is equally applicable to anyone in the helping professions. He feels recovery is influenced by the lack of understanding of the causes of the diseases being treated, the knowledge or lack thereof on the part of the healer and the basic motivation of the physician.

Paracelsus quoted by Hall (1975) states as follows:

"But the number of diseases that originate from some unknown causes is far greater than those that come from mechanical causes, and for such diseases our physicians know no cure because not knowing such causes they cannot remove them. All they can prudently do is to observe the patient and make their guesses about his condition; and the patient may rest satisfied if the medicines administered to him do no serious harm, and do not prevent his recovery. The best of our popular physicians are the ones that do least harm. But, unfortunately, some poison their patients with mercury, others purge them or bleed them to death. There are some who have learned so much that their learning has driven out all their common sense, and there are others

who care a great deal more for their own profit than for the health of their patients. A disease does not change its state to accommodate itself to the knowledge of the physician, but the physician should understand the causes of the disease. A physician should be a servant to Nature, and not her enemy; he should be able to guide and direct her in her struggle for life and not throw, by his unreasonable interference, fresh obstacles in the way of recovery" (p.109).

C H A P T E R 2

METHODS AND PROCEDURE

In this chapter a detailed account will be given of subject selection and experimental design. It will be detailed how the present study was planned and how it had to be altered to meet the demands of the vicissitudes of research with human subjects and therapists.

2.1 Selection of Subjects

The Ss were all white children between the ages of eight years and eleven years referred to the Child Guidance Clinic of the University of Cape Town from 1973 through to 1974 for the four experimental groups and the Waiting List Control Group II. The school control, Control Group I, included the same age range. The exclusion criteria listed below applied for both experimental and control groups:

Intellectually sub-normal Ss;

Emergency referrals;

Straightforward diagnostic referrals, e.g.

IQ assessments, school readiness assessment,

and assessments of a similar nature;

Ss showing hard neurological signs of the

central nervous system dysfunction;

Afrikaans-speaking Ss, as the assessment

instruments that were used were not available

in the medium of Afrikaans.

Two hundred and forty-eight subjects were included in the study;



one hundred and twenty-four were boys and one hundred and twenty-four were girls. Distribution per group will be detailed further on.

In addition to the reviewed studies pertinent to the efficacy of child psychotherapy outcome research, it is necessary and pertinent at this stage to present data on the incidence of emotional disturbance in children and to indicate the background to subject selection of this present study.

The Underwood Report (1955) reports percentages estimated 5,4, 7,7 and 11,8 for children of school-going age that would need child guidance services. Lapouse and Monk (1958) feel that behaviour symptoms are widespread in children. Brandon (1960) reports a rate of 17,9%. Douglas and Mulligan (1961) in a post hoc longitudinal study found at the age of 15 years ,0009 percent had either enrolled in clinics or utilized psychiatric services. Rutter and Graham (1966) reported a prevalence rate of 6,3% in 10 and 11 year old children; they estimated that one-third possibly and one-third probably required treatment while the other third merely need diagnosis and advice. The actual percentage receiving treatment was ,07 percent. Eisenberg (1961), reporting on a review of the American literature, quotes a figure in the order of  $10 \pm 2$  percent for disturbed school children and one-tenth of those found to be in need actually receiving care. Rutter and Graham (1966) and Rutter, Tizard and Whitmore (1970) report a disturbance rate of 6,8% on the Isle of Wight. Pringle, Butler and Davie (1966) found 13,4% prevalence. Similarly, Chazan and Jackson (1971) report a figure of 13-14%. Atkins and Kolvin (1973), randomly sampling infant schools in Newcastle, found an 11%

disturbance rate. Using identical screening procedures (viz. parent and teacher questionnaires) to Rutter and Graham (1966) and Rutter et al (1970), Shamley, Frampton and Van der Spuy (1975) found an incidence of emotional disturbance of 13,1% in a random white Primary School Cape Peninsula (R.S.A.) sample, based on the same assessment criteria as used by Rutter (1970) and Atkins and Kolvin (1973).

It would appear that differences in definition of disturbance, methods of assessment and regional differences could contribute to the discrepant percentages. Garside, Hulbert, Kolvin, Van der Spuy, Wolstenholme and Wrate (1973), commenting on the British surveys state:

"While agreeing with Rutter et al (1970) that it is not possible to arrive at any adequate summary of the findings of the above studies, we would consider a further overall estimate of psychiatric disorder to be at least one child in ten" (p.3).

However, what is the actual referral rate?

Shepherd et al (1966) found 49% of parents with psychiatrically disordered children admitted to a disorder, and 15% of those children not receiving help from any other clinical source at all, wanted help. Brandon (1960) reports 50% of parents of disturbed children in the Newcastle area wanting help. This area is characterised by a tradition of paediatrician front line service (Garside et al 1973). Ryle (1963), conducting a survey of his general practice referrals, and Rutter (1970) found that only 1 in 5 children, manifesting some form of psychiatric disorder, were actually having some professional assistance.

There are several factors that account for this very low referral rate:

1. Long waiting lists that lead to selective intake (Rehin, 1972).
2. Children and adolescents are usually referred when behaviour is bothersome either to the parents, the social authorities, the neighbours, or institutions (Weinberger, 1972). Children are seldom self-referred. This intolerance of the child's behaviour by the parents is corroborated by Shepherd (1966 a & b) as a reason for referral. Further deterrents to referral are inadequate communication between parent and referral agent, especially in relation to gauche negotiations between teacher/principal with the parent of a disturbed child. This usually takes the form of no prior indication to the parent of disturbing behaviour. The parents are summarily summoned and they are confronted with the disturbing behaviour of their child. In addition they are not given full information as to the nature and kind of service rendered by the institution to which they are told to take their child for assistance.

Parents thus resist, especially if the behaviour is not manifest at home. Another reason for a low referral rate from parents of disturbed children is the prevalence of numerous myths associated with the word clinics, psychiatrists and psychologists - the implication that their child is mad/insane and the reflection on them as parents, aggravated by their identification with their offspring, further militates against them seeking help. A further factor, not highlighted by any research but repeatedly encountered when dealing with the initial intake referrals and initial interviews,

is the lack of paternal support. Mothers literally come for help behind fathers' back, the reason being twofold: fathers think there are no problems, and fathers are against the children coming to a clinic and seeing the psychiatrist/psychologist/P.S.W., and in fact, they themselves refuse to come. The legal implications of guardians and custodians have bearing on the continuation of any assistance offered, and fathers have to be gently wooed, more often than not, successfully. The mothers that come despite fathers' disapproval, are by far a small fraction of the society who are capable of defying the breadwinners' wrath at such a high cost of being informed on by one of their offspring, either the index patient or one of his siblings.

Other fears and beliefs are: of hypnosis, that the child will be put to sleep; or given a magic injection; and or a magic pill. Although these are feared, they too seem to have a fascination, and a few referrals manifest themselves each year for the magic cures.

Again, many parents refer disturbed children despite a certain breed of school authorities who do not feel that children should ever be referred for help. This too must be a force contributing to a low referral rate. One of the schools in the Cape Peninsula with an extremely low referral rate was found to have the highest proportion of emotional disturbance as assessed by the Rutter Scale A(2) (parents) and Scale B(2) (teachers) and a high under-achievement percentage. The results are embedded in the work of De Kock, Frampton, Van der Spuy and Shamley (1974). For ethical reasons this fact was not highlighted in the paper. An analysis of the Annual Reports of the University of Cape Town Child Guidance

Clinic showed that the School Authorities, a category of referral agent, is substantially lower than that of Parents, Relatives and Friends.

Social Classes II and III (see Appendix A) form the bulk of the University of Cape Town Child Guidance Clinic referrals; it is also these two social classes that are financially in the position to engage in private treatment. (Psychiatric and psychological treatments are covered by Medical Aid Schemes.) Referrals to the University of Cape Town Child Guidance Clinic are thus not necessarily a representative sample for the Social Classes II and III. What in fact might be more accurate, is that the University of Cape Town Child Guidance Clinic's referrals are not from the lower social classes, i.e. Social Classes IV to VI who, moreover, are not in a financial position to seek private assistance.

## 2.2 Groups

Originally it had been planned to have six methods of treatment in dealing with referral to the Child Guidance Clinic. It was also intended to have a minimum of 30 Ss to a group. Appropriate referrals (Ss) would then have been randomly allocated to five groups (i.e. the four experimental groups and Waiting List Control Group II) as they were referred to the Child Guidance Clinic. Control Group I was to be a random, screened, non-clinic, non-referred population and hence making a total of six groups. The original intentions had been followed as far as possible, but certain modifications had to be made due to practical circumstances as will be explained presently. Explication of each of the groups will be given and the format that was eventually necessitated.

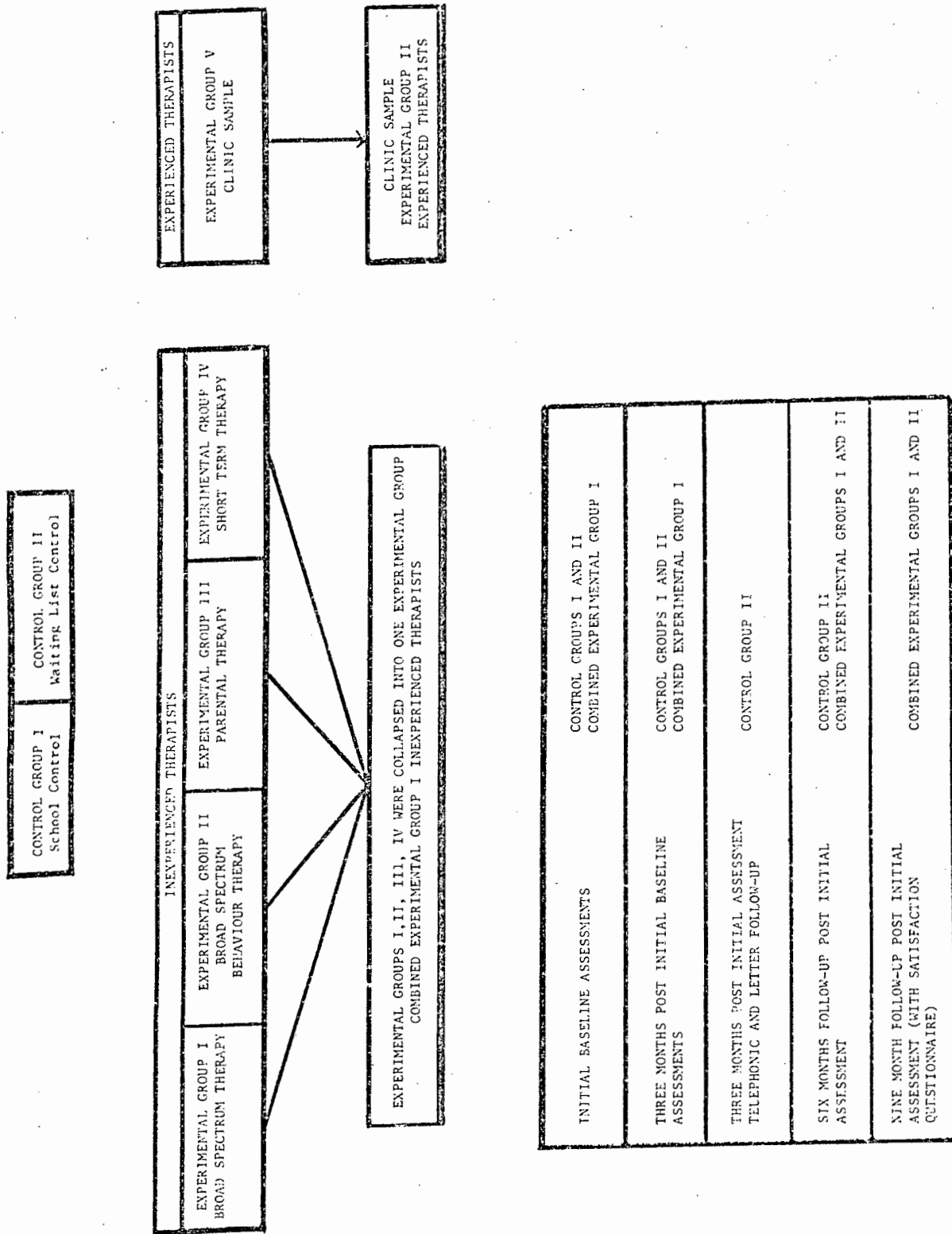


Figure 1. Experimental Design.

Subjects fulfilling the selection criteria were randomly assigned to the various experimental groups and eventually collapsed into Experimental Group I, see Figure 1. With the exception of the Short Term Therapy group, the intention was that they should be seen for a period of three months for a minimum of one hour per week, but in actual fact the majority of them were regarded as having made sufficient progress before three months had elapsed. Details are presented further on.

Control Group I - school control, a non-referred non-clinic population.

These subjects formed a control group in the community. They were not affected by any contact with the Child Guidance Clinic or any other clinic in the Cape Peninsula, either before their initial assessment or during the intervening three month period before the re-assessment took place.

Permission was given by the Cape Education Department for this screening. Once the school principals had agreed, parents were solicited to co-operate by letter and were instructed to give their written consent for their child's participation in this study.

Six schools were randomly selected from a list of schools provided by the Department of Education of the Cape Province and one hundred children were randomly selected from each of the six schools.

Final returns of the consent forms totalled 333 and thus testing began as detailed further on.

The purpose of including a school control was expressly to select Ss who had some degree of disturbance in order that they finally might be matched with the experimental groups. Hence the following

screening procedure was adopted to eliminate testing and re-testing the whole sample drawn.

Parents of the 333 pupils who had returned the parental consent forms were sent the Maryland Parental Attitude Survey for each of the parents and the Rutter Child Scale A(2). At the same time these 333 subjects were tested on the Otis Quick Scoring Mental Ability Test, the Holborn Reading Inventory and the Schonell Test No.5 Miscellaneous Combinations. The teachers were requested to complete the Rutter Child Scale B(2).

From the results obtained from these instruments selection took place of emotionally disturbed subjects according to the cut-off points suggested by Rutter (1972). The Junior Eysenck Personality Inventory, the California Test of Personality and the Benton Visual Retention Test were then administered.

The re-assessment was scheduled for a date three months from the initial testing date. All the baseline tests were re-administered except the Parent and Child Interviews and the medical examination. The final number of Ss fully re-assessed totalled 126 Ss of which 59 were boys and 67 were girls.

Grave problems were encountered with the re-assessment. Parents had to be sent repeated reminders to return the Child Scale A(2) and the Maryland Parental Attitude Surveys. Many found the latter too demanding to complete. The schools were not very partial to the carrying out of further procedures and thus for pragmatic reasons this group was not further followed up.



Control Group II - waiting list control. This group would be given an appointment for assessment immediately after the clinic was contacted and then would not be treated but left on the waiting list for a period of three months, then re-assessed and treated.

Due to ethical objections raised about leaving referred clients untreated on the waiting list for a period of three months for research purposes, it was decided not to obtain the waiting list control group by the same random allocation procedure as for the treatment groups. Alternatively, it was decided to use the last block of 30 referrals meeting the selection criteria before the Clinic closed in 1973. They were then to be re-assessed three months later once the Clinic had re-opened in 1974. The Clinic was closed for the annual vacation and no one was seen for treatment.

Thirty appointments were made and confirmed for the 12th December 1973. The following procedure was followed:

Baseline assessment procedures were carried out for the initial assessment except for the Parent and Child Interviews. The rationale for this was that these interviews could have a therapeutic effect, elimination of which was desirable. The full baseline test battery was re-administered three months later with inclusion of the Parent and Child Interviews. This re-assessment was followed by a report back interview to the parents. Where Ss had not shown adequate improvement they were carried as therapy cases by the clinician concerned. At no time were these cases allocated into the rest of the research treatment programme.

Of the 30 confirmed appointments, only 11 Ss arrived for the initial assessment. Three months later only 6 out of the initial 11 subjects

were available for re-assessment.

Those 19 that failed to keep their appointments were then contacted either telephonically or by letter. The reasons for failure to keep appointments will be tabled in the results section.

A follow-up procedure was carried out for this group three months after the December date in 1973. Thus the total number of Ss in this group finally came to 6, 2 being boys and 4 being girls.

Experimental Group I - Broad Spectrum Psychotherapy. The traditional run-of-the-mill psychotherapy was carried out on the patients in this group. This is the usual eclectic psychotherapy used with some variation at the majority of child guidance and related establishments. It is basically insight-oriented, but is tolerant of some behaviour therapy and special techniques. It is the form of psychotherapy traditionally used at the University of Cape Town Child Guidance Clinic. According to Phillips and Wiener (1966), a wide variety of approaches may come under the rubric eclectic psychotherapy; the range is so vast that in fact no homogeneous body of literature represents this approach. This approach is loosely organised and provides no consistent set of guiding principles for integrating and solving problems. Phillips and Wiener (1966) further feel that because it lacks "a consistent theoretical bent, its success appears to depend largely on the temperament of the therapist and his own empirical skill with select problems he has encountered before" (p.140).

Subjects (N21) were to be assessed and reassessed on the standard assessment procedures as set out in section 2.4 - Outline Assessment

Instruments and Procedures for Baseline Assessment and Re-assessment. The time periods are indicated in Figure 1.

Experimental Group II - Broad Spectrum Behaviour Therapy.

In this condition subjects (N7) were treated and managed according to behaviour therapy principles with an emphasis on 'broad spectrum' behaviour therapy (Lazarus 1972). Stress was on behaviour modification even though in some cases additional supporting techniques were necessary. The basic feature of this type of treatment is behaviour modification rather than an acquisition of insight.

The emphasis again was on long term treatment and the time stipulation, assessment/reassessment instruments, was as for broad spectrum psychotherapy above.

Protagonists of a broad, all-inclusive field of behaviour modification are Lazarus (1971), Marks (1971, 1976), Marzten (1970), Paul (1969) and Skinner (1971).

Experimental Group III - Parental Therapy; Therapy with Parents only (N14). After the initial interview(s) and psychometric assessments, the parents only were then seen in an eclectic approach including play therapy, remediation and discussion. Where remedial education was indicated, an attempt was made to teach the parent to fulfil the role of the remedial teacher. Where indicated, attempts were made to involve parents in group discussions. Here again the emphasis was long term and the time stipulations, assessment/reassessment procedure, were identical to that of Experimental Groups I and II.

This type of therapy in the child area owes its impetus to the research of Rioch, Elkes, Flint (1965) and Truax (1968) in their attempt to overcome the shortage of therapists by training non-professional therapists, thus adding to the earlier conceptualization of Schofield's (1964) formalization of the therapist as a friend. The mother tends to be the focus for training as a therapist. Very divergent schools of treatment have utilized parents as change agents for their children: the behaviour therapists (Allen and Harris, 1966; Bernal, Duryee, Pruett and Burns, 1969; Cantrell, Cantrell, Huddleston and Woolridge, 1969; Engeln, Knutson, Laughy and Garlington, 1968; Herbert and Barr, 1972; Johnson and Brown, 1969; Lindsley, 1970; Mira, 1970; Patterson, 1968; Patterson and Brodsky, 1966; Patterson, McNeal, Hawkins and Phelps, 1967; Patterson, Ray and Shaw, 1961; Patterson, Shaw and Ebner, 1969; Risley and Wolf, 1966; Salzinger, Feldman and Portnoy, 1970; Toepfer, 1973; Tough, Hawkins, McArthur and Van Ravensevaay, 1971; Wagner and Ora, 1970; Wahler, 1967, 1969a and 1969b; Wolf, Risley and Mees, 1964; Zeilberger, Sampen and Sloane, 1968; and Zlutnick, 1970) and the Rogerians (Guerney, 1964; Fuchs, 1957; Moustakas, 1959). In fact, precedents for this type of therapy exist prior to 1964 in the literature. Freud's treatment of little Hans is a well-documented example. In 1959, Moustakas advocated play therapy sessions to be conducted by parents of relatively normal children at home. Fuchs (1957), directed by her father, C. Rogers, conducted play therapy sessions with her daughter and overcame a toilet training problem.

Guerney (1964) describes filial therapy, its rationale, and gives the following synopsis:

"Filial Therapy involves training parents, in groups of 6 to 8, to conduct play sessions with their emotionally disturbed young children, using an orientation and methodology modeled after client-centered play therapy. After training, the parents conduct their play sessions at home while continuing their weekly group meetings. Parents' sessions with their therapist begin with discussion of the play sessions, but may extend to any other areas that are emotionally relevant. Preliminary experience with 2 groups suggests that this type of method is deserving of further exploration as a method of increasing leverage of professional resources, and as a tool for gaining further insight into children's fantasy and parent-child relationships" (Ibid., p.304).

Stover and Guernsey (1967) elaborate further; it is their belief that the behaviour under consideration to be changed was learned or acquired in the presence of the parents or under their influence or through their attitude. There appears to be a similarity between filial therapy and behaviour therapy, where the emphasis is on "determining the factors of parent behaviour that maintain deviant child behaviour" (Levitt, 1971, p.481).

Truax (1966) draws attention to the similarities between the elements of client-centred therapy and behaviour modification.

Stover and Guernsey (1967) present data that suggest the effectiveness of filial therapy. D'Angelo and Walsh (1967) concluded that counselling the mothers of emotionally disturbed children is more efficacious than counselling the mother and therapizing her child, or only therapizing the child, or counselling both parents or mother, father and child.

However, Levitt (1971) sombrely evaluates the position of filial therapy:

"Its practicality in a world of professional scarcity,

as well as its efficacy, remain to be demonstrated"  
(Ibid., p.482).

Experimental Group IV - Short Term Therapy (N22). After the initial intake interview(s) and diagnostic psychometric sessions, therapy and handling was restricted to five sessions, spread over a period of no longer than six weeks. If remedial education was required after this, it was arranged to be done either by the mother or a private teacher. The stress was on insight - oriented methods, but there were no limits on the methods based on learning theory or special techniques where they appeared to be indicated. The emphasis here was on short term therapy.

Short term therapy is mentioned by Rank (1947), Shlien, Mosak and Dreikurs (1962) and Taft (1963).

Modern psychopharmacology and the learning variety of therapeutic techniques presently available, still do not cope adequately with the ever-increasing mental health problem. The milder emotional disturbances are still in dire need of help. Short term therapy may offer such help as might be required. Individuals with milder emotional problems are often unwilling to avail themselves of what they regard as stigmatized treatment in a hospital, or are reluctant to indulge in a lengthy treatment programme; furthermore, they might simply not be in a position to afford the financial cost accompanying a lengthy treatment programme.

Very often short term therapy of a structured directive variety may meet their requirements. Phillips and Wiener (1966) point out the widespread usage of this type of help as follows:

"In medicine, as in social work, law and other service professions, limited help (first aid or a small boost) is an accepted technique of treatment or of solving problems. Minor aids, judiciously applied, can be crucial in avoiding defeat or damage and in turning the organism toward success as seen in the development of children" (p.4).

One thus aims at limited goals in a direct and concrete fashion. Whether basic change or minor adjustment is achieved, is still open to debate.

There are a large number of studies in short term therapy, also referred to as brief therapy, time-restricted therapy or time-limited therapy.

Two trends of thought have contributed to the increasing interest in short term therapy: one is Parkinson's law of diminishing returns, i.e. the longer the time spent in therapy, the poorer the results; the other is with a time limit imposed both helper and helpee will proceed at an accelerated pace to achieve the therapeutic goals set.

Numerous investigations and therapists in diverse fields of therapy have shown interest in short term treatment, from the analysts Alexander and French (1946), Fairbairn (1952) and Knight (1941) through to the behaviour therapists Wolpe (1952, 1954), Lazarus (1960, 1963), Marks and Gelder (1965), Gelder and Marks (1966), Hain, Butcher and Stevenson (1966) and Pascal and Zax (1956) and many more authors employing behaviour change techniques, too numerous to list. Those that have shown interest in short term psychotherapy are Alexander (1951), Allen (1942), Baker (1947), Bonime (1953), Cramer (1974), Gliedman, Nash, Imber, Stone and

Frank (1958), Grinker (1947), Gutheil (1944), Harris and Christiansen (1946), Morton (1955), Phillips and Johnston (1954), Phillips, Test and Adams (1964), Malan (1975) and Waltzer (1975).

However, despite abundant research studies, short term therapy is a vaguely defined procedure. The duration of short term therapy seems to vary with the whim of the researcher, from one session suggested by Taft (1933) to 125 by Wolpe (1952, 1954). Furthermore, the reported studies do not concur on time variables such as "unit duration, amount, frequency and regularity" (Meltzoff and Kornreich, 1970, p.340).

#### Control for Therapist Personality

The trainee therapists employed for the execution of this research were each required to administer all four forms of therapy in an attempt to control for the influence of the therapists' personality.

#### Problems Experienced with Initial Research Design and Modifications Made

A fair amount of hostility about the research, which came mainly from the senior clinicians who had to supervise the trainee therapists, affected the programme adversely.

Furthermore, there appeared to be a problem in keeping the various experimental groups distinct in practice. For reasons explained below the four experimental groups were collapsed into Experimental Group I: sixty-four Ss were seen; 49 were boys, 15 were girls. Broad spectrum psychotherapy, already a general eclectic pot-pourri with an insight orientation slant, was the prevailing traditional mode of therapeutic intervention at the Clinic. Broad spectrum



behaviour therapy implying an undogmatic form of behaviour therapy with emphasis on reinforcement, overlaps considerably with later exponents of therapies within the insight orientated therapeutic tradition, i.e. Rogers and the neo-Rogerians like Truax, Carkhuff and Ginott. Leading exponents of both schools recognise and admit the overlap.

In parental therapy the focus was on the parents, i.e. counselling and guidance to them in the handling of their children. Thus the children were not seen for therapy; they were only seen for assessments. This group, it was felt, maintained its distinctive characteristic.

In short term therapy, therapy was stipulated as a maximum of five sessions. In practice it was found that a large number of other patients in fact did also not require more than five sessions. It maintained its separate character only insofar as there was a planned intention from the start to have no more than five sessions of therapy, whereas in the other cases there was no initial plan to limit the sessions. In reality this distinction became almost purely academic and it was almost impossible to regard three of the experimental groups as separate experimental groups. The four collapsed experimental groups thus formed one experimental group called Experimental Group I. Their results were, however, also analysed separately even though it was difficult to keep the techniques distinct; it might still be that the difference of interest might have an effect. The parental therapy group did of course constitute a separate group.

This experience appeared to concur with that of a study of psychotherapeutic process research reported on verbally by Truax at the International Congress of Applied Psychology in Amsterdam in 1968. Truax compared what actually happened during therapy conducted by psychoanalysts, compared with Rogerian therapists and with behaviour therapists. Truax

actually found after analysis of taped interviews of these three types of therapy that there was a large overlap in techniques despite wide differences of the therapist approach. Behaviour therapists actually spent an average of only 20 minutes of an hour on specific behaviour modification techniques, the rest of the time they indulged in what can be seen as something akin to more conventional psychotherapy, whereas psychoanalysts did a vast amount of unintentional desensitization by discussing anxiety provoking situations in a relaxed atmosphere.

As far as it is known this research has never been published. These findings would certainly appear to be akin to some of the difficulties experienced in the present study in keeping the therapeutic techniques practised in the various experimental groups totally distinct. Nevertheless, as stated before, as a matter of interest the results of the four therapy groups both separately and combined for Experimental Group I were analysed.

#### Experimental Group Cases seen by Experienced Therapists

The conviction gradually grew that it would be erroneous to base the assessment of outcome exclusively on the performance of trainee therapists. It appeared reasonable to assume that experienced therapists would probably have better results than trainees. On the basis of this it was then decided to generate Experimental Group II which consisted of cases seen by experienced therapists.

These 34 Ss, 22 boys and 12 girls, were seen during the period 1973-1974 corresponding to the time period of Experimental Group I.

At first it was thought that statistically viable numbers of a matching sample would not be obtained. There should have been no viable matchable sample in the clinic population as they should have all been included in the research programme. On methodically tracing each case, checking that

it matched the selection criteria, it was found that cases had been syphoned to the experienced clinical psychologists during 1973 and 1974, hence facilitating a matching of a research group sample with a sample not initially included in the research, further permitting a comparison between trainee therapists and qualified therapists. This syphoning off took place presumably in an attempt by clinicians to keep as many cases as possible out of the research programme as a direct result of hostility to the research. This hostility will be discussed in greater detail later. As it happened, this syphoning off eventually appeared to be a blessing in disguise, as it enabled us to compile a matched group seen by experienced therapists.

It was possible on a post hoc basis through file inspection to allocate these cases into one of the types of therapy, viz. broad spectrum therapy, broad spectrum behaviour therapy, parental therapy and short term therapy, as details about diagnostic classification, treatment procedures and various other clinical data are comprehensively recorded in the files on a routine basis.

Subjects were then followed up after therapy and parents were contacted to complete the Satisfaction Questionnaire.

These results will also be analysed according to the research categories listed above, but because of the lack of control we have had over these cases, they will also be analysed simply as a collapsed single group seen by experienced therapists.

### 2.3 Testers

All testers for Control Group I, i.e. the school control group, were third year psychology students, who had been trained in the administration of the specific tests by the experimenter. The placement and supervision of these testers in the various schools was done by the director of the

clinic, a psychology trainee and the experimenter.

### Therapists

Therapists consisted of two distinct groups: trainee therapists who could be regarded as inexperienced as opposed to experienced, qualified and registered clinical psychologists.

The trainee therapists were all post-graduate students, who had a minimum of four years psychological training and one year's post-graduate training. A total of 11 trainees was involved.

There were five qualified experienced therapists, three women and two men, who have been registered clinical psychologists for periods varying from one to eight years.

### Trainee Therapists: Training of 1973 Trainee Therapists.

Eleven trainee therapists received daily training in test administration and in the different types of therapy used in this programme.

Therapy Training. The therapy training was given in the form of seminars, demonstrations, case presentation and individual case supervision of the four kinds of therapy involved in the research programme. After the first two months of intensive training on a daily basis, individual case supervision continued throughout the research programme on a bi-weekly basis.

In addition, five hours weekly were allocated to trainee therapists for group discussion of therapy, psychotherapy research and the research programme as a whole.

Once the trainee therapists were deemed ready, Ss were allocated to them.

Each of the trainee therapists was required to apply all the various therapy techniques required by the research design in an attempt to control for therapist personality.

The rigid application of the various experimental treatments only applied to the trainee psychologists. The rationale for this was that they were new to all therapeutic procedures and it was felt that they should not necessarily apply any particular treatment technique better than any other.

Experienced qualified psychologists on the other hand were felt to have already established a therapeutic pattern and to have asked them to apply different techniques, i.e. behaviour therapy in which they were inexperienced would have caused an undue bias, as they would probably be less efficient with an unfamiliar technique. In addition, the research directors did not have the same control over the experienced therapists as over the trainees and it was not possible to include cases seen by them in the more detailed research procedure. None of the detailed testing was done. Nevertheless, some common procedures for the ascertainment of outcome were carried out so that a comparison might be made with Experimental Group I which fulfilled the more rigid criteria.

#### 2.4 Assessment Instruments

The assessment instruments used were not regarded as having adequate validity for the individual case. However, the assessment instruments selected do seem to have adequate group validity to use in an overall group assessment. More than this was not required for the overall purposes of this study.

It must again be emphasized that at all times the trainee therapists were instructed and requested to administer as many further individual tests as might have been required for clinical purposes.

There was too much individual variation in additional tests applied to use the results for the present research.

OUTLINE ASSESSMENT INSTRUMENTS, PROCEDURES FOR BASELINE ASSESSMENT, AND REASSESSMENT

Intellectual Assessment:

At Clinic: The Otis Quick Scoring Mental Ability Test:  
Alpha Form A, Beta Form A (Otis, S. 1937, 1965, 1936, 1969).

Personality Assessment:

At Clinic: The Junior Eysenck Personality Inventory (Eysenck, S.B.G., 1965).  
The California Test of Personality, 1953 Revision.

At Clinic: Primary Form BB, Elementary Form AA. (Thorpe, L.P., Clarke, W.W. and  
Tieggs, E.W., 1953).

Scholastic Assessment:

At Clinic: The Holborn Reading Inventory (Watts, A.F., 1944).  
Arithmetic: Test No.5 Miscellaneous Combinations (Schonell, F.J.  
and Schonell, E.F., 1960).

Cerebral Dysfunction:

At Clinic: The Benton Visual Retention Test, Revised Edition (Benton, A.L., 1963).

Instruments of Indirect Personality Assessment:

At Home: Maryland Parental Attitude Survey (Pumroy, D.K., 1966).  
Child Scale A(2). (Rutter, M., 1970, 1972).

At School: Child Scale B(2). (Rutter, M., 1970, 1972, 1975).

At Clinic: Parent Interview. (Graham, P. and Rutter, M., 1968).  
Child Interview. (Rutter, M. and Graham, P., 1968).

Medical Examination:

By own G.P.: Isle of Wight Survey: Medical Examination (Rutter, M., Tizzard, J  
and Whitmore, K., 1970).

Classifications:

A Tri-axial Classification of Mental Disorders in Childhood (Rutter, M., Lebovici, S.,  
Eisenberg, L., Sneznevskij, A.V., Sadoun, R., Brooke, E. and Lin, T.,  
1969).

Social Class Classification adapted by Van der Spuy, H.I.J., from the Classification  
of Occupations and Directory of Occupational Titles, Volumes I-III, 1972.

Additional Assessment:

Therapist Assessment:

Follow-Up Procedures

Follow-Up I : Six months after initial intake.

Follow-Up II: Nine months after initial intake.

Specific Follow-Up:

This follow-up refers specifically to Control Group II: three months after failure to  
keep initial appointment.

#### 2.4.1 Intellectual Assessment

##### Otis Quick Scoring Mental Ability Tests, Alpha Form A.

Arthur S. Otis, Ph.D. (1936-1938).

Description. The Alpha Test comprises 90 sets consisting of four pictures and designs. Both non-verbal and verbal testing can be completed in the same text books.

The Alpha 'Verbal' does require administration; it is not self-administering. Cut out stencils facilitate scoring for both Verbal and Non-Verbal scales.

Applicability. Otis (1936) suggests that the results of mental ability tests have the following applicability: for detecting over- and under-achievers, for heterogeneous grading, for streaming purposes, for comparing different schools or localities, for research purposes, and for guidance purposes.

Age Applicability. Applicable to grades one to four, equal to age of seven years to ten years of age.

Scoring. Scores may be reported as "IQ's" or "M.A.'s".

Reliability. Kuder (1949) reports a reliability of .81 for the Alpha Form A total score. Although this reliability figure is not strikingly high, it appears acceptable for group prediction and appraisal.

Evaluation. Spearman (1941) describes the Otis Alpha as practical and measuring "one single general ability".

Kuhlman (1941) criticised Otis who claims in the Alpha manual that the test is self-administering, i.e. the verbal section requires

someone to read the 90 instructions to the pupils. He indicates the drawbacks of self-administered tests focussing on the motivational and interest aspects which would tend to fluctuate from child to child, and possibly account for the great variability in I.Q. "when they are computed in the usual way". Furthermore, the "non-verbal" application rests almost entirely on the recognition of similarities, and the "verbal" test is almost equally limited. Kuhlman finds fault with the norms. Those given included "a much larger range than the ages that are normal for grades" (p.236). The test is also very heavily dependant on visual acuity and this visual acuity of the child will affect the results.

Rationale for Inclusion. The Otis Alpha Quick Scoring Mental Ability Test was not regarded as the most ideal instrument for intellectual assessment, but because of the large number of subjects involved and the very limited resources available, the choice was a pragmatic compromise.

Otis Quick Scoring Mental Ability Tests, Beta Form A.

Arthur S. Otis, Ph.D. (1937).

Description. The Beta test consists of 80 items. It is a revision of the Otis Self-Administering Test of Mental Ability.

Scoring. Same procedure as for Otis Alpha Form A.

Applicability. According to instruction in manual, test format 49, Beta Form A, was applicable for pre- and post-tests for the Control Groups I and II and Experimental Group I.



Age Applicability. Applied to grades four to nine which corresponds to an age equivalent of ten to fifteen years.

Reliability. The reliability, as computed by the correlation of comparable forms, according to Kuder (1949), yields a combined coefficient of ,96 based on grades four to nine inclusive.

Evaluation. The advantage of this test is its rapid scoring method. Practice items are not recorded on the answer sheet but in an analogous manner in the form of the test format. Otis does not instruct his tester on the advisability of guessing on items that are problematic to them. The same criticism levelled by Kuhlman (1941) against self-administering tests applies to the Beta version.

Rationale for Inclusion. Identical to that of the Otis Alpha.

#### 2.4.2 Personality Assessment Instruments

##### California Test of Personality, 1953 Revision

L.P. Thorpe, W.W. Clark and E.W. Tieggs (1953).

Description. This is an inventory type test providing information about personal and social adjustment characteristics of groups and individuals (N.B.E.R. Catalogue of Tests, 1973). The California Test of Personality yields 15 scores: self-reliance, sense of personal worth, sense of personal freedom, feeling of belonging, withdrawing tendencies, nervous symptoms, total personal adjustment, social standards, social skills, anti-social tendencies, family relations, school relations, community relations and total social adjustment.

Design. According to Thorpe et al (1953) this test is designed to reveal the status of certain "intangible" factors in personality and social adjustment.

Age Applicability. Two out of the five levels available were selected for the present study: Primary Form BB age equivalent five to nine years old; Elementary Form AA age equivalent ten to fourteen years old.

Administration. Individually when the child was unable to read, and in groups when large numbers of school controls were tested who could read. No specific time limit is imposed by this test.

The same forms were used for test and re-test assessment.

Evaluation. The authors admit to the fact that despite the fact of keeping the language level at 5th Grade level "a certain amount of misunderstanding on a number of items is inevitable" (Ibid., p.10). This was overcome by reading the questions to the children and allowing them to ask for clarification on any word they did not understand.

In addition the criticisms of a yes/no and forced choice answer system apply.

Reliability. For Primary Form AA and BB reliability coefficients on personal adjustment sub-categories range from ,70 to ,87 and a standard error of measurement range from ,08 to 2,87. On social adjustment the reliabilities ranged from ,51 to ,82 with standard error of measurement range from 0,88 to 2,36. The reliability coefficient for total adjustment was ,88 with a

standard error of measurement 3,76. The number of cases these figures were based on was 255.

For Elementary Forms AA and BB, personal adjustment categories report a reliability coefficient range from ,64 to ,93 with a standard error of measurement range from 0,76 to 3,44. The range of reliability coefficients for the category social adjustment was from ,59 to ,92. The total adjustment yielded a reliability coefficient of ,94 and a standard error of measurement of 5,02. These figures were based on a total of 648 cases.

Validity. Sims (1959) evaluates the validity of the California Test of Personality, commenting as follows:

"Evidence on the validity of personality inventories will, generally speaking, be indirect. The authors in this edition base their case mainly on the care taken in the construction of the revised test, and the reported usefulness of the first edition as a pre- and in-service training device for teachers, as an aid to counselors, clinical psychologists, and teachers in the study of problem cases, and as a tool useful in personality research. In support of their contention, they marshal a considerable amount of evidence, although one wishes at times that it all were reported with the exactitude contained in the statement that in some 90 publications of research the test has been found useful. Such expressions as 'school officials in increasing number' or 'many clinical psychologists' are, for example, not too easy to interpret.

In spite of limitations, however, the additional evidence on validity reported or referred to in the manual not only answers some of the earlier criticisms but convinces this reviewer that as a measure of self-concept in the, as of now, vaguely defined area called adjustment, this test is as valid as most such instruments" (p.102).

Junior Eysenck Personality Inventory

Sybil B.G. Eysenck (1965).

Description. This inventory was adapted from the EPI (Eysenck & Eysenck, 1965) which in turn was developed from the Maudsley Personality Inventory (Eysenck, 1959). The test consists of a total of 60 questions: 24 for the scales of neuroticism and extraversion and 12 for the lie scale. Normative information is provided for each year group from seven to sixteen and presented for girls and boys separately.

Application. This inventory was designed to measure the two major personality variables of neuroticism or emotionality and extraversion/introversion in children. In addition the Junior EPI has a lie scale and thus serves as a detector to faking.

Age Applicability. The inventory is applicable for ages seven to 16 years.

Administration. For those children who could not read, the instructions and questions were read to them. The test was administered in groups for the school control and individually for Experimental Group I. The test and re-test administration remained the same.

Scoring. This is done by means of one stencil for the extraversion, neuroticism and lie scale.

Evaluation.

Reliability: Split half reliabilities for the Scale for children aged from seven to 16 years are reported as follows:

Girls - ,633 to ,868 and boys - ,581 to ,864 on Extraversion;

Girls - ,802 to ,890 and boys - ,785 to ,839 on Neuroticism;

Girls - ,409 to ,767 and boys - ,607 to ,779 on Lie Scale.

There is a considerable increase in reliability with age, concerning only the extraversion scale test/re-test reliability:

"reliabilities average between 7 and 8; they tend on the whole to increase with age for E, a little less for N, while as far as L is concerned there is no obvious progression. All in all the test/re-test reliabilities are a little lower than split half reliabilities" (Ibid., p.11).

Validity. Validity at the moment is inadequate. The use and value of the lie scale is not adequately explicated, nor is an adequate clinical interpretation provided for various extraversion/introversion scores. This inventory, like the California Test of Personality, 1953 revision, bears the disadvantage of the yes/no answer system.

### 2.4.3 Scholastic Assessment

#### Reading

Holborn Reading Inventory. A.F. Watts (1944).

Description. Only one form of the test is available. Thirty-three sentences arranged in order of difficulty comprise the scale. Two scores are obtained: sentence recognition and comprehension.

Application. The test measures recognition and comprehension by utilising a single series of sentences, and attempts to obtain a grading of these abilities.

Administration. The test was administered individually. As no

equivalent of this test form was available, test/re-test administration was carried out. The comprehension section was administered to Experimental Group I but not to the two control groups due to lack of time allocation. Thus in the comparative analysis of data, the comprehension scores were not used.

Evaluation. The manual is very unclear as to scoring for errors. "Prompt him by telling him the words he is unable to name until altogether he has failed to name four" (Watts, 1970, p.4). Prompt means "to assist (a speaker when at a loss) by suggesting something to be said or (a recitor) by supplying the words that come next" (McIntosh, 1954, p.960). Watts really means that a "prompt" is regarded as an error and testing for recognition is stopped after the testee is assisted four times.

Furthermore, there is no clear statement of calculating a comprehension score; one presumes that the age equivalents are read off in the same manner as recognition scores are obtained.

Finally Flemming (1953) comments:

"Apparently no attempt has been made to derive figures for validity or reliability by calculating correlations with other measures of reading ability or by assessing the consistency of scores on split halves of the test or on the repetition of a second occasion" (p.580).

It nevertheless has a clear face validity as it actually assesses reading in the testing situation.

Rationale for Inclusion. It is a very economic reading assessment technique for both recall and recognition and very easily scorable. It screens out reading problems into two areas listed

for further investigation. Furthermore, the school control yielded the Cape Peninsula, R.S.A. norms (Corbitt and Shamley, 1974). It was according to these norms that the sentence recognition results were calculated. Interestingly enough, the position in 1944 in Britain was similar to the Cape Peninsula, R.S.A., pre-television era. A further difference concerning the British and South African school population is the earlier school entry age of British pupils.

Schonell Arithmetic Test No.5 Miscellaneous Combinations

Schonell, F.J. and Schonell, F.E., (1965).

Description. Schonell and Schonell (1960) state that "the first fourteen lines of this test consist of seventy of the most difficult combinations in the four processes. The combinations are arranged in mixed order primarily for discovering the pupil's efficiency in changing from one process to another" (Ibid., p.8).

Application. "The last thirty elements in the test consist of a selection of the most difficult combinations from the multiplication and division tables of 10, 11 and 12" (Ibid., p.90). A time limit of five minutes is imposed.

Age Applicability. Age norms provided for an arithmetic age from seven to fifteen years.

Administration. This test was group administered for the Control Groups I and II and individually or group administered for Experimental Group I.

Standardization was carried out on 2400 pupils between the ages of 7 and 14,11 years with a time limit of five minutes.

Evaluation. No test/re-test reliability figure or split half reliabilities are quoted; nor are there any statements concerning validity. The only type of validity that we can assume is that of face validity, as it actually assesses the child's ability to make calculations in the testing situation. The younger aged children found it very difficult to calculate across e.g.  $3 + 8 = 11$ . South African children in the sub-standards and early grades prefer to calculate downward

$$\begin{array}{r} 3 \\ + 8 \\ \hline =11 \end{array}$$

sticking rather rigidly to the vertical columns of the tens and units. The horizontal plane did elicit refusals.

Rationale for Inclusion. In order to obtain a very quick and accurate assessment of pupils in mechanical arithmetic abilities and to pinpoint the basic source of difficulty for further investigation, this test was selected. Furthermore, the school control provided Cape Peninsula, R.S.A. norms (De Kock and Shamley, 1973). It was according to these new norms that the results for the present study were calculated.

#### 2.4.4 Cerebral Dysfunction Testing

##### Benton Visual Retention Test, Revised Edition

Arthur L. Benton (1963).

Description. The test is described in the manual as a clinical and research instrument which is designed for assessment of memory,



perception and visuo-motor functions. It consists of three equivalent forms each consisting of ten plates.

Application. It is designed to supplement the usual mental examination of a person suspected of abnormality or impairment (N.B.E.R. Catalogue of Tests, 1973).

Age Applicability. This test has an age applicability of eight years and over.

Administration. Form C, administered individually to all groups, was employed both for test and re-test administration.

Validity. Benton admits that the validity of the test for diagnosing brain injury is not adequately established, although the purpose of the test was intentionally for diagnosing brain injury. Benton further claims that by using the appropriate cut-off points, this test will pick up 40% - 50% of brain damaged cases and this would only include 4% of non-brain damaged cases; this claim is more or less in accord with other claims made for memory or designs tests (Hannawalt, 1959). The manual lacks adequate description of the re-standardization procedure, population description, number of subjects, sex differences, statistical methods, reliability of the test, and the correlations among the three different forms of the test (Hannawalt, 1959).

Rationale for Inclusion. The Benton Visual Retention Test was both a clinical and research instrument. Although not highly discriminatory between visual perception and visual memory deficits, it was argued that it would be able to detect any gross

deficits in the two areas mentioned.

#### 2.4.5 Instruments of Indirect Personality Assessment

##### Maryland Parental Attitude Survey

Donald K. Pumroy (1966).

Description: It yields four scores: disciplinarian, indulgent, protective, rejecting. There is no alternative form of the test. The test consists of 95 paired statements, utilizing a forced-choice response for each set between two statements. The first five paired statements act as buffers and are not scored. Ninety items remain and these are paired statements representing each attitude an equal number of times; the maximum possible score for each attitude is 45.

Application: This instrument purports to measure parents' attitudes toward child-rearing. It is argued that "it seems obvious that the attitudes parents have toward child-rearing are related to the way they interact with their children, and this, in turn, should have an effect on the personality of their children" (Pumroy, 1966, p.73).

Age Applicability: The mean age for male parents was 25,28, SD 8,36; the mean age for female parents was 23,9, SD 5,90.

Administration: Parents were instructed to fill in the forms individually for both pre- and post-tests.

Evaluation: The main criticism to be levelled against the MPAS is the repeated and violent resistance parents had to this

survey. One couple burned their test forms.

The forced choice technique proved in numerous cases too much for them and hence many omitted some items and the material was rendered invalid for scoring. Scores are only comparable to means and standard deviations and are not graded in severity.

Reliability. For a sample of 30 male and 24 female college students test/re-test reliability is ,622 and ,730. Split half reliability is ,666 and ,843 for a sample of 45 female and 45 male college students. Pumroy (1966) claims that these coefficients of reliability ,675 and ,758 compare favourably to instruments of a similar nature.

Validity. Pumroy (1966) claims face validity for the MPAS. Brody (1964) established incorrect validity for the MPAS. Van der Spuy, Garside, George, Leitch, Kolvin, Wolstenholme and Tweedle (1975), concluding their comprehensive investigation into the validity of the MPAS, 'Studies in the validation of MPAS', comment on the validity of the MPAS: "It does not have adequate validity for the purposes of individual clinical decisions, but it appears to have adequate validity in indicating group trends to be retained as a research tool or an economical screen....." (p.17).

Rationale for Inclusion. The MPAS was selected to ascertain the relation of parental attitude towards the child, its relationship to disturbance and impairment. Instruments like the Parental Attitude Research Instrument (Schaefer and Bell, 1958) were rejected for failing to control for response set.

Behaviour Scales

Child Scale A(2) (Parents) (Rutter, M., 1972, personal communication).

Description: Child Scale A(2) is a modification of Scale A(1).

"A children's behaviour questionnaire for completion by parents. Thirty-one brief statements concerning the child's behaviour comprise the scale" (Ibid., 1972).

The parent is asked to indicate the frequency of occurrence of the behaviour, or the depth of its severity, or the extent to which the statement applies to the child. Each item is scored 0, 1 or 2, producing a total score within the range of 0-62 (Ibid., 1972).

The first section consists of eight health problems; the parent has to indicate the frequency with which the problems occur. Never, scores 0, occasionally, scores 1, at least once per week, scores 2.

The second section deals with five questions concerning habits. No, scores 0, yes mildly, scores 1, yes severely, scores 2.

The third section consists of 18 brief statements concerning the child's behaviour. The weight of 0 is attributed to "Doesn't apply"; 1 is attributed to "Applies somewhat"; and 2 is attributed to "Certainly applies".

Scoring: Rutter (1965) states that selecting children with a neurotic or anti-social disorder is a two-stage procedure.

Some disorder is indicated by children obtaining a total score of 13 or more; those whose neurotic scores exceed their anti-social scores are designated neurotic, and those whose anti-social scores exceed the neurotic scores are designated anti-social. When the

neurotic and anti-social scores are equal, the sub-scores are designated undifferentiated. Studies indicate that children falling into the category undifferentiated resemble anti-social children to a greater extent than the neurotic children in terms of their educational attainments (Rutter and Graham, 1968).

Age Applicability. The Child Scale A(2) is applicable for administration to middle age range children.

Administration. The Child Scale A(2) is administered to parents; the instructions are indicated on the form. It was used both for the test and re-test for Control Groups I and II and Experimental Group I.

Evaluation.

Reliability and Validity. No re-test reliability figures are available for inter-rater reliability; discriminative power of scores or discrimination between neurotic children and anti-social children is available from Rutter for the Child Scale A. As this behaviour scale is an improvement on the Child Scale A, it would seem reasonable to assume that the validity and reliability would at least be as good. The Scale A has outstanding credentials: re-test reliability + 0,74, inter-rater reliability with simultaneous ratings by mother and father +0,64 and +0,04 when fathers' scores were compared with the earlier scores obtained by the mothers. Scale A discriminated between a clinic and a non-clinic sample by means of the total score of 13 being the cut off point (Rutter et al, 1970).

Rationale for Inclusion. Rutter et al (1970), commenting on

the Child Scale A state:

"The findings suggest that the questionnaire may usefully be employed as a screening instrument to select children likely to show some emotional or behavioural disorder. As the scale differentiates neurotic and anti-social disorders, it may also be used as a standardised means of describing a child's disorder" (p.418).

It was for these reasons that the revised improved Child Scale A(2) was included.

Child Scale B(2)(Teachers) (Rutter, M., 1967, 1972; personal communication, 1975).

Description. The Child Scale B(2) (a slightly modified version of the original Child Scale B) consists of six brief statements concerning the child's behaviour. The teacher has to check whether the statement "certainly applies", "applies somewhat" or "doesn't apply" is applicable to the child in question (Ibid., 1972).

Scoring. The scores are weighted "2", "1" and "0" respectively, yielding a total score of 0-52 by adding the scores of the 26 items. Children achieving a total score of nine or more are designated as displaying some disorders. The same procedure is used as described in Child Scale A(2)(Parents) for designating children neurotic, anti-social or undifferentiated.

Age Applicability. This scale applies to middle age range children.

Administration: This scale is presented to teachers and completed as per instructions indicated on the Child Scale A(2) form. It was used for both test and re-test in Experimental Group I and Control Groups I and II.

Evaluation.

Reliability and Validity: No figures are available to date on the Child Scale B(2). Rutter (1975) does not quote further figures. As the Child Scale B(2)(Teachers) is an improvement on the Child Scale B, it would seem reasonably safe to assume the validity and reliability would at least be comparable.

Re-test Reliability for Scale B(2). Re-testing after a two month interval produced a product moment correlation between the total scores on two occasions for 80 subjects of +0,89.

Inter-Rater Reliability. One set of teachers rated 70 children, 2-3 months later a different set of teachers rated the same children, and the product moment correlation between the total scores on the two occasions was +0,72.

"It was concluded that the scale was reasonably efficient in differentiating children attending psychiatric clinics. Both anti-social and neurotic children were differentiated, but a slightly higher proportion of anti-social children than neurotic children were picked out by means of the scale"  
(Rutter, 1967, p.9).

According to Rutter (1967):

"Items that designate or compose the neurotic or anti-social children have been found to be reliably discriminating except for item 23 which does not meet five percent level for boys" (p.9).

Teachers with large classes do have difficulty in knowing each child and care must be taken with new teachers. Also, assessments in the first weeks of the school year with new class teachers could yield less fruitful results. Hence the School Control Group I was started only in the middle to end of the second quarter of the school year.

Rationale for Inclusion. The advantage of the Child Scale B(2) is twofold: it is short and a busy teacher can cope with the time calculated for completion; further the Child Scale B(2) makes diagnostic distinctions. Scales by Wickman (1928), Eisenberg, Lachman, Molling, Lochner, Mizelle and Connors (1963) and Ross, Lacey and Patrou (1965) all lack this essential attribute of diagnostic differentiation.

### Interviews

#### Interview with Parent

Graham, P. and Rutter, M. (1968).

Description. This is a structured open ended interview consisting of the following two sections.

Section I. The mother is asked "whether her child has any problem of behaviour or any nervous troubles" (Graham and Rutter, 1968). Should the answer be negative, the interview proceeds to Section II of the interview. With an affirmative answer, the interviewer waits until the mother completes her description and enquires whether there are any further problems. This procedure is duplicated until the mother reports that there are no other problems. The interviewer then enquires whether the mother felt the problems she had described "were more than would



be found with most children of her child's age" (Ibid., 1968). It is further elicited whether she had received help with her child's problems and whether she was desirous of further assistance. The mother was further asked what she thought was the cause of the problem and how it would persist without help. The mother was further requested to give the following for each problem described: date of onset, what happens when the behaviour occurs, contributory factors, frequency and severity, precipitation.

Having dealt with the spontaneously described problems, the interview proceeds to Section II. This consists of 36 questions "which are intended to cover the various areas of clinical importance" (Ibid., p.582). When symptoms have been elicited previously, the pertinent questions in this section were omitted, provided the interviewer felt he could elicit no further relevant information. Obligatory probes are attached to questions dealing with sleep and relationships with parents. Facilitative probes are suggested throughout for positive replies; however, the onus is on the interviewer to obtain a comprehensive account of the pertinent behaviour.

Age Applicability: This interview is used with ten to eleven year old children with problems. Despite the lower ranges of the present study being eight years of age, the experimenter felt very strongly about the down-scaling applicability of the questionnaire to be appropriate.

Evaluation:

Reliability. Reliability of the overall judgment of psychiatric abnormality with 268 parents was high. Reliability was also high

on rating individual symptoms where rigid behaviour criteria had to be met; but where inferences had to be made or relationships judged, reliability was less gratifying or convincing. The quality and type of spontaneous complaints varied appreciably on comparing two separate occasions when the parents were interviewed (Ibid., 1968).

Application. This interview is a diagnostic tool for both clinical and research purposes, having the advantages of being both structured and open ended. The interview with the parent gathers adequate information in a systematic fashion. Occasionally parents and clinicians complained that areas covered were too numerous. This criticism, the experimenter feels, is related not to the basic structure of this questionnaire, but stemmed rather from a different philosophical viewpoint.

Rationale for Inclusion. The requirements of both clinical and research purposes were met by including interviews with the parent in a way that no other existing questionnaire was able to fulfil.

#### Interview with Child

Rutter, M. and Graham, P. (1968).

Description. This interview with the child is also divided into two parts.

The first part of this interview is unstructured. The child was seen individually, "the aim being to get the child relaxed and

talking freely" (Ibid., p.565). The recommended room was free from clutter with only specific toys on view. The article by Rutter and Graham provides suggestions as to how this part should be carried out; however, each interviewer could adapt the interview to meet the needs of each individual child.

In the second part of the interview the child was systematically asked about fears, unhappiness, worries, irritabilities, tempers and peer relationships. Areas that are covered are specified, coded and categorised. However, the precise probing of the questions was left to the individual interviewer as indicated in the instructions. The child was also given tasks to perform to assess attention span, distractibility and persistence.

#### Applicability.

"The purpose of the examination is a determination of the nature and extent of any abnormalities of emotions, behaviour or relationships shown by the child rather than an evaluation of the psychodynamic development or aetiology of such abnormalities; the categories to be rated are listed in the schedule"  
(Ibid., p.563).

Age Applicability. This interview is conducted with children from seven to twelve years of age.

Administration. This is a half-hour diagnostic psychiatric interview which was administered according to the instructions.

#### Evaluation.

Reliability. Four studies of reliability and validity were carried out by Rutter and Graham (1968). They are cited below:

Inter-rater reliability based on different interviews.

Eighty-nine Isle of Wight children were used in this study.

When each of the examiners considered that the child

"had a definite and marked abnormality, the other examiner agreed in 90% of the cases and the product moment correlation between the two raters was ,84" (Ibid., p.566).

The overall agreement on inter-rater reliability based on the same interview was as follows:

"Inter-rater correlation ranged from ,63 to ,95 and there was usually better than 80% agreement on the rarely occurring rating points of definite and marked abnormality" (Ibid., pp.567-568).

Agreement in inter-rater reliability based on different interviews at the Maudsley Hospital was found to be

"appreciably less than those based on the same interview but greatly better than the first study" (Ibid., p.569).

Validity. Rutter et al (1968), basing the validity on the Isle of Wight children, found that the

"rating of 'definite and marked' psychiatric abnormality was made very much more frequently in the psychiatrically abnormal group (25 percent of boys and 43 percent of girls) than in the control group (3 percent of boys and 0 percent of girls), the difference being statistically highly significant (critical ratio = 3,86 for boys and 6,13 for girls,  $p < 01$ )" (p.571).

The authors summarize their evaluation of this interview in the following manner:

"Certain limitations of the interview must also be emphasized. The reliability of some judgements is still too low in inferring anxiety, depression, or emotional responsiveness.

Although, in this age group antisocial children were differentiated fairly well from children in the general population and neurotic traits, the interview offered little opportunity for the expression of aggressive or antisocial tendencies. It is unlikely that the interview would be of much value in differentiating the non-neurotic delinquent child from

the normal child. Finally, it needs to be stressed that the interview has been examined only in relation to its value in the diagnosis of the presence of psychiatric disorder. Its reliability and validity in the assessment of attitudes, emotional conflicts, motivations and other variables more relevant to the determination of aetiology or of the psychic processes associated with psychiatric disorder have yet to be examined" (Ibid., p.576).

Rationale for Inclusion: Our requirements for a systematic diagnostic tool that would indicate the existence and nature of a disorder were met by this interview.

"Surprisingly little has been written on the interview with the child as a diagnostic tool, in contrast to the voluminous literature on the therapeutic interview" (Ibid., p.563).

Hence this interview was accepted.

#### 2.4.6 Medical Examination

##### Isle of Wight Survey - Medical Examination Rutter (1970)

Description. The medical examination consists of two parts.

Part I: Elicited from parents - pre- and perinatal history.

Part II: Elicited from parents - early developmental history.

Past medical history.

Social and family history.

Medical examination of the child included: height, weight, vision, hearing, ears, nose, teeth, skin, lungs, heart, abdomen, locomotion system and sexual maturity.

##### Reliability.

"The general medical examination was useful and moderately reliable in the assessment of height, weight, visual acuity and overt strabismus.....

The reliability of the general medical examination was so poor in many respects that some of the findings were worthless" (Rutter, 1970, p.101).

Age Applicability. Nine and ten year old children on the Isle of Wight were used for individual study and the medical examination applied. For this study it was felt that a two year age discrepancy would not affect our needs. The medical examination was not required for analysis of the research data per se but to have the children checked out by their own general practitioners so that the exclusion criteria set out under 2.1 would be met; also that one would not apply or withhold a treatment from someone who had a grave physical medical problem. Any queries raised by the Isle of Wight Survey Medical Examination or by the G.P. were referred to the clinic doctor for further investigation and referral.

Evaluation. The authors feel methods of physical examination are in need of further standardisation. It must be stressed that children in the present study were seen by their G.P. and not as a school medical examination as was the intention of the Isle of Wight Survey Medical Examination. None of the children had routine audiometry. This did not prove to be a drawback.

Rationale for Inclusion: This medical examination was chosen to exclude from the research programme any child with gross neurological defects, retardation or severe physical problems, to meet the exclusion criteria, and above all to meet the ethical requirements in order to avoid psychotherapising anyone for physical ills.

2.4.7 A Tri-Axial Classification of Mental Disorders in Childhood.

An International Study - Rutter, M., Lebovici, S., Eisenberg, L., Sneznevskij, A.V., Sadoun, R., Brooke, E. and Lin, T. (1969).

Description. This classification is the result of the Third W.H.O. Seminar on Psychiatric Diagnosis and Statistics held in Paris in 1967. This Seminar was concerned with psychiatric disorder in children from 0 - 12 years. International participants were drawn from all disciplines, backgrounds and theoretical orientations. It was decided at this conference to emphasize and utilize clinical facts as a starting point for developing a classification rather than attempting to consolidate varied theoretical concepts with their divergent views on aetiology and pathogenesis of mental disorders. This poses grave problems in adult classification and adds even greater confusion to the classification of childhood disorders. The outcome of this seminar resulted in a suggested "Triple axis classification scheme". Axis No.1 encompasses the clinical psychiatric syndrome; the second axis gives a description, regardless of causation, of the child's intellectual development; and the third axis indicates aetiological or any other relevant factors. A glossary of terms is provided as a result of identical diagnosis having been coded by different psychiatrists. This forms a valuable guide. This classification system as it stands was seen as mainly a preliminary classificatory system that would be tried out internationally and be reported on in 1975 so that all inconsistencies and difficulties could be eliminated. This would be seen as a significant step in the development of that particular part of the I.C.D. covering child psychiatric disorders.

Rationale for using the Tri-Axial Classification. The University of Cape Town Child Guidance Clinic had up to the point of the commencement of the research project not used any international classification system but a system all of its own which proved totally meaningless for comparative research; thus it was decided that it was essential to introduce the international classificatory system not only for research cases but for the clinic as a whole.

Limitations. A great deal of resistance was expressed by clinicians resulting in omission of one or two axes and/or incomplete classifications. However, with some effort, complete classification for the research groups could be obtained. Difficulty was experienced chiefly on the first axis by the trainee therapists, as the presenting problem of the intake population of the clinic is not predominantly formulated as emotional or psychiatric disturbance but rather as a sample predominated by a variety of scholastic difficulties. Almost invariably these are associated with emotional disturbances and often the scholastic problems fade into the background during or after the first interview, and the emotional problems appear to be the dominant ones.



2.4.8 Social Class Classification adapted by Dr. H.I.J. van der Spuy from the Classification of Occupations and Directory of Occupational Titles, Volumes I-III, 1972.

- 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-collared workers, semi-professionals.
- Class IV : Skilled workers, qualified tradesmen, apprentices.
- Class V : Semi-skilled workers.
- Class VI : Unskilled workers, permanently unemployed, poor whites.....

Rationale for Inclusion. This system of classification was introduced in 1972 to the University of Cape Town Child Guidance Clinic for the purpose of ascertaining the social classes of the clients utilizing the services of the clinic. By the time this research project was on the way, this system was a regular feature in the run-of-the-mill information collected on clients. This classification system was used for both Control Groups I and II and Experimental Groups I and II.

#### 2.4.9 Additional Assessment

##### Therapist Assessment

Description. Therapists were requested to indicate their responses on a three point rating scale to the following:

1. Their initial ease or difficulty in dealing with the case;
2. Their evaluation of the appropriateness of the type of treatment the case had been assigned;
3. Their ease or difficulty to assess and treat the children within the rigours of the research programme;
4. Their views on the allocation of children to a specific treatment group as morally justifiable or not;
5. Their perception regarding the necessity for research in psychotherapy;
6. Further, they were asked to state their preferred school of psychotherapy;
7. Whether they had any difficulty in keeping the different therapy treatments separate and, if so, was this due to their basic hostility, unhappiness with or indifference to the present study.

Administration. All therapists of Experimental Group I, the inexperienced therapists, were asked to fill in their evaluations for each case seen. They offered considerable resistance, some refusing to fill in the evaluation, others repeatedly stating that they had never been given any assessment forms. Finally, each and every one of the inexperienced therapists were sent a set of the therapist evaluations by registered mail. All these assessments were posted on the same day. Those inexperienced therapists who signed for their mail informed the rest of their

colleagues. Again, the stalwarts were in a position not to fill in their assessments; they simply did not collect or sign for their registered mail, and still no explanation could be elicited. For reasons listed previously, the experienced therapists, Experimental Group II, were not asked to complete this assessment.

Rationale for Inclusion. The inclusion of the Therapist Assessment was carried out to establish the attitudinal set by which the therapists approached their task which might ultimately affect the outcome.

#### 2.4.10 Follow-Up Procedures

##### Follow-Up I

Description. Follow-Up I procedure consisted of two questions which were rated on a three point rating scale. These questions were:

Question I : How is the problem now?

Question II : Please rate the severity of the problem on the scale below.

Administration. The Follow-Up I with these two questions was carried out by an independent assessor not involved either with the research design or treatment programmes, six months after initial intake. The assessor who conducted Follow-Up I was not the same as the one who was to be used in Follow-Up II, to prevent bias. These questions were put to both Experimental Groups I and II. The assessor was provided with a list of names and addresses and telephone numbers of the clients. No prior

disclosure of the therapist's identity was made to the assessor. No immediate prior notice was given to the therapists of the dates of Follow-Up I ensuring that the results would be free from therapists' bias.

#### Follow-Up II

Satisfaction Questionnaire (J. Santa-Barbara, C.A. Woodward, S. Levin, J.T. Goodman, D.L. Streiner, L. Muzzin and N.B. Epstein, 1974).

Description. The Satisfaction Questionnaire was designed to tap consumer satisfaction and used specifically in this instance to explore parental satisfaction. Several alterations were made to the questionnaire. The nature of these changes was purely substitutional, i.e. University of Cape Town Child Guidance Clinic was substituted for Child and Family Centre and Chedoke McMaster Child and Family Centre; Clinic was substituted for Centre. Clinic Approach to Treatment replaced Family Approach to Treatment.

The function of this measure was "to assess satisfaction with services received, recidivism, degree to which family perceives changes, related to treatment and intervention" (Ibid., Table 1, 1974).

A 5-point Likert Scale is used for rating client satisfaction. However, in the present study a 3-point rating scale was used because all other additional assessment instruments were rated in this manner due to the fact that the present sample was not very large.

Questions 1, 2 and 4 ascertained whether it had been easy or difficult to obtain the services of the Clinic; whether parents felt that they should have received certain services but did not; and whether they would or would not return to the Clinic should the need arise. The type of response required to these questions was of the yes/no variety.

Questions 3, 6 and 7 covered areas of client satisfaction with services received; also the present severity rating of the problem; further whether any changes experienced were attributable to the services received at the Clinic. Question 7b elicited mothers' and fathers' reactions independently to the type of treatment received at the Clinic. Questions 5 and 12 were omitted.

Question 8 probed whether any member of the family had sought treatment in the last six months and from whom.

Question 9 goes on to enquire whether the original referral problem was still being treated at the Clinic.

Question 10 invites suggestions for improving the services at the Clinic.

Question 11 asks whether they have any pertinent information to relate about the family situation.

Question 13 allows the clients an opportunity to pose questions about the nature or purpose of the follow-up study.

Administration: Follow-Up II with the Satisfaction Questionnaire was carried out nine months after initial intake by an

independent assessor not involved either with the research design or treatment programmes. This questionnaire was administered to both Experimental Groups I and II. The assessor was provided with a list of names, addresses and telephone numbers of the clients. No prior disclosure of the therapist's identity was made to the assessor. Furthermore, no immediate prior warning was given to the therapists that their cases would be followed up in this manner, hence, these assessments are free of therapists' bias.

The total questionnaire was administered. However, due to the detail of the statistical analysis, only responses to Question 3 dealing with satisfaction of services received, Question 4 whether clients would return to the clinic, Question 6 how they felt about the original problem, Question 7 whether they felt the change could be attributable to the Clinic, were fully investigated with each other at Follow-Up I. Furthermore, they were compared with Therapist Assessment.

Validity. This questionnaire has face validity.

Comment. All parents contacted co-operated well and there were no refusals or difficulties.

#### 2.4.11 Specific Follow-Up for Control Group II, waiting list control

Description. Three questions were put to the clients who failed to keep their initial appointment on 12th December 1973.

These questions were:

Question 1: Was there any particular reason why your child did not come to the clinic for testing in December 1973?

Question 2: Would you like your child to be seen at a future date?

Question 3: How is your child now?

Administration. Yet another independent assessor traced and followed up 19 clients three months after the date of the initial appointment.

Rationale for Inclusion. As only 11 out of the 30 confirmed appointments were kept, it was felt that a dropout rate of 63,3% was excessively high and not compatible with the literature. It was decided to establish whether a spontaneous recovery had taken place, or whether a re-evaluation of the problem had occurred and treatment was not deemed necessary, or whether other reasons, like mother being ill, might have prevented them from keeping their appointment.

## 2.5 Statistics

The 2 G Test, a two-tailed t-test, and an analysis of covariance was used to calculate pre-test compatibility of different groups, pre- to post-test differences, follow-up results and therapists' attitudes.

### 2 G Test

Details are presented of the 2 G Test as it is a less well known statistical procedure.

Le Roux and Van Rooyen (1972) sketch the background of the 2 G Test, a non-parametric test, which historically speaking is not new but rather unknown. The 2 G Test, they state, is applicable when the data is available on a rough nominal scale. They further point out that the chi-square test is usually the most generally used to test the homogeneity of the frequency in the tables. However, the chi-square test has a very important limitation: the size of a frequency in a cell.

Although less well known than the chi-square, the 2 G Test is another test used to measure homogeneity of  $r \times k$  table. The statistic, 2 G Test, is approximately distributed as the chi-square with  $(r-1) \times (k-1)$  degrees of freedom. (The authors quote Wilks [1935] in support of this statement.) Thus the result is that the tables of the probability levels for the distribution chi-square are also used for the G Test. G is very easy to calculate provided  $n \log_e n$  tables are available; the rest is just a matter of addition and subtraction. This means that G is easy and also quicker to calculate than chi-square.

The statistic G is calculated by means of the following formulae: calculate the case of  $r \times k$  table where  $k$  is independent and  $r$  the dependent variable:

$$G = \sum_{ij} x_{ij} \log x_{ij} - \sum_i x_{.i} \log x_{.i} \\ - \sum_i x_{i.} \log x_{i.} + N \log N$$



where  $x_{ij}$  = frequency in cell  $ij$ , viz. the frequency in the  $i$ -th row and  $j$ -th column.

$x_{i.}$  = total frequency in the  $i$ -th row.

$x_{.j}$  = total frequency in the  $j$ -th column.

$N$  = total sum.

$\log$  = natural logarithms viz. to the base  $e$ .

Furthermore, a cell with a frequency of zero contributes nothing to the value of  $G$  so that the test is also applicable with low frequencies or a cell with a frequency that is zero.

For a mathematical discussion of this statistic the authors refer us to Kullback (1959); the relevant section is 5. Asymptotic Properties of Chapter 5, dealing with Information Statistics and the page references are 97-106.

#### Two-tailed t-test

A two-tailed t-test was used ensuring that the significance of change in either direction is tested, i.e. that patients/subjects may improve or get worse. In the present study t-tests for matched pairs have been used in testing for pre- to post-test differences for within-group differences. To test differences between groups a t-test for differences between two means has been used. The assumption being that certain subgroups of patients may have become worse on certain measures.

Analysis of Covariance

The model used is a one-way layout with one concomitant variable.

The general assumptions are

$$\tilde{\Omega}: \begin{cases} y_{ij} = \beta_i + \gamma z_{ij} + e_{ij} & (i = 1, \dots, I; j = 1, \dots, J), \\ \text{the } \{e_{ij}\} \text{ are independently } N(0, \sigma^2). \end{cases}$$

Under these assumptions the error sums of squares is found to be

$$\mathcal{P}_{\tilde{\Omega}} = \sum_i \sum_j (y_{ij} - \bar{y}_i)^2,$$

which may be calculated from

$$\mathcal{P}_{\tilde{\Omega}} = \sum_i \sum_j y_{ij}^2 - \sum_i J_i \bar{y}_i^2.$$

The sums of squares must then be adjusted and under  $\tilde{\Omega}$  we have

$$\begin{aligned} \mathcal{S}_{\tilde{\Omega}} &= \mathcal{P}_{\tilde{\Omega}} - m_{zv, \tilde{\Omega}} \hat{\gamma}_{\tilde{\Omega}} \\ &= m_{vv, \tilde{\Omega}} - m_{zz, \tilde{\Omega}}^{-1} m_{zv, \tilde{\Omega}}^2. \end{aligned}$$

where

$$\begin{aligned} m_{vv, \tilde{\Omega}} &= \sum_i \sum_j y_{ij}^2 - \sum_i J_i \bar{y}_i^2, \\ m_{zz, \tilde{\Omega}} &= \sum_i \sum_j z_{ij}^2 - \sum_i J_i \bar{z}_i^2, \\ m_{zv, \tilde{\Omega}} &= \sum_i \sum_j z_{ij} y_{ij} - \sum_i J_i \bar{z}_i \bar{y}_i. \end{aligned}$$

We are interested in the hypothesis

$$H_{\beta}: \beta_1 = \beta_2 = \dots = \beta_I$$

and if we denote  $H_{\beta} \cap \tilde{\Omega}$  by  $\omega$  we have that

$$\mathcal{S}_{\omega} = \sum_i \sum_j (y_{ij} - \bar{y})^2,$$

which may be calculated from

$$\mathcal{S}_\omega = \sum_i \sum_j y_{ij}^2 - n\bar{y}^2.$$

Again this must be adjusted so that under  $\Omega$  we have the sums of squares

$$\mathcal{S}_\omega = m_{yy,\omega} - m_{zz,\omega}^{-1} m_{yz,\omega}^2$$

where

$$m_{yy,\omega} = \sum_i \sum_j y_{ij}^2 - n\bar{y}^2,$$

$$m_{zz,\omega} = \sum_i \sum_j z_{ij}^2 - n\bar{z}^2,$$

$$m_{zy,\omega} = \sum_i \sum_j z_{ij} y_{ij} - n\bar{z}\bar{y},$$

To test the hypothesis  $H_\beta$  we use an  $\mathcal{F}$  statistic calculated with  $\mathcal{S}_\omega - \mathcal{S}_\Omega$  as the numerator and  $\mathcal{S}_\Omega$  as the denominator. The respective degrees of freedom are  $I-1$  and  $n-I-1$ .

If the hypothesis  $H_\beta$  is rejected, one can determine by the Scheffé-S method of multiple comparisons which of the contrasts is responsible for this. To apply the S-method, we need the variance of  $\hat{\psi}_\Omega = \sum_i c_i \hat{\beta}_{i,\Omega}$ , the estimate under  $\Omega$  of the contrast  $\psi = \sum_i c_i \beta_i$ , where  $\sum_i c_i = 0$ .

We have  $\hat{\psi}_\Omega = \sum_i c_i \bar{y}_i - \hat{\gamma}_\Omega \sum_i c_i z_i$ ,

and 
$$\text{Var}(\hat{\psi}_\Omega) = \sigma^2 \left\{ \sum_i \frac{c_i^2}{J_i} + \frac{\left( \sum_i c_i z_i \right)^2}{\sum_i \sum_j (z_{ij} - z_i)^2} \right\},$$

The Tukey-T method is not applicable because the estimates  $\{\hat{\beta}_{i,\Omega}\}$  will not in general have equal variances (or equal covariances) even if the  $\{J_i\}$  are equal (Scheffé, 1959).

## 2.6 Further Problems encountered with the Research

From the time of its inception the University of Cape Town Child Guidance Clinic had not undertaken an evaluation of the quality or effectiveness of the services it rendered to the community. It was therefore decided to do an evaluation of its efficacy as a Clinic. It was also initially planned to include some of the similar surrounding clinics in this evaluation, so that a comparison might be made, but their co-operation could however not be obtained.

Within the Clinic, as already mentioned, the evaluation research caused a vast amount of hostility in a number of the staff members, presumably because they felt threatened by it and because previously virtually no research had been done at the Clinic.

Thus the prevailing attitude towards this research programme was one of hostility. This hostility was verbalised overtly and was based on a misinterpretation of the total research engaged in by the Clinic, specifically this research programme. Research on the whole was viewed as unnecessary and everything connected with research was a waste of time and investment for both patient and therapist. It was regarded as interfering with the clinical service rendered by the Clinic to the community.

Furthermore, it was generally communicated to referring agencies that cases should not be referred to the University of Cape Town Child Guidance Clinic as they would only be used for research purposes. Though it was pointed out that only 14% of cases referred to the Clinic were involved in this research programme and that no child was refused treatment or provided with inferior treatment because he was included in this programme, this opposition never-

theless persisted. Unfounded rumours concerning the programme circulated among the Clinic staff and were spread to other institutions outside the Clinic. All attempts at presenting the facts were met with hostility.

Due to this opposition from the experienced clinicians, it was not possible to include their cases in a tightly organised and structured research programme. When it was eventually decided to investigate the efficacy of experienced therapists, this investigation had to be done on a post hoc and indirect basis. The trainee therapists involved in the programme were influenced and pressurized to adopt similar negative attitudes. Cases on the waiting list allocated to the research programme were mysteriously syphoned off to experienced therapists as non-research cases in violation of the Director's explicit instructions. This indicates the antagonism that existed at all levels to the programme.

Thus, the research programme was hampered; this was aggravated by a two-third absenteeism rate for the initial appointment in 1973, for the Waiting List Control Group II. The experimenter decided to run a second waiting list control group in December 1974 to augment numbers and to obtain a statistically viable sample. However, this was not to be. The Child Guidance Clinic ran into financial difficulties and emergency action was taken; the waiting list was closed in September 1974; all the part-time clinicians were requested to work at half sessional rate and requested to deplete the existing waiting list. The ideas of a further waiting list control group had to be abandoned.

This put a stop to an attempt to obtain further waiting list control subjects prior to and during the school vacation when the workings of the Clinic grind to a halt. As a result, the running of additional subjects for the waiting list Control Group II, although experimentally desirable, was now not practically possible.

As has been stated earlier, there are certain factors or variables that must of necessity influence efficacy and process research programmes. These research programmes do not take place in "wall-less" institutions. They take place in a building with a certain architectural and physical structure containing an hierarchy of trained, qualified, experienced, unqualified and inexperienced personnel plus trainees. The personnel and trainees are firstly human beings and secondly people with certain expertise. It would be clinically naive to assume that professional training transcends all prejudices and minor personality foibles, let alone age discrepancies manifest in the so-called generation gap in some instances; add to this enumeration, length of service, personal orientation and interest. The result is indeed a very interesting and potent dynamic brew that must of necessity exert some influence in its various combinations, creating an ethos with gaseous propensities capable of equal distribution unto all aspects of functioning of any institution or programme.

Studies cited up to the present give us the flavour of these subtly permeating influences which must surely have some bearing on the progress of efficiency and process research.

Grace (1974) bravely reports on her investigation in the following

manner.

She commences by posing the following question:

"Entangled in institutionalism the individual rarely questions the effectiveness of these organisational systems. Organisations proliferate and feed upon each other as epiphytes obliterating any understanding of the organisation's original reason for being" (p.3).

She details her goals as follows:

"Specifically, this study traces the process whereby initial goals of treating large numbers of poor, inner-city children on a short-term basis are transformed so that at the end of one year only five middleclass children, carefully selected so they will not be troublesome, have been chosen for long-term treatment" (Ibid., p.4).

She raises the following questions, some of which are rather embarrassing to the individuals in the helping professions, and courageously poses them without any attempt at being suggestive:

"This study raises questions as to the societal functions of such organisations: Do psychiatric treatment programs provide services for children or jobs for psychiatric specialists? Do such organisations treat or merely control deviance? What type of people compose the organisation? What are their personal goals and aspirations, and how is the organisational context influential in the attainment or frustration of these goals? Does a newly forming organisation respond to the needs of the clientele or does it primarily concern itself with the politics of survival in a pre-existent organisational structure? What is involved in the process of organisational development? These are some of the questions to which this study addresses itself" (Ibid., p.4).

Her findings merit a fair hearing as they spell out very clearly the inner machinations of the programme or institution.

She traces five factors and their development in the external

organisation affecting and distorting the initial goals set out. These were: (1) external organisational pressures demanding that children were in fact being seen, (2) the inability to develop a treatment methodology, (3) inter-administration changes necessitating a revised strategy and the lack of clarity to the programme director as to what was a suitable treatment programme for children, (4) the conflict between the Regional and Programme Director, (5) with the result that the primary goal now becomes the survival within the political field of the larger bureaucratic organisation.

Specific factors were:

"(1) the relatively low professional status of the program director....., (2) the availability of professionally untrained, college-educated, young staff....., (3) recruitment of consultants to conduct training programs for the staff.....incentives afforded the consultants served to bind the loyalty of the consultants to the program director. In addition to the supplemental income, consultants had much to gain through this work. First, being a consultant in any professional group is considered to be recognition of a high degree of competence in that field. Private practitioner psychiatrists repeatedly encountered children that needed services beyond those they could offer within the confines of their office practice. They, therefore, had a vested interest in the creation of a particular type of treatment program which could serve as an adjunct to their private practices....., (4) the interlocking system of program director, staff and consultants which created a situation rendering the program director in full control of her staff.....

The first managerial problem tackled by the program concerned the structuring of relationships between the participants to promote in-group solidarity and thereby diminish the probability of participants establishing relationships with others outside the confines of the program.....

The training process was closely associated with diagnosis, in that, as the program developed, an increased emphasis was placed upon rapidly making decisions as to which children presented in Intake and Screening contacts would be suitable candidates for presentation in the diagnostic case conferences.....



An analysis of the structure evolved at the end of the first year of the program's development revealed an increased sophistication of the program in the political realm as evidenced by the documents produced with an accompanying decrease of emphasis on the nature of the treatment provided or the population of children to be served.

An analysis of the children for whom help was sought revealed that the large majority of them displayed some form of aggressive behaviour and were ruled out at each step of the Intake-Screening-Diagnostic process. The small minority of withdrawn children were those selected for admission to the program.

Staff responses to a questionnaire designed to elicit their perceptions of factors governing the decision-making process indicate that although all staff members were involved in making these types of decisions, they either were unaware of the 'real' criteria governing the process or perceived an unspoken agreement to deny the basis on which such decisions were made" (Ibid., pp.209-214).

Related more specifically now to an actual research programme conducted in an ongoing institution is that of Santa-Barbara, Woodward, Levin, Streiner, Goodman, Muzzin and Epstein (1974). These authors write more delicately and in a humorous vein, as the title of their paper reflects: 'Marriage or mirage. Is a realistic marriage of clinicians, researchers and administrators possible in an evaluative research project?'.  
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The authors detail a case history of their implementation of an evaluative research project at the Chedoke McMaster Child and Family Centre in Hamilton, Ontario.

Under the heading of "Courtship and Wedding", the authors outline how they detailed the research project to clinicians, and how they were misled by their false sense of complacency engendered by the initial co-operative responsiveness of the clinicians.

The tone of the heading changes sharply: "Shall we get a divorce?".

This section is delicately written, yet one does not fail to experience their sense of thwartedness, frustration and almost despair, which led them seriously to consider whether they should abandon the whole project. Full of critical self-evaluation they focus on themselves under the sub-heading "The Project Staff". They confess to being "novices", researchers not attached to a clinic team at the centre, they were in fact "external to that professional and social system". Further they chose an evaluative research project rather than an evaluation of the entire program. The initial implication of their strict scientific decision was not apparent to them. The authors state:

"Having foregone the pleasure of a program evaluation was not without the drawback; however, we found therapists reluctant to take cases which had been tagged as eligible for our study, but quickly volunteering for ineligible cases. If all cases were involved, clearly this option would have been closed" (Ibid., p.8).

One of the outcome measures used by these authors, the Goal Attainment Scale, presented special problems. "The GAS came to be seen as the entire project although it was only one of several outcome measures being used. Many clinicians had reservations about the utility of the GAS as an outcome measure" (Ibid., p.8), because it involved much time and energy.

Their research design called for a six-month follow-up, after termination of treatment. The authors felt the message they as a research group were conveying to the therapists was that if they worked hard for the project they would get some feedback in the future, some of which might be negative. "It was a message we have often regretted" (Ibid., p.9). Lamentably, the authors offer no assistance for the avoidance of such a message.

"The phenomenon of the vanishing clients caused us some concern. We had expended considerable effort to gear up the research staff and the clinicians only to find what we expected to be a peak intake period in the early part of the study, turn into a dribble. Rather than intact families with 6-12 year old children being the model case, many were single parent families, and families with adolescents were presenting" (Ibid., p.10).

This finally resulted in the researchers deciding to commence two sub-studies resulting from the dearth of intact families and the increase of single parent families. Their decision made "it more difficult for unwilling clinicians to avoid being involved in the project" (Ibid., p.10). The clinicians further held the view that the researchers were fickle.

Training for the scoring of the GAS proved problematic despite the fact that the authors changed and improved their techniques, yet they did not fully dispel the resistance.

"We felt we were making our entire training procedure clear and objective, and would everyone please hurry up and attain the criteria. We have no experimental data as to whether the high proportion of families who refused to participate in our project (their participation was solicited by their therapists), or the unavailability of therapists, to re-negotiate an inadequately constructed GAS, or the leper-like status we accrued at the Centre, were in any way related to this training approach. We refused to do the necessary controlled study to obtain such data. Our embarrassment over this approach has not decreased with the passage of time and no more will be said about this incident"

(Ibid., pp.12-13).

Implicit in these last two sentences is a view of researchers who, as stated previously, were only human (not super human because they were following a scientific model). The effects of the other humans (clinicians) made the obtaining of data that would elucidate the reason for the shrinkage in target figures impossible. Up to the present

there does not seem to be any research data that sets form to the facts as to the shrinkage causation and the differential factors involved.

A further sequel to "delinquent" clinicians is elaborated in the following manner:

"Inadequate clinician participation occurred in many ways. Eligible families were not asked to participate in the study; if they were asked and agreed to participate, their families' consent forms would not get signed or would not reach the research assistants; families wouldn't be asked to participate until they were well into treatment and 'pre' test measures were no longer applicable if families did become involved with the pre-test phase, the GAS would not be forthcoming from the therapist; if the first draft of a GAS did arrive but needed some technical improvement, therapist would be unavailable to re-negotiate the Guide; closure forms filled out by the therapist would be hard to obtain" (Ibid., pp.13-14).

As a last resort, the research group sought the aid of the Clinical Director.

"The research group began to feel that the Clinical Director was not really helping the project, that he was sympathizing with the clinicians, and didn't appreciate our concerns about the quality and quantity of the data. We had the feeling he regarded us as obsessive about the quality of our data and compulsive about not missing any eligible cases, and about gathering complete data on families who did participate. We did not find a way to make him appreciate that the data requirements for a research project were much more stringent than the information he needed to function as a Clinical Director" (Ibid., pp.14-15).

Finally, the authors proceed to "And they lived happily ever after(?)". Santa Barbara et al (1974) attribute the survival of the project to understanding the definitions clearly, e.g. the role of researcher, the role of the highly trained clinician and the trainee clinician; in addition to the role of the Clinical

Director. This was facilitated by the researchers holding regular meetings with the Clinical Director and the clinicians respectively. Emerging from these discussions a major issue was clarified by the Clinical Director:

"It became clearly established that research was indeed a priority of the Centre, and that all staff should realize that along with clinical service and teaching, research involvement was regarded as an integral part of their employment contract" (Ibid., p.19).

Furthermore, the researchers abandoned the idea of a summative evaluation and decided that "the dangers of contaminating the results by providing feedback would be negligible compared to the enhanced co-operation we could expect from therapists" (Ibid., p.19).

Candy, Balfour, Cawley, Hildebrand, Malan, Marks and Wilson (1972) report "A feasibility study for a controlled trial of formal psychiatry". This study too details certain problems encountered in the implementation of the programme and the inability to achieve the target population on which they had decided. Although the researchers were concerned with adults in the Inner London area only, it has relevance for psychotherapy research in general.

These investigations concluded that the trial they had initially planned was not feasible; their final patient sample consisted of only 6 patients. To reach their target figure it would take "13 years to accumulate 90 patients" (Ibid., p.352).

"The principal limitation stems from the difficulty of accumulating sufficient patients for such a trial within a reasonable span of time.

The reasons for this limitation require careful consideration. Some psychiatrists who had agreed to participate did not refer all patients seen by them

who conformed to the initial criteria. In addition, certain other contributing factors, all related to conditions necessitated by a controlled trial, can be identified: (1) restriction of referral sources; (2) rejection of 'too suitable' patients; (3) rejection of 'less suitable' patients" (Ibid., p.359).

They comment on restriction of referral sources:

"Although referrals were sought from most National Health Service Clinics within the Inner London area, ethical considerations prevented access to certain potentially fruitful sources of referrals. These include psychotherapy clinics, in particular the Tavistock Clinic and the Maudsley Hospital Psychotherapy Department, and psychologically oriented general practitioners, in particular those who had attended seminars at the Tavistock Clinic or the Cassel Hospital. Patients are referred to Psychotherapy Clinics specifically for consideration of psychotherapy, and, as already mentioned, it was considered proper to enter such patients into a study where they would have only a two-thirds chance of receiving such treatment. Similar considerations applied to patients from psychologically oriented general practitioners" (Ibid., p.359).

Detailing the rationale for rejection of "'Too suitable'" patients, the authors state:

"A number of patients referred to the study were already aware of the implications of undergoing psychotherapy (often they had had some previous psychotherapy), and were not prepared to accept anything else. A number had been prepared by the referring psychiatrist for psychotherapy (in spite of the request in Notes for Participating Physicians that this should not be done). A number had been sent by their general practitioners to the referring psychiatrist specifically for psychotherapy. While in general such circumstances made the patient more suitable for treatment with planned, time-limited psychotherapy, they make him less suitable for acceptance into the trial itself, not only because of the ethical impropriety of accepting these patients into a trial in which they had a one-third chance of not receiving psychotherapy but also because of the practical difficulty that if a patient wants psychotherapy or nothing, he is unlikely to persist with a form of treatment which he does not regard as psychotherapy" (Ibid., p.359).

Candy et al (1972) reason as follows for the exclusion of "Less Suitable Patients" for planned, time-limited psychotherapy:

"It would be foolish in a trial on which the reputation at least of a certain form of psychotherapy might stand or fall to run the risk that such 'doubtful' patients could mar an otherwise favourable result. Thus a number of patients who in ordinary practice would have been offered this type of treatment were excluded. Moreover, in the context of the study it was not possible to provide for such patients (as is commonly done in practice) an extended diagnostic procedure, designed to test out or increase motivation, or to allow a therapeutic plan to crystallize" (Ibid., p.359).

The investigators soberly return to consider the ethical issues in greater detail and conclude:

"Co-operative controlled studies of psychotherapy are particularly vulnerable to limitations imposed by ethical considerations. These difficulties cannot easily be overcome, since where ethical issues are concerned, there can be no easy compromise; once an ethical objection has been raised, the limitations thereby imposed have to be accepted, even by those who do not accept the force of the objection" (Ibid., p.360).

Thus, from the studies of Grace (1974), Santa-Barbara et al (1974) and Candy et al (1972) it appears that the difficulties experienced in the present study, which were thought to be unique, were found to be general features of efficacy studies.

CHAPTER 3

PRESENTATION OF RESULTS

Due to the detail of the statistical analysis of this study the results are divided into the following sections:

- 3.1 An Analysis of Pre-test Scores to establish the Compatibility of Experimental and Control Groups
- 3.2 An Analysis of Pre-test to Post-test Results
- 3.3 An Analysis of Results of Follow-ups I and II
- 3.4 An Analysis of Therapists' Attitudes and their Relationship to Follow-ups I and II
- 3.5 An Analysis of the Different Therapies and their Relationship to Follow-ups I and II and certain Pre- to Post-test Changes
- 3.6 An Analysis of Sex Differences and their Relationship to Pre- to Post-test Changes
- 3.7 An Analysis of Age Differences and their Relationship to Pre- to Post-test Changes
- 3.8 An Analysis of Social Class Differences and their Relationship to Pre- to Post-test Changes
- 3.9 Additional Detailed Investigation on Specific Factors
- 3.10 Acceptance/non-acceptance of hypotheses in the light of the presented results.

To ensure clarity of presentation it was deemed necessary to recall the designation of control and experimental groups:

Control Group I, refers to the non-referred, untreated school control.

Control Group II, refers to the referred, untreated clinic waiting list group.

Experimental Group I, refers to the referred, treated clinic sample, with treatment being conducted by inexperienced therapists.

Experimental Group II, refers to the referred, treated clinic sample with treatment being conducted by experienced therapists.



3.1 An Analysis of Pre-test Scores to establish the Compatibility of Experimental and Control Groups

3.1.1 Six tables are presented.

Tables 1, 3 and 5 present the results of the 2 G Test for the following group comparisons:

Control Group I versus Experimental Group I;

Control Group I versus Control Group II;

Control Group I versus Control Group II and  
Experimental Group I

on the following factors:

Sex;

Social Class;

Child Scale A(2), designation;

Child Scale B(2), designation.

Tables 2, 4 and 6 present the results of a two tailed t-test of significance of mean differences for the following group comparisons:

Control Group I versus Experimental Group I;

Control Group I versus Control Group II;

Control Group I versus Control Group II and  
Experimental Group I

on the following factors:

Age;

Child Scale A(2), total score;

Child Scale B(2), total score.

3.1.2 Tables 7 and 8 present the results of the 2 G Test for the following group comparisons:

Experimental Group I versus Experimental Group II;

Control Groups I and II versus Experimental Groups I and II

on the following factors:

Sex;

Social Class.

3.1.3 Table 9 presents the results of the 2 G Test for Control

Group II versus Experimental Group I on the following factors:

Parent Interview, designation;

Child Interview, designation.

3.1.1 Table 1 shows the comparisons between Control Group I versus Experimental Group I on the following factors: sex, social class, Child Scale A(2), designation, Child Scale B(2), designation. It is shown that the above two groups differ significantly from each other at the ,01 level of significance.

Table 1: 2 G Test of Pre-test Scores for Control Group I versus Experimental Group I on the following factors.

Factors	N	df (r-1)(k-1)	2 G
Sex (Boy - Girl)	190	1	15,96**
Social Class	190	5	19,9 **
Child Scale A(2) designation	181	3	19,9 **
Child Scale B(2) designation	183	3	12, **

Note

\* p < ,05.

\*\* p < ,01.

A closer scrutiny of the factors yields the following:

Sex: Control Group I, the school control, had almost equal male/female ratio, 47% were boys and 53% were girls. In Experimental Group I, the referred, treated group, the proportion was 77% boys and 23% girls. This proportion is typical of the Child Guidance Clinic referral population, where boys far exceed girls, usually to the ratio 3 boys to 1 girl. This disproportionate boy/girl representation has been documented by Gilbert (1951), Reisman and Kissel (1968), and occurs in NIMH Statistical Note 90 (1973).

Social Class: The social class percentage distributions for Control Group I and Experimental Group I were as follows:-

<u>Social Classes</u>		<u>Control</u>	<u>Experimental</u>		<u>Total</u>
	f	<u>Group I</u>	f	<u>Group I</u>	
I	1	1%	1	2%	2
II	8	6.1/2%	12	19%	20
III	49	39%	33	52%	82
IV	57	45%	18	28%	75
V	8	6.1/2%	0	0%	8
VI	3	29%	0	0%	3
Total	126		64		190

Social Classes III and IV account for 84% of Control Group I and for 80% of Experimental Group I. The largest discrepancies occur for social classes V and VI. Control Group I has 35% of cases in those two Social Classes while Experimental Group I has 0%. Social Class II has a higher percentage in Experimental Group I. This, like the Sex distribution anomaly, is again typical for the Child Guidance Clinic intake population. Despite the fact that it offers a free service, it very seldom attracts or reaches out to the lower socio-economic classes V and VI. This trend has been reflected in the Clinic Annual Reports consistently over the years.

Child Scale A(2) designation percentage distributions are presented below:

<u>Child Scale A(2)</u> <u>designation</u>		<u>Control</u> <u>Group I</u>		<u>Experimental</u> <u>Group I</u>	
	f		f		Total
Non-disturbed	67	53%	34	62%	101
Antisocial	27	21%	6	11%	33
Neurotic	20	16%	3	5%	23
Mixed/ Undifferentiated	12	10%	12	12%	24
Total	126		55		181

Experimental Group I, the referred treated group, has in fact more non-disturbed children than Control Group I, the non-treated sample. In addition, the designation antisocial has a higher representation in Control Group I than Experimental Group I.

In Control Group I the designation neurotic is less than the designation antisocial. Contrasting Control Group I with Experimental Group I, the referred group has a lower neurotic percentage representation. However, the pattern for anti-social and neurotic in both Control Group I and Experimental Group I are similar. The designation mixed/undifferentiated has plus-minus an equal distribution for both Control Group I and Experimental Group I.

Rutter Child Scale B(2) designation percentage distributions are presented:

<u>Child Scale B(2) designation</u>		<u>Control Group I</u>		<u>Experimental Group I</u>	
	f		f		Total
Non-disturbed	93	74%	31	54%	124
Antisocial	20	16%	20	35%	40
Neurotic	9	7%	6	11%	15
Mixed/ Undifferentiated	4	3%	0	0%	4
Total	126		57		183

It is interesting to note that the pattern for the B(2) Scale is the reversal of the A(2) Scale. Here the non-treated Control Group I has a higher non-disturbed population, 74%, than the Experimental Group I, 54%.

Also, the designations antisocial and neurotic have this distribution reversed for the A(2) Scale.

Mixed/undifferentiated designation differs for the B(2) as compared with A(2) where their distribution was more or less similar for Control Group I and Experimental Group I. Control Group I for the B(2) designation mixed/undifferentiated has 3%, while Experimental Group I has no percentage representation.

Table 2: A two-tailed t-test of significance for mean differences (pre-test) for Control Group I versus Experimental Group I on the following factors.

Factors	df	t
Age	188	3,43 **
Child Scale A(2) total Score	188	1,43
Child Scale B(2) total Score	188	3,08 **

Note

\* p < ,05.

\*\* p < ,01.

As can be seen from Table 2 the ages were significantly different at the ,01 level, the Control Group I having a higher average age than Experimental Group I. The mean for Control Group I was 119,38 months with a Standard Deviation (SD) of 11,88. Experimental Group I, on the other hand, had a mean of 113,12 and SD 11,98.

Child Scale B(2) total score was significantly different at the ,01 level, Control Group I having an average of 5,6 with SD 5,73, which is lower than that of the Experimental Group I which has an average of 8,64 with SD 7,55.

Table 3: 2 G Test of pre-test scores for Control Group I versus Control Group II on the following factors.

Factors	N	df (r-1)(k-1)	2 G
Sex (boy-girl)	150	1	0,44
Social Class	132	5	4,07
Child Scale A(2) designation	132	3	8,73 *
Child Scale B(2) designation	132	3	2,21

Note

\*  $p < ,05$ .

\*\*  $p < ,01$ .

Table 3 presents the comparisons between Control Group I versus Control Group II on the following factors: sex, social class, Child Scale A(2) designation. It is shown that the above two groups do not differ significantly at the ,05 or ,01 level of significance on these factors. Thus, these two groups would appear to be comparable except that the Rutter Child Scale A(2) designation differs significantly at the ,05 level.

Rutter Child Scale A(2) designation percentage distributions are presented below:

<u>Child Scale A(2)</u> <u>designation</u>		<u>Control</u> <u>Group I</u>		<u>Control</u> <u>Group II</u>	<u>Total</u>
	f		f		
Non-disturbed	67	53%	4	45%	71
Antisocial	27	21%	1	11%	28
Neurotic	20	16%	0	0%	20
Mixed/ Undifferentiated	12	10%	4	44%	16
Total	126		9		135

Control Group I, the non-treated sample, has a higher non-disturbed percentage than the referred and untreated Control Group II. This is the inverse of the comparison made between Experimental Group I and Control Group I, which were in fact the treated clinic sample. Experimental Group I had a higher percentage of non-disturbed children. The designation antisocial has a higher representation in Control Group I than in Control Group II. This trend was seen and is identical to the comparisons made between Control Group I and Experimental Group I where the non-treated Control Group I had a similar high incidence of the designation antisocial.

The designation neurotic for Control Group I is less than the designation antisocial for this group. Contrasting Control Group I with Control Group II, the clinic waiting list control referred untreated group has a zero percentage



representation in the designation neurotic. However, the pattern for antisocial and neurotic in both Control Group I and Control Group II is similar.

The designation mixed/undifferentiated is very dissimilar. Control Group I has a 10% representation and Control Group II has 44% representation, a discrepancy of 34%.

Table 4: A two-tailed t-test of significance for mean differences (pre-test) for Control Group I versus Control Group II on the following factors.

Factors	df	t
Age	130	1,84 *
Child Scale A(2) Total Score	130	0,35
Child Scale B(2) Total Score	130	0,92

Note

\* p < ,05.

\*\* p < ,01.

Table 4 shows the results of a t-test which was used to compare Control Group I with Control Group II on the following factors: age, Child Scale A(2) total score and Child Scale B(2) total score.

Age: The ages were significantly different at the ,05 level of significance, Control Group I having a higher average than Control Group II. The mean for Control Group I was

119,38 months with SD 11,88. Control Group I had a mean 110,333 months with SD 7,55. Thus, once again, the mean age for a referred sample was lower than the non-referred sample, Control Group I. This trend is similar to the comparison between Control Group I and Experimental Group I on age where the mean age was found to be significantly lower for Experimental Group I, the referred treated sample.

Table 5: 2 G Test of pre-test scores for Control Group I versus Control Group II and Experimental Group I on the following factors.

Factors	N	df (r-1)(k-1)	2 G
Sex (boy-girl)	214	1	12,00 **
Social Class	196	5	21,79 **
Child Scale A(2) designation	190	3	14,71 **
Child Scale B(2) designation	189	3	12,98 **

Note

\* p < ,05.

\*\* p < ,01.

Table 5 presents the comparison between Control Group I versus Control Group II and Experimental Group I on the following factors: sex, social class, Child Scale A(2) designation, Child Scale B(2) designation. It is shown that the non-referred, untreated Control Group I differs significantly from the referred, waiting list Control Group II, and the referred, treated Experimental Group I at the ,01 level of significance.

A closer examination of the factors yields the following:

Sex: Control Group I had an equal male/female ratio, 47% were boys and 53% were girls. In Experimental Group I the distribution was 70% boys and 30% girls. As commented earlier, the clinic referred sample is typical of the annual clinic population where boys far exceed girls in being referred.

Social Class: The social class percentage distribution for Control Group I versus Control Group II and Experimental Group I was as follows:

Social Classes	<u>Control Group I</u>		<u>Control Group II and Experimental Group I</u>		Total
	f	%	f	%	
I	1	1%	1	1%	2
II	8	6.1/2%	13	19%	21
III	49	39%	37	53%	86
IV	57	45%	19	27%	76
V	8	6.1/2%	0	0%	8
VI	3	29%	0	0%	3
<b>Total</b>	<b>126</b>		<b>70</b>		<b>196</b>

Social Classes III and IV account for 84% of Control Group I and 80% of Control Group II and Experimental Group I.

Discrepancies occur for Social Classes V and VI. Control Group I has 35.1/2% of cases in these two social classes, while Control Group II and Experimental Group I have 0%.

Social Class II has a higher percentage in Control Group II and Experimental Group I. This phenomenon, like the sex distribution anomaly, is a typical repetitive pattern of the

referred sample to the Child Guidance Clinic.

Rutter Child Scale A(2) designation percentage distributions are listed below:

<u>Child Scale A(2)</u> <u>designation</u>	f	<u>Control</u> <u>Group I</u>	f	<u>Control Group II</u> <u>and Experimental</u> <u>Group I</u>	Total
Non-disturbed	67	53%	38	59%	105
Antisocial	27	21%	7	11%	34
Neurotic	20	16%	3	5%	23
Mixed/ Undifferentiated	12	10%	16	25%	28
Total	126		64		190

Control Group II and Experimental Group I together have a higher incidence of non-disturbed cases according to the Child Scale A(2), while Control Group I, the non-treated, non-referred group, has fewer non-disturbed cases and a larger number of disturbed cases. The designation antisocial representation is nearly twice as large for Control Group I than it is for the combined Control Group II and Experimental Group I. The designation neurotic is plus minus three times larger for the Control Group I than for Control Group II and Experimental Group I conjointly.

However, the designation mixed/undifferentiated is two-and-a-half times larger for Control Group II and Experimental Group I combined than for Control Group I.

Table 6: A two-tailed t-test of significance for mean differences (pre-test) for Control Group I versus Control Group II and Experimental Group I on the following factors.

Factors	df	t
Age	192	3,63 **
Child Scale A(2) total Score	192	4,50 **
Child Scale B(2) total Score	192	3,11 **

Note

- \* p < ,05.
- \*\* p < ,01.

Set out in Table 6 are the results of the t-test used to compare Control Group I versus Control Group II and Experimental Group I on the following factors: age, Child Scale A(2) total score and Child Scale B(2) total score. All these factors were significant at the ,01 level.

Age: The ages were significantly different at the ,01 level, Control Group I having a higher average than Control Group II and Experimental Group I. The mean for Control Group I was 119,38 months with SD 11,88. Control Group II and Experimental Group I had a mean of 112,824 with SD 12,22. This trend is repeated throughout where Control Group I has a higher mean age than a referred clinic population.

Child Scale A(2) total scores were significantly different at ,01 level, Control Group I having a higher average than Control

Group II and Experimental Group I. The mean for Control Group I was 12,3 with SD 7,6. Control Group II and Experimental Group I had a mean of 7,27 with SD 7,10. Thus the mean total score for the Child Scale A(2) was significantly higher for the non-referred school control, Control Group I, than for Control Group II and Experimental Group I combined.

Child Scale B(2) total score was significantly different at the ,01 level: Control Group II and Experimental Group I combined had a higher average than Control Group I. The mean for the combined groups, Control Group II and Experimental Group I, was 8,57 with SD 7,39. Control Group I had a mean of 5,62 and SD 5,73.

The results of the t-test of the total scores of the A(2) and B(2) Child Scales confirm the trends described for the Child Scale A(2) designation and the Child Scale B(2) designation on the 2 G Test. These trends were also reversed for the Child Scale A(2) designation and Child Scale A(2) total score, where Control Group I had a larger number of disturbed ratings for the designation disturbed than on total score in Control Group II and Experimental Group I taken together. The reverse held for Child Scale B(2) designation and total score, where Control Group I had a small percentage disturbed and lower mean total score than Control Group II and Experimental Group I.

3.1.2 Two tables are presented. Table numbers 7 and 8 reflect the results of the 2 G on the following factors: sex and social class.

Table 7: 2 G Test of pre-test scores for Experimental Group I versus Experimental Group II on the following factors.

Factors	N	df (r-1)(k-1)	2 G
Sex	98	1	1,53
Social Class	98	5	3,2

Note

\* p < ,05.

\*\* p < ,01.

Table 7 shows the comparisons between Experimental Group I versus Experimental Group II on the following factors: sex and social class. It is shown that the above two groups do not differ significantly from each other on these two factors. Thus for the sex and social class factors the two treated groups are comparable.

Table 8: 2 G Test of pre-test scores for Control Groups I and II versus Experimental Groups I and II on the following factors.

Factors	N	df (r-1)(k-1)	2 G
Sex (boy-girl)	248	1	14,87**
Social Class	230	5	23,29**

Note

\* p < ,05.

\*\* p < ,01.

Table 8 shows the comparisons between Control Groups I and II versus Experimental Groups I and II on the following factors: sex and social class. It is shown that the above two differ significantly from each other at ,01 level of significance.

A closer scrutiny of the factors yields the following:

Sex: Control Groups I and II had plus minus equal male/female ratio; 48% were boys and 52% were girls. In Experimental Groups I and II the proportion was 72% boys and 28% girls. This once again confirms earlier trends where boys in the clinic-referred, treated samples, Experimental Groups I and II, exceed the number of boys in the Control Groups I and II.

Social Class: The social class percentage distribution for Control Groups I and II and Experimental Groups I and II were as follows:

<u>Social Class</u>	<u>Control Groups</u>		<u>Experimental</u>		<u>Total</u>
	<u>f</u>	<u>I and II</u>	<u>f</u>	<u>Groups I &amp; II</u>	
I	1	1%	1	1%	2
II	9	7%	19	19%	28
III	53	40%	51	52%	104
IV	58	44%	26	27%	84
V	8	6%	0	0%	8
VI	3	2%	1	1%	4
<b>Total</b>	<b>132</b>		<b>98</b>		<b>230</b>

Social Classes III and IV for Control Groups I and II account for 88% of the distribution and for Experimental Groups I and II 79%.



Social Classes I and II for Control Groups I and II have an 8% representation and a 20% representation for Experimental Groups I and II, the clinic sample. The inverse occurs for the lower social class categories V and VI where Control Groups I and II have an 8% representation and Experimental Groups I and II, the clinic treated sample, have a 1% representation. This supports the similar trends of a low clinic sample representation in Social Classes V and VI.

3.1.3 Table 9 presents the analysis of pre-test scores to establish the compatibility of Control Group II and Experimental Group I on the following factors: the Rutter Parent Interview designation and the Rutter Child Interview designation.

Table 9: 2 G Test of pre-test scores for Control Group II versus Experimental Group I on the following factors.

Factor	N	df (r-1)(k-1)	2 G
Parent Interview, designation	34	3	2,69.
Child Interview, designation	32	3	1,16

Note

\*  $p < ,05.$

\*\*  $p < ,01.$

It is shown that the above two groups do not differ significantly from each other either at the ,05 level or ,01 level of significance.

3.2.2 Tables 15,16,17 and 18 present the results of a two-tailed t-test of significance of mean differences for the following groups:-

- Control Group I;
- Control Group II;
- Control Groups I and II;
- Experimental Group I

on all the factors listed above for the 2 G Test, except for Child Scales A(2) and B(2) designations.

3.2.3 Table 19 presents the results of the 2 G Test for the following groups:-

- Control Group I;
- Control Group II;
- Control Groups I and II;
- Experimental Group I

on the following factors:-

- Child Scale A(2) designation;
- Child Scale B(2) designation.

3.2.4 Table 20 presents the results of the 2 G Test for Experimental Group I on the following factors:-

- Parent Interview;
- Child Interview.

3.2.5 Analysis of Co-variance:

Table 21 presents the results of the analysis of co-variance of pre- to post-test change between the following groups:

- Control Group I;
- Control Group II;
- Experimental Group I

on the factors listed for 3.2.1 with the exception of the Child Scale A(2) and B(2) designations.

Table 22 presents Scheffé-S Test of Multiple Comparisons for the factors found to have a significant difference in the Analysis of Co-variance.

Table 23 - Inspection of Significant Results based on results of Tables 21 and 22.

Table 24 - Inspection of Results of Table 21 derived from Tables 15 - 18.

Table 10 shows the following change scores to be significant at the ,01 level:

Schonell Test No.5 Miscellaneous Combinations, arithmetic age; at the ,05 level of significance, Holborn Reading Inventory, reading age, and the Benton Visual Retention Test, number correct.

Table 10: 2 G Test comparing pre- to post changes of Control Group I versus Experimental Group I for the following factors:

Factors	N	2 G
CHILD SCALE A(2) TOTAL SCORE	142	3,35
CHILD SCALE A(2) DESIGNATION	142	2,79
CHILD SCALE B(2) TOTAL SCORE	141	0,48
CHILD SCALE B(2) DESIGNATION	141	0,83
OTIS QUICK SCORING MENTAL ABILITY TEST	155	1,12
HOLBORN READING INVENTORY:		
Reading Age	145	6,92*
Reading Quotient	140	0,87
SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS		
Arithmetic Age	155	9,99**
Arithmetic Quotient	151	3,56
BENTON VISUAL RETENTION TEST		
No. Correct	147	7,88*
No. of Errors	147	0,89
JUNIOR EYSENCK PERSONALITY INVENTORY		
Extraversion	153	0,73
Neuroticism	153	1,13
Lie Scale	153	1,39
CALIFORNIA TEST OF PERSONALITY		
Personal Adjustment	153	2,8
Social Adjustment	153	1,1
Total Adjustment	153	3,85
MARYLAND PARENT ATTITUDE SURVEY		
Disciplinarian Score	65	1,22
Indulgence Score	65	1,32
Protectiveness Score	65	0,99
Rejection Score	65	5,33

Note

df (r-1)(k-1) is 2 for ALL FACTORS

\* p < ,05.

\*\* p < ,01.

Table 11 shows the following change scores to be significant at ,01 level of significance: Child Scale B(2) Total Score. At the ,05 level of significance Child Scale B(2) designation, Schonell Test No.5 Miscellaneous Combinations, arithmetic age, and the California Test of Personality, social adjustment are significant.

Table 11: 2 G Test comparing Pre to Post Changes of Control Group I versus Control Group II for the following factors.

Factors	N	2 G
CHILD SCALE A(2) TOTAL SCORE	132	3,89
CHILD SCALE A(2) DESIGNATION	132	0,24
CHILD SCALE B(2) TOTAL SCORE	132	2,71**
CHILD SCALE B(2) DESIGNATION	132	9,66*
OTIS QUICK SCORING MENTAL ABILITY TEST	132	0,4
HOLBORN READING INVENTORY:		
Reading Age	131	4,13
Reading Quotient	131	2,37
SCHONELL TEST NG.5 MISCELLANEOUS COMBINATIONS		
Arithmetic Age	132	6,92*
Arithmetic Quotient	132	0,6
BENTON VISUAL RETENTION TEST		
No. Correct	132	0,85
No. of Errors	132	0,15
JUNIOR EYSENCK PERSONALITY INVENTORY		
Extraversion	132	2,55
Neuroticism	132	2,08
Lie Scale	132	2,1
CALIFORNIA TEST OF PERSONALITY		
Personal Adjustment	132	0,23
Social Adjustment	132	7,51*
Total Adjustment	132	3,33
MARYLAND PARENT ATTITUDE SURVEY		
Disciplinarian Score	60	1,26
Indulgence Score	60	0,15
Protectiveness Score	60	0,59
Rejection Score	60	1,83

Note

df (r-1)(k-1) is 2 for ALL FACTORS

\* p < ,05.

\*\* p < ,01.

Scrutinizing the change scores for the Child Scale B(2) total score we find the following percentage distributions:

	f	<u>Control Group I</u>	f	<u>Control Group II</u>	Total
Improved	43	34%	3	50%	46
Remained the same	25	20%	0	0%	25
Deteriorated	58	46%	3	50%	61
Total	126		6		132

Control Group II shows a greater proportion of change for the categories improved and deteriorated than Control Group I. Control Group I, however, shows a greater proportion of change for the category, remained the same.

A further study of the change scores for the Child Scale B(2) designation reveals the following percentage distributions:

	f	<u>Control Group I</u>	f	<u>Control Group II</u>	Total
Improved	16	12%	2	33%	18
Remained the same	97	73%	1	17%	98
Deteriorated	13	15%	3	50%	16
Total	126		6		132

Control Group II has the highest deterioration rate and improvement rate while Control Group I tends to remain the same.

A further inspection of the change scores for the Schonell Test No.5 Miscellaneous Combinations, arithmetic age, provides these percentage distributions:

	f	<u>Control</u> <u>Group I</u>	f	<u>Control</u> <u>Group II</u>	Total
Improved	97	77%	2	33%	99
Remained the same	7	6%	0	0%	7
Deteriorated	22	17%	4	67%	26
Total	126		6		132

The untreated, non-referred school Control Group I shows clearly an improvement in arithmetic age as compared with the referred, untreated, clinic waiting list Control Group II which has a high deterioration rate.

An investigation of the change scores for the California Test of Personality, social adjustment, provides these percentage distributions:

	f	<u>Control</u> <u>Group I</u>	f	<u>Control</u> <u>Group II</u>	Total
Improved	66	52%	6	100%	72
Remained the same	24	19%	0	0%	24
Deteriorated	36	29%	0	0%	36
Total	126		6		132

The referred, untreated clinic waiting list, Control Group II, has a clear-cut improvement rate of 100% in comparison with non-treated, non-referred school control, Control Group I.



Table 12 shows the following change scores to be significant at the ,01 level of significance: Child Scale B(2), designation; at the ,05 level of significance, Child Scale A(2), total score and the California Test of Personality, social adjustment.

Table 12: 2 G Test comparing Pre to Post Changes of Control Group II versus Experimental Group I for the following factors.

Factors	N	2 G
CHILD SCALE A(2) TOTAL SCORE	22	7,27*
CHILD SCALE A(2) DESIGNATION	22	2,73
CHILD SCALE B(2) TOTAL SCORE	21	1,65
CHILD SCALE B(2) DESIGNATION	21	9,6**
OTIS QUICK SCORING MENTAL ABILITY TEST	35	1,24
HOLBORN READING INVENTORY:		
Reading Age	24	2,18
Reading Quotient	19	1,45
SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS		
Arithmetic Age	35	3,97
Arithmetic Quotient	31	0,83
BENTON VISUAL RETENTION TEST		
No. Correct	27	0,64
No. of Errors	27	0,37
JUNIOR EYSENCK PERSONALITY INVENTORY		
Extraversion	33	1,52
Neuroticism	33	2,82
Lie Scale	33	0,74
CALIFORNIA TEST OF PERSONALITY		
Personal Adjustment	33	0,58
Social Adjustment	33	6,17*
Total Adjustment	33	1,27
MARYLAND PARENT ATTITUDE SURVEY		
Disciplinarian Score	13	0,96
Indulgence Score	13	0,03
Protectiveness Score	13	0,03
Rejection Score	13	1,99

Note

df (r-1)(k-1) is 2 for ALL FACTORS

\* p < ,05.

\*\* p < ,01.

A study of the change scores for the Child Scale B(2) designation provides these percentage distributions:

	f	<u>Control</u> <u>Group II</u>	f	<u>Experimental</u> <u>Group I</u>	Total
Improved	2	33%	1	33%	3
Remained the same	1	17%	13	60%	14
Deteriorated	3	50%	1	7%	4
Total	6		15		21

The referred, treated Experimental Group I has a significantly lower deterioration percentage than the referred, untreated Control Group II.

Inspection of the change scores for the Child Scale A(2) total score reveals the following percentage distributions:

	f	<u>Control</u> <u>Group II</u>	f	<u>Experimental</u> <u>Group I</u>	Total
Improved	4	66,6%	2	12,5%	6
Remained the same	1	16,7%	2	12,5%	3
Deteriorated	1	16,7%	12	75%	13
Total	6		16		22

Control Group II, the referred, untreated group, had a significantly higher proportion of improvement than the referred, treated Experimental Group I, which had a significantly higher proportion of deterioration.

Investigating the change scores for the California Test of Personality, social adjustment provides these percentage distributions:

		<u>Control</u> <u>Group II</u>		<u>Experimental</u> <u>Group I</u>	<u>Total</u>
Improved	f	100%	f	56%	21
Remained the same	0	0%	3	11%	3
Deteriorated	0	0%	9	33%	9
<b>Total</b>	6		27		33

The referred, untreated Control Group II had an improvement rate of 100% compared with the referred, treated Experimental Group I which only had 56% improvement.

Table 13 shows the following change scores to be significant at ,01 level of significance: Schonell Test No.5 Miscellaneous Combinations, arithmetic age; at the ,05 level of significance, Child Scale B(2), designation; Holborn Reading Inventory, reading age, and the Benton Visual Retention Test, number correct.

Table 13: 2 G Test comparing Pre to Post Changes of Control Group I versus Control Group II and Experimental Group I for the following factors.

Factors	N	2 G
CHILD SCALE A(2) TOTAL SCORE	148	0,43
CHILD SCALE A(2) DESIGNATION	148	0,58
CHILD SCALE B(2) TOTAL SCORE	147	1,46
CHILD SCALE B(2) DESIGNATION	147	1,32*
OTIS QUICK SCORING MENTAL ABILITY TEST	161	0,4
HOLBORN READING INVENTORY:		
Reading Age	150	8,51*
Reading Quotient	145	1,74
SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS		
Arithmetic Age	161	12,3**
Arithmetic Quotient	157	3,24
BENTON VISUAL RETENTION TEST		
No. Correct	153	7,77*
No. of Errors	153	0,69
JUNIOR EYSENCK PERSONALITY INVENTORY		
Extraversion	159	1,6
Neuroticism	159	0,58
Lie Scale	159	2,5
CALIFORNIA TEST OF PERSONALITY		
Personal Adjustment	159	2,4
Social Adjustment	159	2,36
Total Adjustment	159	5,47
MARYLAND PARENT ATTITUDE SURVEY		
Disciplinarian Score	69	1,49
Indulgence Score	69	0,43
Protectiveness Score	69	1,47
Rejection Score	69	5,25

Note

df (r-1)(k-1) is 2 for ALL FACTORS

\* p < ,05.

\*\* p < ,01.

Investigating the change scores for the Schonell Test No.5 Miscellaneous Combinations, arithmetic age, provides these percentage distributions:

		<u>Control</u> <u>Group I</u>		<u>Control Group II</u> <u>and Experimental</u> <u>Group I</u>	Total
	f		f		
Improved	97	77%	16	46%	113
Remained the same	7	6%	6	17%	13
Deteriorated	22	17%	13	37%	35
Total	126		35		161

Thus Control Group I, the non-referred, non-treated school control, achieved an increase in arithmetic age significantly higher than the combined results of the referred, non-treated Control Group II and the referred, treated Experimental Group I.

Inspection of the change scores for the Child Scale B(2) designation provides these percentage distributions:

		<u>Control</u> <u>Group I</u>		<u>Control Group II</u> <u>and Experimental</u> <u>Group I</u>	Total
	f		f		
Improved	16	12%	3	33%	19
Remained the same	97	73%	14	48%	111
Deteriorated	13	15%	4	19%	17
Total	126		21		147

Thus the non-referred non-treated Control Group I improved to a lesser extent than the combined results of the referred non-treated Control Group II and the referred treated Experimental Group I.

Table 14 shows the following change scores to be significant at ,01 level of significance:

Schonell Test No.5 Miscellaneous Combinations, arithmetic age; at the ,05 level of significance, Holborn Reading Inventory, reading age, and the Benton Visual Retention Test, number correct.



Table 14: 2 G Test comparing Pre to Post Changes of Control Groups I and II versus Experimental Group I for the following factors.

Factors	N	2 G
CHILD SCALE A(2) TOTAL SCORE	148	3,81
CHILD SCALE A(2) DESIGNATION	148	2,91
CHILD SCALE B(2) TOTAL SCORE	147	0,41
CHILD SCALE B(2) DESIGNATION	147	1,27
OTIS QUICK SCORING MENTAL ABILITY TEST	161	1,24
HOLBORN READING INVENTORY:		
Reading Age	150	6,55*
Reading Quotient	145	0,83
SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS		
Arithmetic Age	161	9,34**
Arithmetic Quotient	157	3,48
BENTON VISUAL RETENTION TEST		
No. Correct	153	7,46*
No. of Errors	153	0,90
JUNIOR EYSENCK PERSONALITY INVENTORY		
Extraversion	159	0,59
Neuroticism	159	1,31
Lie Scale	159	1,16
CALIFORNIA TEST OF PERSONALITY		
Personal Adjustment	159	2,76
Social Adjustment	159	1,02
Total Adjustment	159	3,41
MARYLAND PARENT ATTITUDE SURVEY		
Disciplinarian Score	69	1,2
Indulgence Score	69	0,31
Protectiveness Score	69	0,91
Rejection Score	69	5,40

Note

df (r-1)(k-1) is 2 for ALL FACTORS

\* p < ,05.

\*\* p < ,01.

An analysis of the change scores for the Schonell Test No.5 Miscellaneous Combinations, arithmetic age, provides these percentage distributions:

	<u>Control Groups</u>		<u>Experimental</u>		Total
	f	<u>I and II</u>	f	<u>Group I</u>	
Improved	99	75%	14	48%	113
Remained the same	7	5%	6	21%	13
Deteriorated	26	20%	9	31%	35
Total	132		29		161

The combined Control Groups I and II have a higher percentage improvement than the referred, treated Experimental Group I.

A further analysis of the change scores for the Holborn Reading Inventory, reading age, provides these percentage distributions:

	<u>Control Groups</u>		<u>Experimental</u>		Total
	f	<u>I and II</u>	f	<u>Group I</u>	
Improved	102	78%	10	53%	112
Remained the same	13	10%	2	10%	15
Deteriorated	16	12%	7	37%	23
Total	131		19		150

Control Group I, the non-referred, untreated group, and the referred Control Group II combined have a higher proportion improvement than the referred, treated Experimental Group I.

An inspection of the change scores for the Benton Visual Retention Test, number correct, provides these percentage distributions:

	<u>Control Groups</u>		<u>Experimental</u>		Total
	f	<u>I and II</u>	f	<u>Group I</u>	
Improved	64	48%	7	33%	71
Remained the same	9	7%	6	29%	15
Deteriorated	59	45%	8	38%	67
Total	132		21		153

The combined groups, Control Group I and Control Group II, have a higher proportion change, improved, deteriorated, and a lower proportion remain the same than Experimental Group I.

3.2.2 Tables 15 to 18 present the results of the two-tailed t-test of significance of mean differences (Post - Pre-test) of paired observations:

Control Group I;

Control Group II;

Control Group I and Control Group II;

Experimental Group I.

Table 15: Two-tailed t-test of significance for mean differences (post-test - pre-test) of paired observations in Control Group I.

Factor	$\bar{d}$	SEd	t	df (n-1)	Increase	Decrease
CHILD SCALE A(2) TOTAL SCORE	-1	6,61	-1,69	125	-	Yes
CHILD SCALE B(2) TOTAL SCORE	-0,05	5,65	-0,09	125	-	Yes
OTIS QUICK SCORING MENTAL ABILITY TEST FULL SCALE	1,98	9,8	2,26*	125	Yes	-
HOLBORN READING INVENTORY:						
Reading Age	9,98	15,37	7,29**	125	Yes	-
Reading quotient	0,6	21,53	,31	125	Yes	-
SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS						
Arithmetic Age	5,17	7,02	8,24**	125	Yes	-
Arithmetic Quotient	-3,75	16,76	-2,5 *	125	-	Yes
BENTON VISUAL RETENTION TEST						
No. Correct	0,11	2,7	0,461	125	Yes	-
No. of Errors	-0,37	4,98	-0,82	125	-	Yes
JUNIOR EYSENCK PERSONALITY INVENTORY						
Extraversion	37,74	128,13	3,21**	125	Yes	-
Neuroticism	-20,63	116,81	-2,01*	125	-	Yes
Lie Scale	15,71	118,35	1,48	125	Yes	-
CALIFORNIA TEST OF PERSONALITY						
Personal Adjustment	8,54	20,21	4,62**	125	Yes	-
Social Adjustment	8,74	20,87	4,68**	125	Yes	-
Total Adjustment	8,55	17,12	5,58**	125	Yes	-
MARYLAND PARENT ATTITUDE SURVEY						
Disciplinarian Score	116,66	138,7	0,91	57	Yes	-
Indulgence Score	-7,05	136,17	-0,39	57	-	Yes
Protectiveness Score	-10,98	130,51	-0,64	57	-	Yes
Rejection Score	11,48	137,05	0,65	57	Yes	-

Note

\* p < ,05.

\*\* p < ,01.

The obtained t-values in Table 15 are significant at the ,01 level for the following factors: Holborn Reading Inventory, reading age; Schonell Test No.5 Miscellaneous Combinations, arithmetic age; Junior Eysenck Personality Inventory, extraversion; and the California Test of Personality, personal, social and total adjustment. At the ,05 level of significance for the factors: Otis Quick Scoring Mental Ability Test; Schonell Test No.5 Miscellaneous Combinations, arithmetic quotient; and the Junior Eysenck Personality Inventory, neuroticism.

An examination of the significant results reveals a significant improvement and increase:

in IQ obtained on the Otis Quick Scoring Mental Ability Test;  
in reading age on the Holborn Reading Inventory;  
in arithmetic age on the Schonell Test No.5 Miscellaneous Combinations;  
in extraversion on the Eysenck Junior Personality Inventory; and  
in personal, social and total adjustment on the California Test of Personality.

Thus the non-referred, untreated school control, Control Group I, achieved a significant increase and improvement in the areas of intelligence, reading, arithmetic and personality assessments. The decrease in neuroticism is not a negative indication, but positive.

A comment on the decrease in arithmetic quotient: this may be explained away as the formula for reading quotient used was reading age divided by mental age multiplied by 100. It was shown that there was a significant increase in IQ and in reading age, thus cancelling each other out as IQ increased to a greater degree than reading age. The following results show a significant deterioration and decrease:

in arithmetic quotient on the Schonell Test No.5 Miscellaneous Combination, and  
in neuroticism on the Junior Eysenck Personality Inventory.

Table 16: Two-tailed t-test of significance for mean differences (post-test - pre-test) of paired observations in Control Group II.

Factor	$\bar{d}$	SEd	t	df (n-1)	Increase	Decrease
CHILD SCALE A(2) TOTAL SCORE	-1,83	5,01	-0,9	5	-	Yes
CHILD SCALE B(2) TOTAL SCORE	-1,83	10,03	-0,04	5	-	Yes
OTIS QUICK SCORING MENTAL ABILITY TEST FULL SCALE	2,33	5,89	0,97	5	Yes	-
HOLBORN READING INVENTORY:						
Reading Age	-3	22,26	-3	4	-	Yes
Reading quotient	-16	20,09	-1,78	4	-	Yes
SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS						
Arithmetic Age	-1,17	5,27	-0,54	5	-	Yes
Arithmetic Quotient	-6,17	15,42	-0,98	5	-	Yes
BENTON VISUAL RETENTION TEST						
No. Correct	0,17	1,6	0,39	5	Yes	-
No. of Errors	0,5	1,52	0,81	5	Yes	-
JUNIOR EYSENCK PERSONALITY INVENTORY						
Extraversion	-24,5	62,21	-0,96	5	-	Yes
Neuroticism	-83,67	77,05	-2,66	5	-	Yes
Lie Scale	11,5	113,17	0,25	5	Yes	-
CALIFORNIA TEST OF PERSONALITY						
Personal Adjustment	0,8	27,75	0,71	5	Yes	-
Social Adjustment	22,67	12,04	4,61*	5	Yes	-
Total Adjustment	18	14,99	2,94	5	Yes	-
MARYLAND PARENT ATTITUDE SURVEY						
Disciplinarian Score	8,5	37,83	0,47	3	Yes	-
Indulgence Score	11	45,64	0,42	3	Yes	-
Protectiveness Score	1,0	116,67	0,02	3	Yes	-
Rejection Score	-59,75	77,84	-1,53	3	-	Yes

Note

\* p < ,05.  
\*\* p < ,01.

Table 17: Two-tailed t-test of significance for mean differences (post-test - pre-test) of paired observations in Control Groups I and II.

Factor	$\bar{d}$	SEd	t	df (n-1)	Increase	Decrease
CHILD SCALE A(2) TOTAL SCORE	1,27	6,68	0,71	131	Yes	-
CHILD SCALE B(2) TOTAL SCORE	-0,13	5,87	-0,25	131	-	Yes
OTIS QUICK SCORING MENTAL ABILITY TEST FULL SCALE	1,99	9,65	2,36*	131	Yes	-
HOLBORN READING INVENTORY:						
Reading Age	9,48	15,71	6,88**	130	Yes	-
Reading quotient	-0,04	21,64	-0,02**	130	-	Yes
SCHONEILL TEST NO.5 MISCELLANEOUS COMBINATIONS						
Arithmetic Age	4,89	7,06	7,92**	131	Yes	-
Arithmetic Quotient	-3,86	16,66	-2,65**	131	-	Yes
BENTON VISUAL RETENTION TEST						
No. Correct	0,13	2,66	0,56	131	Yes	-
No. of Errors	-0,33	4,87	-0,77	131	-	Yes
JUNIOR EYSENCK PERSONALITY INVENTORY						
Extraversion	33,92	126,46	3,07**	131	Yes	-
Neuroticism	-23,83	115,84	-2,35*	131	-	Yes
Lie Scale	15,52	117,75	1,51	131	Yes	-
CALIFORNIA TEST OF PERSONALITY						
Personal Adjustment	8,63	21,3	4,64**	131	Yes	-
Social Adjustment	9,22	20,8	5,07**	131	Yes	-
Total Adjustment	8,98	17,09	6,01**	131	Yes	-
MARYLAND PARENT ATTITUDE SURVEY						
Disciplinarian Score	-6,5	136,25	-0,37	61	-	Yes
Indulgence Score	-15,53	128,07	-0,95	61	-	Yes
Protectiveness Score	13,97	138,63	0,79	61	Yes	-
Rejection Score	0,95	5,31	-1,40	61	Yes	-

Note

\* p < ,05.

\*\* p < ,01.

Table 17 shows the following obtained t-values to be significant:

at the ,01 level an improvement and increase is shown:

in reading age, on the Holborn Reading Inventory;

in arithmetic age, on the Schonell Test No.5

Miscellaneous Combinations;

in extraversion, on the Junior Eysenck Personality  
Inventory; and

in personal, social and total adjustment, on the  
California Test of Personality.

At the ,05 level an improvement and increase is shown in IQ on  
the Otis Quick Scoring Mental Ability Test.

A significant deterioration and decrease is shown at the ,05  
level in neuroticism on the Junior Eysenck Personality Inventory;  
at the ,01 level in the reading quotient on the Holborn Reading  
Inventory; and arithmetic quotient on the Schonell Test No.5  
Miscellaneous Combinations.

Thus the combination of Control Groups I and II cause two more  
factors to emerge at the ,01 level than were present on Control  
Group I originally.

These factors are: reading quotient and arithmetic quotient  
which both show a significant deterioration and decrease. As  
mentioned in the discussion for Table 15, this might be attributable  
to the formula used to calculate the quotients.



Table 18: Two-tailed t-test of significance for mean differences (post-test - pre-test) of paired observations in Experimental Group 1.

Factor	$\bar{d}$	SEd	t	Df (n-1)	Increase	Decrease
CHILD SCALE A(2) TOTAL SCORE	-2,53	2,83	-3,36**	14	-	Yes
CHILD SCALE B(2) TOTAL SCORE	-2	4,6	-1,38**	10	-	Yes
OTIS QUICK SCORING MENTAL ABILITY TEST FULL SCALE	4,97	7,23	3,83**	31	Yes	-
HOLBORN READING INVENTORY:						
Reading Age	8,	6,36	5,48**	19	Yes	-
Reading quotient	0,88	12,83	0,28	16	Yes	-
SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS						
Arithmetic Age	1,07	10,	0,57	28	Yes	-
Arithmetic Quotient	-6,24	10,46	-2,92**	24	-	Yes
BENTON VISUAL RETENTION TEST						
No. Correct	-0,09	1,83	-0,23	21	-	Yes
No. of Errors	0,45	3,	0,7	21	Yes	-
JUNIOR EYSENCK PERSONALITY INVENTORY						
Extraversion	24,44	91,77	1,36	26	Yes	-
Neuroticism	-12,81	94,87	-0,69	26	-	Yes
Lie Scale	13,63	92,74	0,75	26	Yes	-
CALIFORNIA TEST OF PERSONALITY						
Personal Adjustment	16,93	25,03	3,45**	26	Yes	-
Social Adjustment	11,26	19,02	3,02**	26	Yes	-
Total Adjustment	13,07	18,10	3,68**	26	Yes	-
MARYLAND PARENT ATTITUDE SURVEY						
Disciplinarian Score	6,	79,35	0,21	8	Yes	-
Indulgence Score	2,56	82,84	0,09	8	Yes	-
Protectiveness Score	-10,22	51,21	-0,57	8	-	Yes
Rejection Score	8,67	63,48	0,39	8	Yes	-

Note

\* p < ,05.  
 \*\* p < ,01.

Table 18 shows the following significant improvements and increases at the ,01 level of significance:

in IQ on the Otis Quick Scoring Mental Ability Test;  
in reading age, on the Holborn Reading Inventory;  
in personal, social and total adjustment on the California Test of Personality.

The following factors are those that deteriorated and decreased significantly at the ,01 level:

the Child Scale A(2), Child Scale B(2) and arithmetic quotient on the Schonell Test No.5 Miscellaneous Combinations.

Thus comparing the results of the referred and treated group, Experimental Group I, with those of the non-referred, untreated, Control Group I, the latter group emerges as superior, showing improvement on two more factors than Experimental Group I, i.e. arithmetic age and reading age.

However, Experimental Group I shows a significant decrease on the total scores for the Child Scales A(2) and B(2) which does not reach significance in Control Group I.

3.2.3 Table 19 presents the results of the 2 G Test for the comparisons pre- to post-changes for the Child Scale A(2) designation and Child Scale B(2) designation for the different groups.

Table 19: 2 G Test of Pre and Post Scores of the following groups for the following factors.

Groups and Factors	N	2 G
CONTROL GROUP I		
Child Scale A(2) designation	126	69,18 **
Child Scale B(2) designation	126	31,1 **
CONTROL GROUP II		
Child Scale A(2) designation	6	5,91
Child Scale B(2) designation	6	3,82
CONTROL GROUPS I AND II		
Child Scale A(2) designation	132	31,29 **
Child Scale B(2) designation	132	26,11 **
EXPERIMENTAL GROUP I		
Child Scale A(2) designation	16	10,72
Child Scale B(2) designation	15	14,99

Note

df = (r-1)(k-1) is 9 throughout.

\* p < ,05.

\*\* p < ,01.

Table 19 shows the following significant results at ,01 level of significance: both the Child Scale A(2) designation and Child Scale B(2) designation for Control Group I and for the combined Control Groups I and II.

A closer inspection of the percentage distributions for pre- to post scores on the Child Scale A(2) designation for Control Group I shows the following:

	<u>PRE-TEST</u>		<u>POST-TEST</u>						Total
	<u>Non-disturbed</u>		<u>Disturbed</u>			<u>Mixed/Undifferentiated</u>			
	f		f	Antisocial	Neurotic		f		
Non-disturbed	56	84%	9	13%	1	1,5%	1	1,5%	67
Antisocial	8	30%	12	44%	6	22%	1	4%	27
Neurotic	8	40%	2	10%	7	35%	3	15%	20
Mixed/ Undifferentiated	3	25%	5	42%	1	8%	3	25%	12
Total	75		28		15		8		126

In the category non-disturbed 84% remained non-disturbed on the post-test and 16% became disturbed; 44% remained antisocial on the post-test with 30% being rated non-disturbed and a further 26% changing category designation in the disturbed division.

For the neurotic designation 35% remain the same on the post-test, 40% are rated non-disturbed and 25% change designation in the disturbed division.

Mixed/undifferentiated represents only 25%, the lowest percentage improved, shift into the category non-disturbed; 25% retain their rating and 50% change their rating in the division disturbed.

Inspection of the Child Scale A(2) designation results of pre to post-test scores show the following percentages:

Improved		Remained the same		Deteriorated		Total
f		f		f		
19	15%	96	76%	11	9%	126

There is a high relation between pre- and post-test ratings; they do not change.

Inspection of the Child Scale B(2) designation results of Control Group I of pre- to post-scores shows these percentage distributions:

<u>PRE-TEST</u>	<u>Non-disturbed</u>		<u>POST-TEST</u>				<u>Mixed/ Undifferentiated</u>	<u>Total</u>	
	f		<u>Antisocial</u>	<u>Neurotic</u>	<u>Disturbed</u>	f			
Non-disturbed	78	83%	12	13%	2	2%	2	2%	94
Antisocial	8	42%	9	47%	1	5,5%	1	5,5%	19
Neurotic	2	22%	2	22%	4	45%	1	11%	9
Mixed/ Undifferentiated	3	75%	1	25%	0	0%	0	0%	4
Total	91		24		7		4		126

Of those that were rated non-disturbed on the pre-test 83% retained this rating and 17% were rated in the division disturbed, mostly in the category antisocial.

For designation antisocial 47% remained the same on the post-test and 42% were rated non-disturbed while 10% changed designations in

Thus the percentage distributions show a high relation between pre- and post-test ratings on the Child Scale A(2) designation and Child Scale B(2) designation, i.e. they do not change from pre- to post-test.

3.2.4 Table 20 presents the results of the 2 G Test for the comparisons pre to post changes of the Parent and Child Interviews.



3.2.4 Table 20 presents the results of the 2 G Test for the comparisons pre to post changes of the Parent and Child Interviews.

Table 20: 2 G Test comparing pre to post changes of Experimental Group I for the following factors.

Factor	N	2 G
Parent Interview	28	20,12*
Child Interview	26	24,817**

Note

df = (r-1)(k-1) is 9 throughout

\* p <,05.

\*\* p <,01.

Table 20 shows that for Experimental Group I the results of the comparison of the pre to post changes of the Child Interview and Parent Interview are significant at the ,01 and ,05 levels of significance respectively.

The Child Interview results show the following percentage distributions:

f	Improved	f	Remained the same	f	Deteriorated	Total
4	15%	22	85%	0	0%	26

For the Child Interview there is no change from pre- to post-test ratings.

An inspection of the percentage distributions for the Parent Interview shows:

f	Improved	f	Remained the same	f	Deteriorated	Total
4	14%	24	86%	0	0%	28

These percentage distributions show a high relation between pre- and post-test ratings, indicating no change.

Thus the Child and Parent Interviews display a similar pattern.

3.2.5 Analysis of Covariance:

An Analysis of Covariance was done on the pre- to post-test changes for the following factors: Child Scale A(2) designation, Child Scale B(2) designation, Otis Quick Scoring Mental Ability Test, Holborn Reading Inventory, Schonell Test No.5 Miscellaneous Combinations, Benton Visual Retention Test, Junior Eysenck Personality Inventory, California Test of Personality, and the Maryland Parent Attitude Survey, comparing Control Group I, Control Group II and Experimental Group I to determine whether the pattern of change is the same or differs from group to group.

The Analysis of Covariance results are summarized in Table 21, and the detailed tables may be found in Appendix

**Table 21:** Analysis of Covariance of pre- to post-test change between three groups - Control Group I, Control Group II and Experimental Group I for the following factors.

Factor	Error df	F-Value
CHILD SCALE A(2) TOTAL SCORE	144	1,99
CHILD SCALE B(2) TOTAL SCORE	143	0,22
OTIS QUICK SCORING MENTAL ABILITY TEST FULL SCALE	160	0,40
HOLBORN READING INVENTORY		
Reading Age	147	16,07**
Reading Quotient	144	4,60 *
SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS		
Arithmetic Age	157	21,54**
Arithmetic Quotient	153	0,31
BENTON VISUAL RETENTION TEST		
No. Correct	150	2,44
No. of Errors	150	1,61
JUNIOR EYSENCK PERSONALITY INVENTORY		
Extraversion	155	5,18**
Neuroticism	155	2,72
Lie Scale	155	0,3
CALIFORNIA TEST OF PERSONALITY		
Personal Adjustment	155	2,95
Social Adjustment	154	3,15 *
Total Adjustment	154	4,52 *
MARYLAND PARENT ATTITUDE SURVEY		
Disciplinarian Score	68	1,74
Indulgence Score	68	5,18**
Protectiveness Score	68	4,26 *
Rejection Score	68	9,14**

Note

Between df is 2 throughout

\* p < ,05.

\*\* p < ,01.

Table 22 shows the results of the Scheffé-S test of Multiple Comparisons, which was done on the factors which were found to have significant differences in the Analysis of Covariance, Table 21.

The results are tabulated, indicating the differences of change patterns for the three groups.

Table 22: Scheffé S-test of multiple comparisons for the following contrasts on factors found to have a significant difference in the Analysis of Covariance.

Factor	Contrast between	df <sub>2</sub>	F-Value
HOLBORN READING INVENTORY Reading Age	Control Group I and Control Group II	147	4,86 **
	Control Group I and Experimental Group I	147	3,95 *
	Control Group II and Experimental Group I	147	1,11
HOLBORN READING INVENTORY Reading Quotient	Control Group I and Control Group II	144	2,14
	Control Group I and Experimental Group I	144	0,09
	Control Group II and Experimental Group I	144	1,35
SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS Arithmetic Age	Control Group I and Control Group II	157	5,66 **
	Control Group I and Experimental Group I	157	11,89 **
	Control Group II and Experimental Group I	157	0,38
JUNIOR EYSENCK PERSONALITY INVENTORY Extraversion	Control Group I and Control Group II	155	2,18
	Control Group I and Experimental Group I	155	0,98
	Control Group II and Experimental Group I	155	0,81
CALIFORNIA TEST OF PERSONALITY Social Adjustment	Control Group I and Control Group II	154	1,54
	Control Group I and Experimental Group I	154	0,24
	Control Group II and Experimental Group I	154	0,84
CALIFORNIA TEST OF PERSONALITY Total Adjustment	Control Group I and Control Group II	154	1,66
	Control Group I and Experimental Group I	154	1,36
	Control Group II and Experimental Group I	154	0,41
MARYLAND PARENT ATTITUDE SURVEY Indulgence Score	Control Group I and Control Group II	68	0,75
	Control Group I and Experimental Group I	68	3,97 *
	Control Group II and Experimental Group I	68	0,24
MARYLAND PARENT ATTITUDE SURVEY Protectiveness Score	Control Group I and Control Group II	68	1,73
	Control Group I and Experimental Group I	68	1,54
	Control Group II and Experimental Group I	68	0,08
MARYLAND PARENT ATTITUDE SURVEY Rejection Score	Control Group I and Control Group II	68	4,7 *
	Control Group I and Experimental Group I	63	1,57
	Control Group II and Experimental Group I	68	1,19

Note:

df<sub>1</sub> is 2 throughout.

\* p < ,05.

\*\* p < ,01.

Unfortunately, with the Analysis of Covariance the only method of Multiple Comparisons is the Scheffé-S method which is not suited to pairwise comparisons and hence the resultant loss of indication of significant differences which do in fact exist.

The resultant losses are: reading age on the Holborn Reading Inventory; extraversion on the Junior Eysenck Personality Inventory; social and total adjustment on the California Test of Personality, and protectiveness on the Maryland Parent Attitude Survey.

Table 23 summarizes the factors that are not lost.

**Table 23:** Inspection of significant results from the Analysis of Covariance and Scheffé-S test on Multiple Comparison (Analysis of Covariance of pre-test to post-test change between three groups - Control Group I, Control Group II and Experimental Group I) for the following factors:

Factor	CONTROL GROUP I		CONTROL GROUP II		EXPERIMENTAL GROUP I	
	$\bar{d}$	Average change from pre- to post-test	$\bar{d}$	Average change from pre- to post-test	$\bar{d}$	Average change from pre- to post-test
HOLBORN READING INVENTORY: Reading Age	9,98	Increase	-3	Decrease	8,	Increase
SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS: Arithmetic Age	5,18	Increase	1,17	Decrease	1,07	Increase
MARYLAND PARENT ATTITUDE SURVEY: Indulgence Score	-7,05	Decrease	11	Increase	2,56	Increase
MARYLAND PARENT ATTITUDE SURVEY: Rejection Score	11,48	Increase	-59,75	Decrease	8,67	Increase

From Table 23 the factors that show up on the Scheffé-S test of multiple comparisons confirmed that the average change from pre- to post-test for reading age on the Holborn Reading Inventory; arithmetic age on the Schonell Test No.5 Miscellaneous Combinations; rejection score on the Maryland Parent Attitude Survey, increases in both the non-referred, untreated Control Group I and referred, treated Experimental Group I, while the referred untreated Control Group II shows a decrease.

However, the clinic waiting list control, the referred, untreated Control Group II and the referred, treated Experimental Group I show an increase for the indulgence score on the Maryland Parent Attitude Survey with Control Group I showing a decrease.



Table 24 presents the results indicating significant differences from the Analysis of Covariance which did in fact exist but did not show up on Scheffé-S Test of Multiple Comparisons.

Inspection of the t-test results of Tables 15 to 18 assist in the understanding of these differences.

Table 24: Inspection of significant results from the Analysis of Covariance pre- to post-test changes between three groups, Control Group I, Control Group II and Experimental Group I.

Factor	CONTROL GROUP I		CONTROL GROUP II		EXPERIMENTAL GROUP I	
	$\bar{d}$	Average change from pre- to post-test	$\bar{d}$	Average change from pre- to post-test	$\bar{d}$	Average change from pre- to post-test
HOLBORN READING INVENTORY: Reading Quotient	0,6	Increase	-16,0	Decrease	8,0	Increase
JUNIOR EYSENCK PERSONALITY INVENTORY: Extraversion	37,74	Increase	-24,5	Decrease	24,44	Increase
CALIFORNIA TEST OF PERSONALITY: Social Adjustment	8,74	Increase	26,67	Increase	11,26	Increase
CALIFORNIA TEST OF PERSONALITY: Total Adjustment	8,55	Increase	18,0	Increase	13,07	Increase
MARYLAND PARENT ATTITUDE SURVEY: Protectiveness Score	-10,98	Decrease	1,0	Increase	-10,22	Decrease

Table 24 shows that the untreated, non-referred Control Group I and the referred, treated Experimental Group I show increases in reading quotient for the Holborn Reading Inventory, extraversion on the Junior Eysenck Personality Inventory, and protectiveness for the Maryland Parent Attitude Survey, while Control Group II shows a decrease for both these factors. A decrease is shown for Control Group I and Experimental Group I on protectiveness for the Maryland Parent Attitude Survey.

Although Control Group I, Control Group II and Experimental Group I all show increases for social and total adjustment on the California Test of Personality, increases for Control Group I are closer to those of Experimental Group I than Control Group II.

This trend of Control Group I and Experimental Group I was also found for Table 23.

3.3 Analysis of Results of Follow-ups I and II (FI and FII)

3.3.1 Table 25 shows the results of the 2 G Test for FI - Question (Q) I - How is the problem now, compared with questions in FI and FII for Experimental Groups I and II respectively and combined.

Table 26 shows the results of the 2 G Test for FII - QII The severity of the problem, compared with questions in FII for Experimental Groups I and II respectively and combined.

3.3.2 Tables 27, 28 and 29 show the results of the 2 G Test for FII questions compared with each other.

3.3.3 Tables 30 and 31 show the results of the 2 G Test for two specific questions, one each from FI and FII.

3.3.4 Table 32 shows the results of the 2 G Test for the overall trends in percentages for FI and FII for Experimental Groups I and II combined.

3.3.5 Table 33 shows the results of the 2 G Test investigating the differences between Experimental Groups I and II on responses to FI and FII.

3.3.6 Analysis of Covariance:

Table 34 presents the results of Analysis of Covariance for the change from FI to FII in the status of the problem.

Table 35 presents the inspection of the results of Table 34.

3.3.7 Table 36 shows the results of the 2 G Test investigating the relationship between responses to FI and FII and the four different sex combinations of therapist and child for Experimental Groups I and II respectively.

Table 37 shows the results of the 2 G Test investigating the relationship between the responses to FI and FII and sex of the therapist for Experimental Group I versus Experimental Group II.

### 3.3 Analysis of results of Follow-ups I and II

3.3.1 Tables 25 and 26 show the result of the 2 G Test investigating the responses to questions in Follow-up I (FI) and Follow-up II (FII) for Experimental Group I, Experimental Group II and Experimental Groups I and II combined.

No follow-up data is available on Control Groups I and II as explained in 2.4.10 and 2.4.11.

For Experimental Group II no pre- and post-test data is available for reasons detailed in Chapter 2, however, data for FI and FII are available. This group was seen by a trained experienced therapist.

**Table 25:** 2 G Test investigating the responses to questions in Follow-up I and Follow-up II for Experimental Group I, Experimental Group II and Experimental Groups I and II combined.

FOLLOW-UP I		N	df		2 G
QI - How is the problem now? compared with			(r-1)	(k-1)	
<b>EXPERIMENTAL GROUP I</b>					
FI -QII -	Severity of problem	54	4		14,84**
FII -QI -	How satisfied are you with services you received?	54	4		6,89
FII -QII -	Would you return to Child Guidance Clinic if you felt a need for further services?	52	2		4,86
FII -QIII -	How do you feel about these problems?	52	4		5,82
FII -QIV -	Do you attribute this change in feeling to the treatment you received at the Clinic?	52	4		7,7
<b>EXPERIMENTAL GROUP II</b>					
FI -QII -	Severity of problem	35	4		22,99**
FII -QI -	How satisfied are you with services you received?	34	4		6,29
FII -QII -	Would you return to Child Guidance Clinic if you felt a need for further services?	34	2		0,32
FII -QIII -	How do you feel about these problems?	35	4		6,85
FII -QIV -	Do you attribute this change in feeling to the treatment you received at the Clinic?	34	4		1,76
<b>EXPERIMENTAL GROUPS I AND II</b>					
FI -QII -	Severity of problem	89	4		24,41**
FII -QI -	How satisfied are you with services you received?	88	4		17,76**
FII -QII -	Would you return to Child Guidance Clinic if you felt a need for further services?	86	2		2,77
FII -QIII -	How do you feel about these problems?	87	4		7,67
FII -QIV -	Do you attribute this change in feeling to the treatment you received at the Clinic?	86	4		6,37

Note

\* p <,05.

\*\* p <,01.

Table 25 shows a significant relationship at the ,01 level between FI - QI - How is the problem now? and FI-QII - Severity of the problem - in Experimental Group I, Experimental Group II and the combined Experimental Groups I and II.

FII-QI - How satisfied are you with the services received? shows a significant relationship at the ,01 level for combined Experimental Groups I and II.

Inspection of the relationship between FI-QI - How is the problem now? and FI-QII - Severity of the problem - for Experimental Group I, shows the following percentage distributions:

Severity of Problem	f	How is the Problem now?			Total
		Improved	Remained the same	Deteriorated	
Not severe	14	82%	1 6%	2 12%	17
Slightly severe	10	37%	12 44%	5 19%	27
Very severe	2	20%	5 50%	3 30%	10
Total	26		18	10	54

The greatest number not severe improved; the greatest number slightly severe, and the greatest number very severe remained the same.

Experimental Group II shows the following percentage distributions:

Severity of Problem	f	How is the Problem now?			Total
		Improved	Remained the same	Deteriorated	
Not severe	9	75%	0 0%	3 25%	12
Slightly severe	3	20%	11 73%	1 7%	15
Very severe	2	25%	2 25%	4 50%	8
Total	14		13	8	35

The greatest proportion not severe improved; the greatest number slightly severe remained the same, and the greatest number very severe deteriorated.

Experimental Groups I and II combined show the following percentage distributions:

Severity of Problem	f	How is the Problem now?					Total
		<u>Improved</u>	<u>Remained the same</u>	f	<u>Deteriorated</u>		
Not severe	23	61%	10	26%	5	13%	38
Slightly severe	4	12%	23	70%	6	18%	33
Very severe	4	22%	7	39%	7	39%	18
Total	31		40		18		89

The greatest proportion not severe improved; the greatest number slightly severe remained the same; and the greatest number very severe either deteriorated or remained the same.

Inspection of the relationship between FI and QI - How is the problem now? and FII-QI - How satisfied are you with the services received? for Experimental Groups I and II combined, is as follows:

Satisfaction with Services received	f	How is the problem now?					Total
		<u>Improved</u>	<u>Remained the same</u>	f	<u>Deteriorated</u>		
Satisfied	25	56%	15	33%	5	11%	45
Indifferent	25	89%	3	11%	0	0%	28
Dissatisfied	10	67%	1	7%	4	26%	15
Total	60		19		9		88

The greatest proportion showed the problem had improved irrespective of satisfaction with services received.



Table 26: 2 G Test investigating the responses to questions in Follow-up I and Follow-up II for Experimental Group I, Experimental Group II and Experimental Groups I and II combined.

FOLLOW-UP I		N	df (r-1)(k-1)	2 G
QII - Severity of the problem compared with:				
EXPERIMENTAL GROUP I				
FII-QI	- How satisfied are you with services you received?	53	4	1,05
FII-QII	- Would you return to Child Guidance Clinic if you felt a need for further services?	52	2	4,86
FII-QIII	- How do you feel about these problems?	53	4	4,78
FII-QIV	- Do you attribute this change in feeling to the treatment you received at the Clinic?	53	4	2,41
EXPERIMENTAL GROUP II				
FII-QI	- How satisfied are you with services you received?	33	4	1,22
FII-QII	- Would you return to Child Guidance Clinic if you felt a need for further services?	34	2	1,93
FII-QIII	- How do you feel about these problems?	32	4	12,01**
FII-QIV	- Do you attribute this change in feeling to the treatment you received at the Clinic?	33	4	3,2
EXPERIMENTAL GROUPS I AND II				
FII-QI	- How satisfied are you with services you received?	86	4	3,56
FII-QII	- Would you return to Child Guidance Clinic if you felt a need for further services?	86	2	3,08
FII-QIII	- How do you feel about these problems?	85	4	3,71
FII-QIV	- Do you attribute this change in feeling to the treatment you received at the Clinic?	86	4	1,39

Note

\* p < ,05.

\*\* p < ,01.

3.3.2 Tables 27, 28 and 29 show the results of the 2 G Test investigating the relationship between responses to questions in FII with each other, for Experimental Group I, Experimental Group II and the combined Experimental Groups I and II.

Table 27: 2 G Test investigating the responses to questions in Follow-up II for Experimental Group I, Experimental Group II and Experimental Groups I and II combined.

FOLLOW UP II			
QI - How satisfied are you with services you received? compared with:	N	df (r-1)(k-1)	2 G
EXPERIMENTAL GROUP I			
FII-QII - Would you return to the Child Guidance Clinic if you felt a need for further services?	55	2	22,44**
FII-QIII - How do you feel about these problems?	56	4	4,81
EXPERIMENTAL GROUP II			
FII-QII - Would you return to the Child Guidance Clinic if you felt a need for further services?	34	2	6,12*
FII-QIII - How do you feel about these problems?	34	4	6,62
EXPERIMENTAL GROUPS I AND II			
FII-QII - Would you return to the Child Guidance Clinic if you felt a need for further services?	84	2	20,43**
FII-QIII - How do you feel about these problems?	90	4	5,9

Note

\* p < ,05.  
\*\* p < ,01.

Table 23: 2 G Test investigating the responses to questions in Follow-up II for Experimental Group I, Experimental Group II and Experimental Groups I and II combined.

FOLLOW-UP II			
QII - Would you return to Child Guidance Clinic if you felt a need for further services? compared with:	N	df (r-1)(k-1)	2 G
EXPERIMENTAL GROUP I			
FII-QIII - How do you feel about these problems?	52	2	6,12*
FII-QIV - Do you attribute this change in feeling to the treatment you received at the Clinic?	52	2	11,14**
EXPERIMENTAL GROUP II			
FII-QIII - How do you feel about these problems?	34	2	1,35
FII-QIV - Do you attribute this change in feeling to the treatment you received at the Clinic?	34	2	2,06
EXPERIMENTAL GROUPS I AND II			
FII-QIII - How do you feel about these problems?	86	2	3,23
FII-QIV - Do you attribute this change in feeling to the treatment you received at the Clinic?	86	2	9,79**

Note

\* p <,05.  
\*\* p <,01.

Table 29: 2 G Test investigating the responses to questions in Follow-up II for Experimental Group I, Experimental Group II and Experimental Groups I and II combined.

FOLLOW-UP II			
QIV - Do you attribute this change in feeling to the treatment you received at the Clinic? compared with:	N	df (r-1)(k-1)	2 G
EXPERIMENTAL GROUP I			
FII-QI - How satisfied are you with services you received?	55	4	12,66**
FII-QIII - How do you feel about these problems?	55	4	2,97
EXPERIMENTAL GROUP II			
FII-QI - How satisfied are you with services you received?	33	4	2,12
FII-QIII - How do you feel about these problems?	33	4	7,45
EXPERIMENTAL GROUPS I AND II			
FII-QI - How satisfied are you with services you received?	88	4	8,34
FII-QIII - How do you feel about these problems?	88	4	37,53**

Note

\* p < ,05.  
 \*\* p < ,01.

Table 27 shows a significant relationship between FII-QI - How satisfied are you with the services received? and FII-QII - Would you return to the Child Guidance Clinic if you felt a need for further services? for Experimental Group I, at the ,01 level, Experimental Group II, at the ,05 level, and the combined Experimental Groups I and II, at the ,01 level.

Inspection of the results for Experimental Group I shows the following:

<u>Return</u>	f	<u>Satisfaction with Service</u>			Total		
		<u>Satisfied</u>	f	<u>Indifferent</u>		f	<u>Dissatisfied</u>
Yes	47	98%	0	0%	1	2%	48
No	2	29%	4	57%	1	14%	7
Total	49		4		2		55

The greatest proportion which agreed to return said they were satisfied, the greatest proportion not returning was indifferent.

Inspection of the results for Experimental Group II shows the following percentage distribution:

<u>Return</u>	f	<u>Satisfaction with Service</u>			Total		
		<u>Satisfied</u>	f	<u>Indifferent</u>		f	<u>Dissatisfied</u>
Yes	27	87%	2	6,5%	2	6,5%	31
No	1	33%	0	0%	2	67%	3
Total	28		2		4		34

The greatest proportion which agreed to return was satisfied; the greatest number not returning said they were dissatisfied.

Inspection of the results for the combined Experimental Groups I and II shows a distribution as follows:

<u>Return</u>	f	<u>Satisfaction with Service</u>			Total		
		<u>Satisfied</u>	f	<u>Indifferent</u>		f	<u>Dissatisfied</u>
Yes	69	93%	2	3%	3	4%	74
No	3	30%	4	40%	3	30%	10
Total	72		6		6		84

<u>Return</u>	<u>Do you attribute this change in feeling to the treatment you received at the Clinic?</u>						Total
		<u>Mostly</u>		<u>Partly</u>		<u>Not at all</u>	
Yes	f 30	65%	f 12	26%	f 4	9%	46
No	2	33%	0	0%	4	67%	6
Total	32		12		8		52

The greatest proportion of those who agreed to return felt the change was mostly attributable to the Clinic. The greatest proportion of those who would not return felt that the change was not at all attributable to the Clinic.

Inspection of the results of Experimental Groups I and II shows the following percentage distributions:

<u>Return</u>	<u>Do you attribute this change in feeling to the treatment you received at the Clinic?</u>						Total
		<u>Mostly</u>		<u>Partly</u>		<u>Not at all</u>	
Yes	f 38	49%	f 34	44%	f 5	7%	77
No	4	44,5%	1	11%	4	44,5%	9
Total	42		35		9		86

Of those who agreed to return a slightly greater proportion felt the change was mostly due to the Clinic. Of those who would not return an equal proportion felt the change was due mostly or not at all to the Clinic.

Table 29 shows a significant relationship at the ,01 level of significance for Experimental Group I between FII-QIV - Do you attribute this change in feeling to the treatment you received at the Clinic? and FII-QI - How satisfied are you with the services you received?

Inspection of the results shows the following:

<u>Satisfied with Services</u>	f	<u>Do you attribute this change in feeling to the treatment you received at the Clinic?</u>					Total
		<u>Mostly</u>	f	<u>Partly</u>	f	<u>Not at all</u>	
Satisfied	31	97%	1	3%	0	0%	32
Indifferent	14	93%	1	7%	0	0%	15
Dissatisfied	4	50%	2	25%	2	25%	8
Total	49		4		2		55

The greatest proportion satisfied felt the change was mostly attributable to the Clinic; the greatest number indifferent felt the change was only partly attributable to the Clinic, and the greatest number dissatisfied felt the change was not at all attributable to the Clinic.

A significant relationship exists at the ,01 level of significance for Experimental Groups I and II combined between FII-QIV - Do you attribute the change in feeling to the treatment you received at the Clinic? and FII-QIII - How do you feel about these problems?

Inspection of the results shows the following:

<u>How do you feel about these problems?</u>	f	<u>Do you attribute this change in feeling to the treatment received at the Clinic?</u>					Total
		<u>Mostly</u>	f	<u>Partly</u>	f	<u>Not at all</u>	
Improved	39	70%	17	30%	0	0%	56
Remained the same	13	69%	5	26%	1	5%	19
Deteriorated	8	62%	4	31%	1	7%	13
Total	60		26		2		88

The greatest proportion improved felt the Clinic was mostly responsible for a change; the greatest number who remained the same attributed the change mostly to the Clinic and the greatest number who deteriorated felt the change was mostly attributable to the Clinic.



3.3.3 Tables 30 and 31 show the results of the 2 G Test investigating the interaction between two specific questions one each from FI and FII and age, 96-114 months and 115-144 months, and six social classes based on Experimental Groups I and II respectively.

Table 30: 2 G Test investigating the interaction between two specific questions from Follow-up I and Follow-up II and age (96-114 months and 115-144 months) based on Experimental Group I and Experimental Group II respectively.

FACTORS AND GROUPS	N	2 G
EXPERIMENTAL GROUP I      Age versus		
Follow-up I - QI - How is the problem now?	54	0,32
Follow-up II - QIII - How do you feel about these problems?	54	0,28
EXPERIMENTAL GROUP II      Age versus		
Follow-up I - QI - How is the problem now?	34	1,37
Follow-up II - QIII - How do you feel about these problems?	34	1,78

Note

df (r-1)(k-1) is 2 throughout

\* p < ,05.

\*\* p < ,01.

Table 30 shows no significant interaction between age and questions from FI and FII.

Table 31: 2 G Test investigating the interaction between two specific questions from Follow-up I and Follow-up II and the six social classes based on Experimental Group I and Experimental Group II respectively.

FACTORS AND GROUPS	N	2 G
EXPERIMENTAL GROUP I Six social classes, versus		
Follow-up I - QI - How is the problem now?	53	0,89
Follow-up II - QIII - How do you feel about these problems?	54	7,77
EXPERIMENTAL GROUP II Six social classes, versus		
Follow-up I - QI - How is the problem now?	34	5,7
Follow-up II - QIII - How do you feel about these problems?	34	10,32

Note

df  $(r-1)(k-1)$  is 10 throughout.

\*  $p < ,05.$

\*\*  $p < ,01.$

Table 31 shows no significant interaction between the six social classes and questions from FI and FII.

3.3.4 Table 32 shows the results indicating the overall trends in percentages derived from the 2 G Tests for Experimental Groups I and II combined on responses to FI and FII.

The 2 G Test was done to compare Experimental Group I with Experimental Group II on all the questions in FI and FII.

Table 33 summarizes these results.

Table 32 presents the percentage distribution of combined Experimental Groups I and II six months after initial intake.

Status of problem: 33% improved; larger number, 48%, remained the same, and 19% deteriorated.

The severity of the problem: the greatest number most severe was 45% with 30% slightly severe and the smallest number very severe.

At FII, 9 months after initial intake, the results were that 86% felt satisfied with services received. An equal percentage, 7%, felt indifferent and dissatisfied respectively, and the largest number, 89%, were willing to return to the Clinic, while 1% were not.

At this stage, FII, 84% improved, 9% remained the same and 7% deteriorated.

Thus from FI to FII a 56% increase was rated for the category Improvement.

However, a slightly larger percentage, 47%, felt the Clinic was mostly responsible for this change; 43% felt change was partly due to the Clinic and 10% felt the change was not at all attributable to the Clinic.

3.3.5 Table 33 shows the results of the 2 G Test investigating the differences between Experimental Groups I and II on responses to FI and FII.

Table 33: 2 G Test investigating the differences between Experimental Group I and Experimental Group II on responses to Follow-Up I and Follow-Up II.

FACTOR	N	df (r-1)(k-1)	2 G
FOLLOW-UP I			
QI How is the problem now?	88	2	0,29
QII Severity of the problem?	88	2	3,2
FOLLOW UP II			
QI How satisfied are you with the services you received?	89	2	2,16
QII Would you return to Child Guidance Clinic if you felt a need for further services?	89	1	0,33
QIII How do you feel about these problems?	89	2	6,4*
QIV Do you attribute this change in feeling to the treatment you received at the Clinic?	89	2	15,01**

Note

\* p < ,05.  
 \*\* p < ,01.

<u>Do you attribute this change in feeling to the treatment you received at the Clinic?</u>		<u>Experimental Group I</u>		<u>Experimental Group II</u>	<u>Total</u>
	f		f		
Mostly	32	58%	10	29%	42
Partly	15	27%	23	68%	38
Not at all	8	15%	1	3%	9
Total	55		34		89

Experimental Group I, therapy conducted by inexperienced therapists, shows a higher percentage of those who thought change was mostly attributable to the Clinic, a lower percentage of those who thought change was partly attributable to the Clinic and a higher percentage of those who felt change was not at all attributable to the Clinic than Experimental Group II, therapy conducted by experienced therapists.

However, Experimental Group II, therapy conducted by experienced therapists, shows that 93% felt the change was mostly or partly due to the Clinic, while only 85% of Experimental Group I, therapy conducted by inexperienced therapists, felt this way.



### 3.3.6 Analysis of Covariance.

An Analysis of Covariance was undertaken on the change of the status of the problem from FI and FII between the groups, Experimental Group I and Experimental Group II. Table 34 shows these results.

The Analysis of Covariance was calculated on scores which definitely do not follow a normal distribution; however, the non-normality is compensated by the robustness of a F-test.

Table 34: Analysis of Covariance Table for the change from FI to FII in the status of the problem 'How is the problem now?' for Experimental Group I versus Experimental Group II.

Source	df	S.S.	M.S.	F
between	1	7,13	7,13	10,97
error	84	54,62	0,65	

Note

$F_{1,84} (0,05) = 3,96$

$F_{1,84} (0,01) = 6,96$

Table 35 presents the inspection of the Analysis of Covariance results.

Table 35: Inspection of the Analysis of Covariance results.

FACTOR	Experimental Group I		Experimental Group II	
	$\bar{d}$	Average change from FI to FII	$\bar{d}$	Average change from FI to FII
Status of the problem	2,83	Decrease (greater improvement in state of the problem)	-1,24	Decrease (Improvement in state of the problem)

Table 35 shows that Experimental Group I, therapy conducted by inexperienced therapists, improved to a greater extent than Experimental Group II, therapy conducted by experienced therapists. This confirms the findings of the 2 G Test in Table 33.

3.3.7 The 2 G Test was done to investigate the relationship between the responses to FI and FII and the four different sex combinations of therapists and child for Experimental Groups I and II respectively. Table 36 shows these results.

Table 37 shows the results of the 2 G Test investigating the relationship between the responses to FI and FII and the sex of the therapist for Experimental Group I versus Experimental Group II.

Table 36: 2 G Test investigating the relationship between the response to Follow-Up I and Follow-Up II and the four different sex combinations of therapist and child:  
 Male therapist with male child  
 Male therapist with female child  
 Female therapist with male child  
 Female therapist with female child  
 for Experimental Groups I and II respectively.

FACTORS AND GROUPS	N	2 G
EXPERIMENTAL GROUP I		
Follow-up I - QI - How is the problem now? - improved - same - deteriorated	40	15,55**
Follow-up II - QIII - How do you feel about these problems? - better - same - worse	55	2,83
EXPERIMENTAL GROUP II		
Follow-up I - QI - How is the problem now? - improved - same - deteriorated	32	5,78
Follow-up II - QIII - How do you feel about these problems? - better - same - worse	33	12,1

Note

df (r-1)(k-1) is 6 throughout

\* p < ,05

\*\* p < ,01

Table 37: 2 G Test investigating the relationship between the responses to Follow-Up I and II and Male and Female therapists for Experimental Group I versus Experimental Group II.

FACTORS AND THERAPISTS	N	2 G
MALE THERAPISTS		
Follow-up I, QI - How is the problem now?	50	4,36
Follow-up II, QIII - How do you feel about these problems?	53	8,91*
FEMALE THERAPISTS		
Follow-up I, QI - How is the problem now?	22	8,01*
Follow-up II, QIII - How do you feel about these problems?	35	1,05

Note

df (r-1)(k-1) is 2 throughout

\* p < ,05

\*\* p < ,01

Investigation of the significant results for Table 37 shows that Male therapists for Experimental Group I differ significantly at the ,05 level from those of Experimental Group II.

For FII - QIII - How do you feel about these problems? -

the percentage distributions are as follows:

<u>How do you feel about these problems?</u>		<u>Experimental Group I Inexperienced male therapists</u>		<u>Experimental Group II Experienced male therapists</u>	
	f		f		Total
Improved	28	90%	14	64%	42
Remained the same	3	10%	4	18%	7
Deteriorated	0	0%	4	18%	4
Total	31		22		53

Nine months after initial intake, at FII, the inexperienced male therapists, Experimental Group I, recorded a higher improved percentage, a lower percentage remained the same, and a zero percentage deteriorated in comparison to the experienced male therapists, Experimental Group II.

The female therapists for Experimental Group I differ significantly at the ,05 level of significance from those of Experimental Group II. The percentage distributions are as follows for FI-QI - How is the problem now?

<u>How is the problem now?</u>		<u>Experimental Group I Inexperienced female therapists</u>		<u>Experimental Group II Experienced female therapists</u>	
	f		f		Total
Improved	3	27%	6	55%	9
Remained the same	1	10%	4	36%	5
Deteriorated	7	63%	1	9%	8
Total	11		11		22

Six months after initial intake, at FI, a higher percentage of improved and remained the same was recorded by the experienced

3.4 An Analysis of Therapists' Attitudes and their relationship to Follow-ups I and II

3.4.1 Tables 38 to 43 show the results of the 2 G Test investigating the interaction between the attitudinal assessments completed by the inexperienced therapists in Experimental Group I.

3.4.2 Tables 44 to 50 show the results of the 2 G Test investigating the relationship between therapists' attitudes and all the responses in FI and FII for Experimental Group I.

3.4.1 The interaction between the attitudinal assessments completed by the inexperienced therapists in Experimental Group I. the 2 G Test was used to investigate the attitudinal assessment made by the inexperienced therapists three months after the initial intake and at the same time as the post-test assessments.



Five tables, Tables 38 to 43, are presented each presenting a comparison of one question with the rest of the set of questions as follows:

<u>Table</u>	<u>Key Question</u>		<u>Question numbers</u>
38	I	compared with	II, III, IV, VI and VII
39	II	compared with	IV, VI and VII
40	III	compared with	II, IV, VI and VII
41	IV	compared with	VI and VII
42	V	compared with	I, II, III, IV, VI and VII
43	VI	compared with	VII

Table 38 shows a significant interaction at ,01 level between therapists' attitude, QI - therapists' initial dealing with the case and, QII - therapists' evaluation of the appropriateness of the type of treatment the case has been assigned.

Table 38: 2 G Test investigating the interaction between the attitudinal assessments made by the therapist in Experimental Group I.

Therapists' Assessment	N	2 G
QI - Therapists' initial dealing with case. Compared with:		
QII - Therapists' evaluation of the appropriateness of the type of treatment the case has been assigned.	59	18,35**
QIII - Did you find it easy or difficult to assess and treat children within the rigours of the research programme?	59	6,85
QIV - Did you regard the allocation of children to a specific treatment group as immoral?	61	0,29
QVI - Do you feel research in psychotherapy is necessary?	55	2,82
QVII - If you had difficulty in keeping the different therapy groups separate, was it because you were basically hostile towards, or unhappy about the study?	56	3,27

Note.

df (r-1)(k-1) is 4 throughout.

\* p < ,05.

\*\* p < ,01.

QI evoked the following therapists' attitudes to the initial dealing with cases: 51% found it easy, 32% experienced difficulty, and 17% recorded a response of experience neither easy nor difficult.

This pattern was not related to their other attitudes investigated in Table 38 except to QII - the therapists' evaluation of the appropriateness of the type of treatment the case had been assigned.

Therapist evaluation of the appropriateness of the type of treatment the case had been assigned	Therapist initial dealing with case						Total
	f	Easy	f	Intermediate	f	Difficult	
Appropriate	15	38%	10	26%	14	36%	39
Intermediate	0	0%	0	0%	2	100%	2
Inappropriate	15	83%	0	0%	3	17%	18
Total	30		10		19		59

Of those therapists who experienced indifference (intermediate) to the treatment assigned to the case, 100% experienced initial difficulty with the case.

Of those who gave the evaluation, appropriate, to the assignment of treatment, 36% experienced initial difficulty in dealing with the case, whereas only 17% of therapists who felt that the treatment assigned was inappropriate found it initially difficult to deal with the case.

However, 83% of those who felt the treatment allocation to be inappropriate, experienced initial ease in dealing with the case.

Of those who felt the treatment to be appropriate, 38% experienced initial ease and 26% initially experienced neither ease nor difficulty in dealing with the case.

Table 39 shows the following general trend: 67% of the therapists responded that the type of treatment the case had been assigned was appropriate, while 30% felt the treatment assigned was inappropriate and 3% felt the treatment was neither appropriate nor inappropriate; they were indifferent.

This pattern, however, was significantly affected at the ,01 level by QIV -- therapist attitude with regard to the morality of allocating a child to a particular treatment group.

The pattern is also significantly affected at the ,01 level by the therapists' attitude of initial ease in dealing with the case as shown in Table 40.

Table 39: 2 G Test investigating the interaction between the attitudinal assessments made by the therapists in Experimental Group I.

Therapists' Assessment	N	2 G
QII - Therapists' evaluation of the appropriateness of the type of treatment the case has been assigned Compared with:		
QIV - Did you regard the allocation of children to a specific treatment group as immoral?	60	17,81**
QVI - Do you feel research in psychotherapy is necessary?	55	1,65
QVII - If you had difficulty in keeping the different therapy groups separate, was it because you were basically hostile towards, or unhappy about the study?	55	9,37

Note.

df (r-1)(k-1) is 4 throughout.

\* p < ,05.

\*\* p < ,01.

On inspecting the results of QII compared with QIV, the following percentage distributions were found:

Therapists' evaluation of the appropriateness of the type of treatment the case had been assigned	Did you regard the allocation of children to a specific treatment group as immoral?						Total
	Appropriate		Intermediate		Inappropriate		
	f	%	f	%	f	%	
Morally justified	16	52%	0	0%	15	48%	31
Intermediate	10	100%	0	0%	0	0%	10
Immoral	14	73%	2	11%	3	16%	19
Total	40		2		18		60

The therapists who regarded the allocation of children to a specific treatment group as immoral or morally justified had a dissimilar pattern in the appropriateness or inappropriateness of the type of treatment.

However, those therapists who had no feelings either way, i.e. intermediate, to the allocation of children to a specific treatment group, felt the type of treatment to be appropriate in 100% of the cases.

Table 40 shows the following general trend: 42% of the therapists responded that they found it easy to assess and treat children within the rigours of the research programme, 49% experienced difficulty and 9% experienced neither ease nor difficulty.

This pattern, however, was significantly affected at ,01 level by therapists' attitude with regard to appropriateness of the type of treatment allocated, the morality of allocating a child to a particular treatment group, and their basic hostility to the study.

Table 40: 2 G Test investigating the interaction between the attitudinal assessments made by the therapists in Experimental Group I.

Therapists' Assessment		
QIII - Did you find it easy or difficult to assess and treat children within the rigours of the research programme? Compared with:	N	2 G
QII - Therapists' evaluation of the appropriateness of the type of treatment the case has been assigned	60	12,05**
QIV - Did you regard the allocation of children to a specific treatment group as immoral?	65	28,64**
QVI - Do you feel research in psychotherapy is necessary?	55	9,3
QVII - If you had difficulty in keeping the different therapy groups separate, was it because you were basically hostile towards, or unhappy about the study?	58	35,81**

Note.

df (r-1)(k-1) is 4 throughout.

\* p < ,05.

\*\* p < ,01.

Inspection of the results of QIII compared with QII showed the following percentage distributions:

Therapists' evaluation of the appropriateness of the type of treatment the case had been assigned

Did you find it easy or difficult to assess and treat children within the rigours of the research programme?

	f	Easy	f	Intermediate	f	Difficult	Total
Appropriate	15	38%	6	15%	19	47%	40
Intermediate	0	0%	0	0%	2	100%	2
Inappropriate	13	72%	0	0%	5	28%	18
Total	28		6		26		60

Of the therapists who felt indifferent (intermediate) to the treatment assigned to the case 100% experienced difficulty in assessing and treating the case within the rigours of the research programme.

Of those who gave the evaluation, appropriate, to assignment of treatment, 47% had difficulty, whereas 28% felt the assignment of therapy to be inappropriate experienced difficulty.

However, 72% of the therapists felt the treatment allocation to be inappropriate and found it easy to work within the research programme.

Of those who felt the treatment allocation to be appropriate, 38% found it easy, and 15% neither found it easy nor difficult to assess and treat children within the rigours of the research programme.

QIII compared with QIV shows the following percentage distributions:

Did you regard the allocation of children to a specific treatment group as immoral?

Did you find it easy or difficult to assess and treat children within the rigours of the research programme?

	f	Easy	f	Intermediate	f	Difficult	Total
Morally justified	22	67%	6	18%	5	15%	33
Intermediate	0	0%	0	0%	0	0%	0
Immoral	8	25%	0	0%	24	75%	32
Total	30		6		29		65

Of those therapists who felt the allocation of children to a specific treatment group to be immoral, 75% had difficulty in assessing and treating children within the rigours of the research programme. Of those who felt allocation to be morally justified, 15% experienced difficulty in working within the constraints of the research programme.

However, 25% who felt allocation of children to a specific treatment group to be immoral, experienced ease in assessing and treating children within the rigours of the research programme. Of those who felt allocation to be morally justified, 67% found it easy and 18% found it neither easy nor difficult to assess and treat children within the rigours of the research programme.

Therapists found the allocation of the treatment to be either morally justified or immoral, but not intermediate.

Inspection of the results of QIII compared with QVII shows the following percentage distributions:

If you had difficulty in keeping the different therapy groups separate, was it because you were basically hostile towards, or unhappy about the study? Did you find it easy or difficult to assess and treat children within the rigours of the research programme?

	f	Easy	Intermediate	Difficult	Total
		f	f	f	
None of these	19	56%	0 0%	15 44%	34
Indifferent	4	31%	6 46%	3 23%	13
Hostile and unhappy	0	0%	0 0%	11 100%	11
Total	23		6	29	58

Of those therapists who had difficulty in keeping the different therapy groups separate because of their basic hostility, 100% had difficulty in

assessing and treating children within the rigours of the research programme.

Of those who felt neither indifferent nor hostile in category, none of these, 44% found it difficult, whereas only 23% of the therapists who found they were indifferent in their attitude to keeping the therapy groups separate, found it difficult to deal with their cases within the confines of the research programme.

However, 31% who felt indifferent to keeping the therapy groups separate, found it easy and 46% found it neither easy nor difficult in assessing and treating children within the rigours of the research programme.

Of those who responded to the category, none of these, 56% found it easy.

Although therapists were requested to state their reasons should they have replied to the category, none of these, no reasons were given.



Table 41 shows the following general trend: 54% regarded the allocation of children to a specific treatment group as morally justified, and 46% found allocation to be quite immoral.

This pattern, however, was significantly affected by therapists' attitudes with regard to their feelings concerning the necessity for research in psychotherapy and their basic hostility towards the study.

The pattern was also significantly affected by the attitudes of initial ease and appropriateness of treatment, as shown in Tables 38 and 39 respectively.

Table 41: 2 G Test investigating the interaction between the attitudinal assessments made by the therapists in Experimental Group I.

Therapists' Assessment	N	2 G
QIV - Did you regard the allocation of children to a specific treatment group as immoral? Compared with:		
QVI - Do you feel research in psychotherapy is necessary?	57	12,17**
QVII - If you had difficulty in keeping the different therapy groups separate, was it because you were basically hostile towards, or unhappy about the study?	57	21,27**

Note.

df (r-1)(k-1) is 4 throughout.

\* p < ,05.

\*\* p < ,01.

On inspection of the results of QIV compared with QVI the following percentage distributions are shown:

Do you feel research in psychotherapy is necessary?	Did you regard the allocation of children to a specific treatment group as immoral?						Total
	Morally justified		Intermediate		Immoral		
	f	%	f	%	f	%	
Necessary	31	62%	0	0%	19	38%	50
Indifferent	0	0%	0	0%	0	0%	0
Unnecessary	0	0%	0	0%	7	100%	7
Total	31		0		26		57

Of those therapists who felt research in psychotherapy to be unnecessary, 100% felt the allocation of children to a specific treatment group to be immoral. Those who felt research in psychotherapy to be necessary, 38% felt allocation to be immoral.

Of those who felt research in psychotherapy to be necessary, 62% found allocation of children to a specific treatment group morally justified.

Results of the inspection of QIV compared with QVII showed the following percentage distributions:

If you had difficulty in keeping the different therapy groups separate, was it because you were basically hostile towards, or unhappy about the study?	Did you regard the allocation of children to a specific treatment group as immoral?						Total
	Morally justified		Intermediate		Immoral		
	f	%	f	%	f	%	
None of these	21	64%	0	0%	12	36%	33
Indifferent	10	77%	0	0%	3	23%	13
Hostile and unhappy	0	0%	0	0%	11	100%	11
Total	31		0		26		57

Of those therapists who had difficulty in keeping the different therapy

groups separate due to their hostility towards the study, 100% regarded the allocation of children to a specific treatment group as immoral.

Of those who responded to the category, none of these, 36% felt the allocation of children to a particular treatment group to be immoral; whereas of those who responded to category, indifferent, 77% and 23% found allocation to a particular treatment programme to be morally justified and immoral respectively.

Table 42, QV, shows the following general trend: 34% recorded that therapy allocated was the same as their preferred method of treatment and 66% indicated that therapy allocated was different from their choice.

This pattern, however, was not significantly affected by any of their other attitudes as shown in Table 42.

Table 42: 2 G Test investigating the interaction between the attitudinal assessment made by the therapists in Experimental Group I.

Therapists' Assessment		
QV - Which is your preferred school of therapy? Compared with:	N	2 G
QI - Therapists' initial dealing with case	60	1,52
QII - Therapists' evaluation of the appropriateness of the type of treatment the case has been assigned	60	0,54
QIII - Did you find it easy or difficult to assess and treat children within the rigours of the research programme?	60	0,04
QIV - Did you regard the allocation of children to a specific treatment group as immoral?	61	2,63
QVI - Do you feel research in psychotherapy is necessary?	55	0,24
QVII - If you had difficulty in keeping the different therapy groups separate, was it because you were basically hostile towards, or unhappy about the study?	53	1,94

Note.

df (r-1)(k-1) is 2 throughout.

\* p <,05.

\*\* p <,01.

Table 43, QVI, shows the following general trend: 89% felt that research in psychotherapy was necessary and 11% felt that it was unnecessary.

This pattern was not affected by QVII, their basic hostility towards the study interfering with their ability to keep the different therapy groups separate. However, it is significantly affected at the .01 level by the attitude QIV, i.e. Did you regard the allocation of children to a specific treatment group as immoral?

Table 43: 2 G Test investigating the interaction between the attitudinal assessments made by the therapists in Experimental Group I.

Therapists' Assessment		
	N	2 G
QVI - Do you feel research in psychotherapy is necessary? Compared with:		
QVII - If you had difficulty in keeping the different therapy groups separate, was it because you were basically hostile towards, or unhappy about the study?	57	8,36

Note.

df (r-1)(k-1) is 4.

\* p < ,05.

\*\* p < ,01.

3.4.2 Tables 44 to 50 show the results of the 2 G Test used to investigate the relationship between the inexperienced therapists' attitude and all the responses in FI and FII for Experimental Group I.

Table 44: 2 G Test investigating the relationship between therapists' attitude and all the responses in Follow-up I and Follow-up II for Experimental Group I.

Therapists' Assessment	N	df (r-1)(k-1)	2 G
QI - Therapists' initial dealing with the case.			
Compared with:			
FOLLOW-UP I			
QI - How is the problem now?	51	4	2,53
QII - Severity of the problem.	50	4	6,25
FOLLOW-UP II			
QI - How satisfied are you with the services you received?	51	4	5,99
QII - Would you return to the Child Guidance Clinic if you felt a need for further services?	51	2	3,72
QIII - How do you feel about these problems?	52	4	3,51
QIV - Do you attribute this change in feeling to the treatment you received at the Clinic?	53	4	3,78

Note.

- \* p < ,05.
- \*\* p < ,01.

Table 45: 2 G Test investigating the relationship between therapists' attitude and all the responses in Follow-up I and Follow-up II for Experimental Group I.

Therapists' Assessment			
QII - Therapists' evaluation of the appropriateness of the type of treatment the case has been assigned. Compared with:	N	df (r-1)(k-1)	2 G
FOLLOW-UP I			
QI - How is the problem now?	48	4	5,07
QII - Severity of the problem.	50	4	9,4
FOLLOW-UP II			
QI - How satisfied are you with the services you received?	52	4	2,05
QII - Would you return to the Child Guidance Clinic if you felt a need for further services?	52	2	1,66
QIII - How do you feel about these problems?	51	4	7,21
QIV - Do you attribute this change in feeling to the treatment you received at the Clinic?	52	4	5,59

Note.

\* p < ,05.

\*\* p < ,01.



Table 46: 2 G Test investigating the relationship between therapists' attitude and all the responses in Follow-up I and Follow-up II for Experimental Group I.

Therapists' Assessment			
QIII - Did you find it easy or difficult to assess and treat children within the rigours of the research programme? Compared with:	N	df (r-1).(k-1)	2 G
FOLLOW-UP I			
QI - How is the problem now?	53	4	11,69**
QII - Severity of the problem.	56	4	8,6
FOLLOW-UP II			
QI - How satisfied are you with the services you received?	55	4	4,67
QII - Would you return to the Child Guidance Clinic if you felt a need for further services?	54	2	2,08
QIII - How do you feel about these problems?	54	4	2,57
QIV - Do you attribute this change in feeling to the treatment you received at the Clinic?	54	4	2,13

Note.

- \* p < ,05.
- \*\* p < ,01.

Table 47: 2 G Test investigating the relationship between therapists' attitude and all the responses in Follow-up I and Follow-up II for Experimental Group I.

Therapists' Assessment			
QIV - Did you regard the allocation of children to a specific treatment group as immoral? Compared with:	N	df (r-1)(k-1)	2 G
FOLLOW-UP I			
QI - How is the problem now?	52	4	5,51
QII - Severity of the problem.	53	4	5,65
FOLLOW-UP II			
QI - How satisfied are you with the services you received?	54	4	8,58
QII - Would you return to the Child Guidance Clinic if you felt a need for further services?	53	2	0,85
QIII - How do you feel about these problems?	52	4	4,42
QIV - Do you attribute this change in feeling to the treatment you received at the Clinic?	53	4	1,06.

Note.

- \* p < ,05.
- \*\* p < ,01.

Table 48: 2 G Test investigating the relationship between therapists' attitude and all the responses in Follow-up I and Follow-up II for Experimental Group I.

Therapists' Assessment			
QV - Which is your preferred school of therapy?	N	df (r-1)(k-1)	2 G
Compared with:			
FOLLOW-UP I			
QI - How is the problem now?	51	2	0,05
QII - Severity of the problem.	51	2	0,19
FOLLOW-UP II			
QI - How satisfied are you with the services you received?	53	2	0,39
QII - Would you return to the Child Guidance Clinic if you felt a need for further services?	53	2	1,52
QIII - How do you feel about these problems?	52	2	3,49
QIV - Do you attribute this change in feeling to the treatment you received at the Clinic?	52	2	0,06

Note.

\* p < ,05.

\*\* p < ,01.

Table 49: 2 G Test investigating the relationship between therapists' attitude and all the responses in Follow-up I and Follow-up II for Experimental Group I.

Therapists' Assessment			
	N	df (r-1)(k-1)	2 G
QVI - Do you feel research in psychotherapy is necessary?			
Compared with:			
FOLLOW-UP I			
QI - How is the problem now?	48	4	6,6
QII - Severity of the problem.	47	4	9,3
FOLLOW-UP II			
QI - How satisfied are you with the services you received?	45	4	4,18
QII - Would you return to the Child Guidance Clinic if you felt a need for further services?	50	2	0,0
QIII - How do you feel about these problems?	46	4	0,28
QIV - Do you attribute this change in feeling to the treatment you received at the Clinic?	49	4	2,34

Note.

- \* p < ,05.
- \*\* p < ,01.

Table 50: 2 G Test investigating the relationship between therapists' attitude and all the responses in Follow-up I and Follow-up II for Experimental Group I.

Therapists' Assessment	N	df (r-1)(k-1)	2 G
QVII - If you had difficulty in keeping the different therapy groups separate, was it because you were basically hostile towards, or unhappy about the study?			
Compared with:			
FOLLOW-UP I			
QI - How is the problem now?	48	4	9,43
QII - Severity of the problem.	48	4	12,44**
FOLLOW-UP II			
QI - How satisfied are you with the services you received?	49	4	6,22
QII - Would you return to Child Guidance Clinic if you felt a need for further services?	51	2	5,06
QIII - How do you feel about these problems?	49	4	6,76
QIV - Do you attribute this change in feeling to the treatment you received at the Clinic?	49	4	2,09

Note.

- \* p < ,05.
- \*\* p < ,01.

The following discussion summarizes the results of Tables 44 to 50.

The pattern that emerged for FI-QI - How is the problem now? - was 31% of cases improved, 50% remained the same and 19% deteriorated. This pattern was not altered by the therapists' attitudes except for the following question in the therapists' assessment: QIII - Did you find it easy or difficult to assess and treat children within the rigours of the research programme? - as is shown in Table 46.

Did you find it easy or difficult to assess and treat children within the rigours of the research programme?

How is the problem now?

	Improved			Remained the same		Deteriorated	Total
	f		f		f		
Easy	10	45%	8	36%	4	19%	22
Intermediate	4	66.2/3%	2	33.1/3%	0	0%	6
Difficult	3	12%	16	64%	6	24%	25
Total	17		26		10		53

Those who found it neither easy nor difficult, but intermediate, to work within the rigours of the research programme had the greatest percentage improved, 66.2/3%, while those who found it difficult had a small improvement, 12%; those who found it easy had a 45% improvement.

Follow-up I-QII - Severity of the problem - had an overall pattern of 50% severe, 19% very severe and 31% intermediate. This pattern holds for all patterns investigated other than QVII - If you had difficulty in keeping the different therapy groups separate, was it because you were basically hostile towards, or unhappy about the study? - where the following was found:

FII-QIV - Did you attribute this change in feeling to the treatment you received at the Clinic? - follows a pattern of 59% change being mostly attributed to treatment received at the Clinic, 27% feeling the change to be partly due to the treatment received, and 14% feeling that the treatment received was not at all responsible for the change. In other words, 86% felt change had occurred due to treatment wholly or partly.

It is interesting to note that 94% of FII-QIII felt the problem had changed. Ninety percent felt the problem had improved and 4% felt the problem had deteriorated, while only 86% felt the change was due to the treatment received at the Clinic.

3.5 An Analysis of the Different Therapies and their Relationship to Follow-ups I and II and certain Pre- to Post-test changes.

3.5.1 Table 51 presents the results of the 2 G Test of the four different therapies, i.e. broad spectrum psychotherapy, broad spectrum behaviour therapy, parental therapy and short term therapy, and their relationship to FI-QI and FII-QIII, in Experimental Groups I and II respectively.

Table 52 presents the results of the 2 G Test of parental therapy versus broad spectrum psychotherapy, broad spectrum behaviour therapy, and short term therapy, and the relationship to FI-QI and FII-QIII, in Experimental Groups I and II respectively.

3.5.2 Table 53 presents the results of the 2 G Test of the four different types of therapies and the relationship between the change scores on the factors Child Scale A(2) designation, Child Scale B(2) designation, Parent Interview and Child Interview for Experimental Group I.

Table 54 presents the results of the 2 G Test of parental therapy versus all other "treatments", i.e. Control Group I, Control Group II and the three therapies encompassed in Experimental Group I, viz. broad spectrum psychotherapy, broad spectrum behaviour therapy and short term therapy in the factors Child Scale A(2) designation and Child Scale B(2) designation.

Table 55 presents the results of all "treatments" listed for Table 54, for the factors Child Scale A(2) designation and Child Scale B(2) designation.



3.5.1 Table 51 presents the results of the 2 G Test investigating the relationship between the responses to FI-QI and FII-QIII, and broad spectrum psychotherapy, broad spectrum behaviour therapy, parental therapy and short term therapy in Experimental Groups I and II respectively.

Table 52 presents the results of the 2 G Test investigating the relationship between the responses to FI-QI and FII-QIII, and parental therapy versus the combined results of broad spectrum psychotherapy, broad spectrum behaviour therapy and short term therapy in Experimental Groups I and II respectively.

Table 51: 2 G Test investigating the relationship between the responses to Follow-ups I and II and the four types of therapy used - broad spectrum psychotherapy, broad spectrum behaviour therapy, parental therapy and short term therapy - in Experimental Groups I and II respectively.

Factors and Groups	N	2 G
EXPERIMENTAL GROUP I		
FI-QI - How is the problem now?	52	12,26
FII-QIII - How do you feel about these problems?	55	8,71
EXPERIMENTAL GROUP II		
FI-QI - How is the problem now?	34	2,98
FII-QIII - How do you feel about these problems?	34	1,73

Note.

df (r-1)(k-1) is 6 throughout.

\* p < ,05.

\*\* p < ,01.

Table 51 shows no significant relationship between the response to FI and FII and the four therapies used in Experimental Groups I and II respectively.

Table 52: 2 G Test investigating the relationship between the response to Follow-ups I and II respectively and one type of therapy, i.e. parental therapy versus short term therapy, broad spectrum behaviour therapy and broad spectrum psychotherapy in Experimental Groups I and II respectively.

Factors and Groups	N	2 G
EXPERIMENTAL GROUP I		
FI-QI - How is the problem now?	52	8,65*
FII-QIII - How do you feel about these problems?	55	3,17
EXPERIMENTAL GROUP II		
FI-QI - How is the problem now?	34	1,68
FII-QIII - How do you feel about these problems?	34	0,63

Note.

df (r-1)(k-1) is 2 throughout.

\* p < ,05.

\*\* p < ,01.

Table 52 shows a significant relationship at the ,05 level of significance between the response to FI-QI - How is the problem now? - and parental therapy versus the combined therapies of short term, broad spectrum behaviour and broad spectrum psychotherapy.

Table 52, in Experimental Group I, the response to FI-QI - How is the problem now? - shows a general pattern of 33% improvement, 17% deterioration and 50% remaining the same. However, a closer investigation of the percentage distributions shows:

How is the problem now?	Parental therapy		Short term therapy Broad spectrum behaviour therapy Broad spectrum psychotherapy		
	f	%	f	%	Total
Improved	4	36%	13	32%	17
Remained the same	2	18%	24	58%	26
Deteriorated	5	46%	4	10%	9
Total	11		41		52

Parental therapy shows a slightly higher improvement rate than the general overall improvement pattern of 33%; however, it exceeds the deterioration general pattern of 17% by being nearly 3 times as great.

The three combined therapies are aligned to the overall pattern following similar distribution patterns for the categories, improved, remained the same and deteriorated.

However, for Experimental Group I, at the FII stage, nine months after the initial intake, there is no significant difference between parental therapy and short term therapy, broad spectrum behaviour therapy and broad spectrum psychotherapy to QIII - How do you feel about these problems?

There is no significant difference for Experimental Group II between parental therapy and the three combined therapies to FI-QI and FII-QIII. Experimental Group II displays similar, but smaller, change patterns to Experimental Group I.

3.5.2 Table 53 presents the results of the 2 G Test investigating the relationship between change scores from pre- to post-test on the factors: Child Scale A(2) designation, Child Scale B(2) designation, Parent Interview, Child Interview and the four types of therapy undertaken for Experimental Group I.

Table 54 shows the results of the 2 G Test investigating the relationship between change scores from pre- to post-test on the factors: Child Scale A(2) designation, Child Scale B(2) designation and parental therapy versus all other "treatments".

Table 55 gives the results of the 2 G Test investigating the relationship between change scores from pre- to post-test on the factors: Child Scale A(2) designation, Child Scale B(2) designation and all types of therapy carried out in the programme.

Table 53: 2 G Test investigating the relationship between the change score from pre- to post-test on the following factors and the four types of therapy - short term therapy, broad spectrum behaviour therapy, parental therapy and broad spectrum psychotherapy in Experimental Group I.

Factors and Groups	N	2 G
EXPERIMENTAL GROUP I		
Child Scale A(2) designation	16	0,81
Child Scale B(2) designation	14	2,66
Parent Interview	28	5,21
Child Interview	26	2,56

Note.

df  $(r-1)(k-1)$  is 6 throughout.

\*  $p < ,05$ .

\*\*  $p < ,01$ .

There was no significant relationship between change scores from pre- to post-test on the factors listed in Table 53 and the four types of therapy in Experimental Group I - short term therapy, broad spectrum behaviour therapy, parental therapy and broad spectrum psychotherapy.

Table 54: 2 G Test investigating the relationship between change scores from pre- to post-test on the following factors and parental therapy against all other types of treatment, no referral and no therapy, Control Group I; referral and no therapy, Control Group II; short term therapy, broad spectrum behaviour therapy and broad spectrum psychotherapy in Experimental Group I.

Factors and Groups	N	2 G
<u>Parental therapy versus all therapies listed above</u>		
Child Scale A(2) designation	148	0,87
Child Scale B(2) designation	146	1,26

Note .

df (r-1)(k-1) is 2 throughout.

\* p < ,05.

\*\* p < ,01.

There was no significant relationship between the change scores from pre- to post-test on the factors listed in Table 54, and parental therapy versus all other types of treatment.

Table 55: 2 G Test investigating the relationship between change scores from pre- to post-test on the following factors and all types of treatment, no referral and no therapy, Control Group I; referral and no therapy, Control Group II; short term therapy, broad spectrum behaviour therapy and broad spectrum psychotherapy in Experimental Group I.

Factors and Groups	N	2 G
<u>All therapies listed above</u>		
Child Scale A(2) designation	148	4,03
Child Scale B(2) designation	146	15,48

Note.

df (r-1)(k-1) is 10 throughout.

\* p < ,05.

\*\* p < ,01.

There was no significant relationship between change scores from pre- to post-test on the factors listed in Table 55 and all types of treatment carried out in the programme.



3.6 An Analysis of Sex Differences and their relationship to pre- to post-test changes

3.6.1 Table 56 presents the results of the 2 G Test change scores for males and females (sex differences) for the following groups:

- Control Group I;
- Control Group II;
- Experimental Group I

on the factors:

- Child Scale A(2) designation;
- Child Scale B(2) designation;
- Parent Interview and
- Child Interview.

3.6.1.1 Analysis of Covariance

Table 57 presents the results of the Analysis of Covariance of pre- to post-test change between males and females (sex differences) for the following groups combined:

- Control Group I;
- Control Group II;
- Experimental Group I

on the following factors:

- Child Scale A(2);
- Child Scale B(2);
- Otis Quick Scoring Mental Ability Test;
- Holborn Reading Inventory;
- Schonell Test No.5 Miscellaneous Combinations;
- Benton Visual Retention Test;
- Junior Eysenck Personality Inventory;
- California Test of Personality; and
- Maryland Parent Attitude Survey.

3.6.2 Table 58 presents the results of the 2 G Test of the change scores and the four sex combinations of therapist and child for Experimental Group I for the following factors:

- Child Scale A(2) designation;
- Child Scale B(2) designation;
- Parent Interview; and
- Child Interview.

3.6.1 Table 56 presents the results of the 2 G Test investigating the relationship between change scores from pre- to post-test for the factors, Child Scale A(2) designation, Child Scale B(2) designation and the Parent Interview and Child Interview (only for Experimental Group I), and sex, male/female, in Control Group I, Control Group II and Experimental Group I respectively.

Table 56: 2 G Test investigating the relationship between the change scores from pre- to post-test for the following factors listed below and sex, male/female, in the groups: Control Group I, Control Group II and Experimental Group I respectively.

Factors and Groups	N	2 G
CONTROL GROUP I		
Child Scale A(2) designation	126	3,06
Child Scale B(2) designation	126	5,75
CONTROL GROUP II		
Child Scale A(2) designation	6	3,14
Child Scale B(2) designation	6	3,82
EXPERIMENTAL GROUP I		
Child Scale A(2) designation	16	2,98
Child Scale B(2) designation	15	0,3
Parent Interview	28	0,8
Child Interview	27	0,34

Note.

df (r-1)(k-1) is 2 throughout.

\* p < ,05.

\*\* p < ,01.

Neither Control Group I, Control Group II nor Experimental Group I show a significant relationship between the change scores from pre- to post-test for the factors listed in Table 56 and sex, male/female, division of the programme sample.

#### 3.6.1.1 Analysis of Covariance

Table 57 presents the results of the Analysis of Covariance of pre- to post-test change between males and females for the following factors: Child Scale A(2), Child Scale B(2), Otis Quick Scoring Mental Ability Test, Holborn Reading Inventory, Schonell No.5 Miscellaneous Combinations, Benton Visual Retention Test, Junior Eysenck Personality Inventory, California Test of Personality and the Maryland Parent Attitude Survey, for Control Group I, Control Group II and Experimental Group I combined.

The detailed tables for the Analysis of Covariance may be found in Appendix C.

Table 57: Analysis of Covariance of pre- to post-test change between males and females for the following factors for Control Group I, Control Group II and Experimental Group I combined.

Factor	Error df	F-Value
CHILD SCALE A(2) TOTAL SCORE	143	0,26
CHILD SCALE B(2) TOTAL SCORE	143	0,39
OTIS QUICK SCORING MENTAL ABILITY TEST	163	0,34
HOLBORN READING INVENTORY:		
Reading age	148	0,32
Reading Quotient	145	0,09
SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS		
Arithmetic Age	158	1,17
Arithmetic Quotient	154	0,32
BENTON VISUAL RETENTION TEST		
No. Correct	151	0,06
No. of Errors	151	3,2
JUNIOR EYSENCK PERSONALITY INVENTORY		
Extraversion	156	0,24
Neuroticism	156	0,39
Lie Scale	156	0,00
CALIFORNIA TEST OF PERSONALITY		
Personal Adjustment	156	0,09
Social Adjustment	155	0,04
Total Adjustment	155	0,14
MARYLAND PARENT ATTITUDE SURVEY		
Disciplinarian Score	69	0,76
Indulgence Score	69	0,43
Protectiveness Score	69	0,87
Rejection Score	69	0,88

Note.

Between df is 1 throughout.

\* p < ,05.

\*\* p < ,01.

From Table 57 it is apparent that the Analysis of Covariance shows no significant sex difference for the factors listed.

3.6.2 Table 58 shows the results of the 2 G Test used to investigate the relationship between change scores from pre- to post-test on the factors: Child Scale A(2), Child Scale B(2), Parent Interview and Child Interview and the four different sex combinations of therapist and child, in Experimental Group I.

Table 58: 2 G Test investigating the relationship between change scores from pre- to post-test on the following factors and the four different sex combinations of therapist and child,  
male therapist with male child  
male therapist with female child  
female therapist with male child  
female therapist with female child  
in Experimental Group I.

Factors and Group	N	2 G
EXPERIMENTAL GROUP I		
Child Scale A(2) designation	16	0,43
Child Scale B(2) designation	14	1,4
Parent Interview	28	4,16
Child Interview	26	6,17

Note.

df (r-1)(k-1) is 6 throughout.

\* p < ,05.

\*\* p < ,01.

Table 58 shows no significant relationship between change scores from pre- to post-test on the factors Child Scale A(2), Child Scale B(2), Parent and Child Interviews and the four different sex combinations of therapist and child in Experimental Group I.

3.7 An Analysis of Age Differences and their relationship to pre- to post-test changes

3.7.1 Table 59 presents the results of the 2 G Test of change scores between the two age groups, 96-114 months and 115-144 months, for the following groups:

Control Group I;  
Control Group II;  
Experimental Group I

for the factors:

Child Scale A(2) designation;  
Child Scale B(2) designation;  
Parent Interview;  
Child Interview.

3.7.1.1 Analysis of Covariance

Table 60 presents the results of the Analysis of Covariance in the pre- to post-test changes between two age groups, 96-114 months and 115-144 months, for the following groups combined:

Control Group I;  
Control Group II;  
Experimental Group I

for the following factors:

Child Scale A(2);  
Child Scale B(2);  
Otis Quick Scoring Mental Ability Test;  
Holborn Reading Inventory;  
Schcnell Test No.5 Miscellaneous Combinations;  
Benton Visual Retention Test;  
Junior Eysenck Personality Inventory;  
Maryland Parent Attitude Survey.

Table 61 presents the results of the Inspection of the significant results of Table 60.



3.7.1 The 2 G Test was done to investigate the relationship between the change scores from pre- to post-test between the two age groups, 96-114 months and 115-144 months, on the following factors: Child Scale A(2) designation, Child Scale B(2) designation, for Control Groups I and II and Experimental Group I and in addition the factors Parent Interview and Child Interview for Experimental Group I. Results appear in Table 59.

Table 59: 2 G Test investigating the relationship between the change scores from pre- to post-test on the following factors and age, 96-114 months and 115-144 months, for Control Group I, Control Group II and Experimental Group I respectively.

Factors and Groups	N	2 G
CONTROL GROUP I		
Child Scale A(2) designation	126	2,38
Child Scale B(2) designation	126	0,92
CONTROL GROUP II		
Child Scale A(2) designation	6	0,91
Child Scale B(2) designation	6	5,41
EXPERIMENTAL GROUP I		
Child Scale A(2) designation	16	0,89
Child Scale B(2) designation	14	0,67
Parent Interview	28	0,01
Child Interview	26	0,46

Note.

df (r-1)(k-1) is 2 throughout.

\* p < ,05.

\*\* p < ,01.

Table 59 shows no significant relationship between change scores from pre- to post-test on the factors listed above, and subjects' age, 96-114 months and 115-144 months.

### 3.7.1.1 Analysis of Covariance

The Analysis of Covariance was done on the pre- to post-test changes between the two age groups, 96-114 months and 115-144 months, for the following factors: Child Scale A(2), Child Scale B(2), Otis Quick Scoring Mental Ability Test, Holborn Reading Inventory, Schonell Test No.5 Miscellaneous Combinations, Benton Visual Retention Test, Junior Eysenck Personality Inventory, California Test of Personality and the Maryland Parent Attitude Survey, based on the groups, Control Group I, Control Group II and Experimental Group I combined.

The Analysis of Covariance results are summarized in Table 60, inspection of the significant results are tabulated in Table 61, and the detailed tables may be found in Appendix D.

Since only two groups were compared, there was no need to do the Scheffe-S Test of Multiple Comparisons.

Table 60: Analysis of Covariance of pre- to post-test change between the two age groups, 96-114 months and 115-144 months, for the following factors based on the groups: Control Group I, Control Group II and Experimental Group I combined.

Factor	Error df	F-Value
CHILD SCALE A(2) TOTAL SCORE	143	0,28
CHILD SCALE B(2) TOTAL SCORE	143	8,04**
OTIS QUICK SCORING MENTAL ABILITY TEST	161	0,32
HOLBORN READING INVENTORY:		
Reading age	148	2,72
Reading Quotient	145	3,21
SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS		
Arithmetic Age	158	42,67**
Arithmetic Quotient	154	5,43*
BENTON VISUAL RETENTION TEST		
No. Correct	151	6,76*
No. of Errors	151	2,5
JUNIOR EYSENCK PERSONALITY INVENTORY		
Extraversion	156	8,1**
Neuroticism	156	0,03
Lie Scale	156	0,42
CALIFORNIA TEST OF PERSONALITY		
Personal Adjustment	156	0,97
Social Adjustment	155	0,07
Total Adjustment	155	1,83
MARYLAND PARENT ATTITUDE SURVEY		
Disciplinarian Score	69	3,39
Indulgence Score	69	1,56
Protectiveness Score	69	0,08
Rejection Score	69	0,95

Note.

Between df is 1 throughout.

\* p < ,05.

\*\* p < ,01.

**Table 61:** Inspection of significant results from the Analysis of Covariance of pre- to post-test change between the two age groups, 96-114 months and 115-144 months, for the following factors based on the groups: Control Group I, Control Group II and Experimental Group I combined.

FACTORS	Younger Age Group 96-114 months		Older Age Group 115-144 months	
	d <sub>1</sub>	Average change from pre- to post	d <sub>2</sub>	Average change from pre- to post
CHILD SCALE B(2) TOTAL SCORE	0,22	Increase	-0,69	Decrease
SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS				
Arithmetic Age	2,06	Increase	5,49	Greater Increase
Arithmetic Quotient	-3,91	Decrease	-4,48	Greater Decrease
BENTON VISUAL RETENTION TEST				
No. Correct	-0,09	Decrease	0,24	Increase
JUNIOR EYSENCK PERSONALITY INVENTORY				
Extraversion	4,31	Increase	53,78	Greater Increase

Table 61 shows an increase for both arithmetic age and extraversion; the greater increase, pre- to post-test changes, is shown by the older age group for these two factors. Arithmetic quotient shows a decrease; the greater decrease is shown for the older group.

The younger age group shows an increase in the total score for the Child Scale B(2), while the older age group shows a decrease, i.e. an improvement.

Furthermore, the younger age group show a decrease in the number of designs correct for the Benton Visual Retention Test, while the older age group shows an increase, i.e. an improvement.

3.8 An Analysis of Social Class Influences and their relationship to pre- to post-test changes

3.8.1 Table 62 presents the results of the 2 G Test of change scores between the six social classes for the following groups:

Control Group I;

Control Group II;

Experimental Group I

for the following factors:

Child Scale A(2) designation;

Child Scale B(2) designation;

Parent Interview;

Child Interview.

3.8.1.1 Analysis of Covariance

Table 63 presents the results of the Analysis of Covariance on the pre- to post-test changes between the six social classes for the following groups combined:

Control Group I;

Control Group II;

Experimental Group I

for the following factors:

Child Scale A(2);

Child Scale B(2);

Oris Quick Scoring Mental Ability Test;

Holborn Reading Inventory;

Schonell Test No.5 Miscellaneous Combinations;

Benton Visual Retention Test;

Junior Eysenck Personality Inventory;

Maryland Parent Attitude Survey.

Table 64 presents the results of Scheffé-S Test of Multiple Comparisons for the factors found to be significant in Table 63.

Table 65 presents the results of the inspection of the significant results derived from Tables 62 and 63.

3.8.1 The 2 G Test was done to investigate the relationship between change scores from pre- to post-test of the following factors: Child Scale A(2) designation, Child Scale B(2) designation, and Parent and Child Interviews for Experimental Group I for the six social classes in Control Group I, Control Group II and Experimental Group I respectively.

Table 62 presents these results.

Table 62: 2 G Test investigating the relationship between the change scores from pre- to post-test on the following factors and the six social classes for Control Group I, Control Group II and Experimental Group I respectively.

Factors and Groups	N	2 G
CONTROL GROUP I		
Child Scale A(2) designation	126	10,34
Child Scale B(2) designation	126	22,56*
CONTROL GROUP II		
Child Scale A(2) designation	6	5,91
Child Scale B(2) designation	6	7,64
EXPERIMENTAL GROUP I		
Child Scale A(2) designation	16	0,94
Child Scale B(2) designation	14	1,95
Parent Interview	28	0,07
Child Interview	26	0,06

Note.

df (r-1)(k-1) is 10 throughout.

\* p < ,05.

\*\* p < ,01.



Table 62 shows only one significant result at the ,05 level, the Child Scale B(2), in Control Group I.

The percentage distribution for the change scores for the Child Scale B(2) and the six social classes are as follows:

<u>Social Classes</u>		<u>Improved</u>		<u>Remained the same</u>		<u>Deteriorated</u>		<u>Total</u>
	f		f		f			
I	0	0%	1	100%	0	0%		1
II	3	38%	5	62%	0	0%		8
III	5	10%	40	82%	4	8%		49
IV	9	16%	43	75%	5	9%		57
V	0	0%	8	100%	0	0%		8
VI	0	0%	3	100%	0	0%		3
Total	17		100		9			126

Social Classes I, V and VI, 100% remained the same; however, Social Class II showed the highest improvement percentage, 38%, followed by Social Class IV, 16%, and Social Class III, 10%. For the category, remained the same, Social Class II has the lowest percentage, 62%, followed by Social Class IV, 75%, and Social Class III, 82%.

Social Class III and Social Class IV have almost an equal percentage that deteriorated.

### 3.8.1.1 Analysis of Covariance

The Analysis of Covariance was done on pre- to post-test changes between the six social classes for the following factors: Child Scale A(2), Child Scale B(2), Holborn Reading Inventory, Schonell Test No.5 Miscellaneous Combinations, Benton Visual Retention Test, Junior Eysenck Personality Inventory, California Test of Personality, and the Maryland Parent Attitude Survey, based on Control Group I, Control Group II and Experimental Group I combined.

These results are summarized in Table 63, and the detailed tables may be found in Appendix E.

Table 64 shows the results of the Scheffé-S Test of Multiple Comparisons, which was performed on the factors found to have significant differences in the Analysis of Covariance, Table 63. The results are tabulated indicating the differences of change patterns for the three groups.

Table 65 describes the inspection of significant results from the Analysis of Covariance and Scheffé-S Test of Multiple Comparisons.

**Table 63:** Analysis of Covariance of pre- to post-test change between the six social classes for the following factors based on Control Group I, Control Group II and Experimental Group I combined.

Factor	Error df	F-Value
CHILD SCALE A(2) TOTAL SCORE	139	1,63
CHILD SCALE B(2) TOTAL SCORE	139	1,94
OTIS QUICK SCORING MENTAL ABILITY TEST	157	1,31
HOLBORN READING INVENTORY:		
Reading age	144	1,48
Reading Quotient	141	1,44
SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS		
Arithmetic Age	154	0,46
Arithmetic Quotient	150	0,72
BENTON VISUAL RETENTION TEST		
No. Correct	147	2,14
No. of Errors	147	3,72**
JUNIOR EYSENCK PERSONALITY INVENTORY		
Extraversion	152	1,27
Neuroticism	152	0,47
Lie Scale	152	2,23
CALIFORNIA TEST OF PERSONALITY		
Personal Adjustment	152	0,90
Social Adjustment	151	0,70
Total Adjustment	151	1,40
MARYLAND PARENT ATTITUDE SURVEY		
Disciplinarian Score	65	0,32
Indulgence Score	65	1,63
Protectiveness Score	65	0,8
Rejection Score	65	3,04*

Note.

Between df is 5 throughout.

\* p < ,05.

\*\* p < ,01.

**Table 64:** Scheffe-S Test of Multiple Comparisons for the following contrasts on the factors found to have a significant difference in the Analysis of Covariance of pre- to post-test change between the six social classes for the following factors based on Control Group I, Control Group II and Experimental Group I combined.

Factor	Contrast between	F-Value
<b>BENTON VISUAL RETENTION TEST</b>		
No. of Errors	Social Class II vs. Social Class III	1,78
	Social Class II vs. Social Class IV	0,20
	Social Class II vs. Social Class V	3,27**
	Social Class II vs. Social Class VI	4,52**
	Social Class III vs. Social Class IV	2,23
	Social Class III vs. Social Class V	1,22
	Social Class III vs. Social Class VI	2,64*
	Social Class IV vs. Social Class V	3,22**
	Social Class IV vs. Social Class VI	4,29**
	Social Class V vs. Social Class VI	0,64
<b>MARYLAND PARENT ATTITUDE SURVEY</b>		
Rejection	Social Class II vs. Social Class III	0,97
	Social Class II vs. Social Class IV	0,03
	Social Class II vs. Social Class V	0,23
	Social Class II vs. Social Class VI	3,23**
	Social Class III vs. Social Class IV	1,51
	Social Class III vs. Social Class V	0,29
	Social Class III vs. Social Class VI	2,25*
	Social Class IV vs. Social Class V	1,14
	Social Class IV vs. Social Class VI	3,27**
Social Class V vs. Social Class VI	1,07	

Note.

df<sub>1</sub> is 5 throughout.

df<sub>2</sub> is 147 throughout.

\* p < ,05.

\*\* p < ,01.

**Table 65:** Inspection of significant results from the Analysis of Covariance and Scheffé-S Test of Multiple Comparisons, (Analysis of Covariance of pre- to post-test change between the six social classes for the following factors based on Control Group I, Control Group II and Experimental Group I combined and Scheffé-S Test of Multiple Comparisons).

FACTOR	Social Class II		Social Class III		Social Class IV		Social Class V		Social Class VI	
	$\bar{d}_2$	Average change pre- to post	$\bar{d}_3$	Average change pre- to post	$\bar{d}_4$	Average change pre- to post	$\bar{d}_5$	Average change pre- to post	$\bar{d}_6$	Average change pre- to post
BENTON VISUAL RETENTION TEST No. of Errors	-0,21	Decrease	-0	No change	-0,53	Decrease	-0,5	Decrease	2,67	Increase
MARYLAND PARENT ATTITUDE SURVEY Rejection	-18,63	Decrease	26,0	Increase	-8,48	Decrease	35,27	Increase	149	Increase

Table 65 shows the following average change from pre- to post-test for: number of errors on the Benton Visual Retention Test, Social Class III shows no change; ranked in order of magnitude: Social Classes IV, V and II show a decrease, whereas Social Class VI shows an increase; rejection on the Maryland Parent Attitude Survey, ranked in order of magnitude: Social Classes VI, V and III show an increase, Social Classes II and IV show a decrease.

For this Analysis of Covariance five social classes were included as Social Class I was ignored on the grounds of it having only one observation.

3.9 Additional Detailed Investigation of Specific Factors

3.9.1 Table 66 shows the results of the 2 G Test investigating the pre-test relationship using the distinction, disturbed/non-disturbed, for the following groups:

Control Group I;

Control Group II;

Experimental Group I

on the following factors:

Child Scale A(2);

Child Scale B(2);

Parent Interview;

Child Interview.

3.9.1 Table 66 shows the results of the 2 G Test investigating the pre-test relationship between the factors Child Scale A(2), Child Scale B(2) and the Parent and Child Interviews using the distinction, disturbed/non-disturbed, for Control Group I, Control Group II and Experimental Group I respectively.



Table 66: 2 G Test of a detailed investigation into the pre-test relationship between the following factors using the distinction, disturbed/non-disturbed, for Control Group I, Control Group II and Experimental Group I respectively.

Factors and Groups	N	df (r-1)(k-1)	2 G
CONTROL GROUP I			
Child Scale A(2) designation versus Child Scale B(2) designation	252	1	11,7**
CONTROL GROUP II			
Interview Parent Interview Child versus Child Scale A(2) designation Child Scale B(2) designation	27	3	0,54
EXPERIMENTAL GROUP I			
Interview Parent Interview Child versus Child Scale A(2) designation Child Scale B(2) designation	239	3	23,69**

Note.

- \* p < ,05.
- \*\* p < ,01.

Table 66 shows the significant results set out below:

Control Group I shows a significant difference at the ,01 level between the Child Scale A(2) and the Child Scale B(2). The percentage distributions are:

	<u>Child Scale A(2)</u> <u>designation</u>		<u>Child Scale B(2)</u> <u>designation</u>		Total
	f		f		
Disturbed	59	47%	33	26%	92
Non-disturbed	67	53%	93	74%	160
Total	126		126		252

For the non-referred, non-treated Control Group I, the Child Scale A(2), completed by the parents, showed a higher disturbance percentage than the Child Scale B(2), completed by the teachers, for the same children.

Inspection of the significant results at the ,01 level of significance shows the following percentage distributions for the referred, treated Experimental Group I:

	<u>Rutter Inter-</u> <u>view Parent</u>		<u>Rutter Inter-</u> <u>view Child</u>		<u>Child Scale A(2)</u> <u>designation</u>		<u>Child Scale B(2)</u> <u>designation</u>		Total
	f		f		f		f		
Disturbed	46	72%	46	73%	21	38%	26	46%	139
Non-disturbed	18	28%	17	27%	34	62%	31	54%	100
Total	64		63		55		57		239

The Rutter Parent and Child Interviews agree in their disturbance ratings for the same child. However, the Child Scales A(2) and B(2) do not agree with the ratings of the Parent and Child Interviews; the Child Scale A(2) has a disturbed percentage of 38% and the Child Scale B(2), 46%.

3.10 Acceptance/non-acceptance of hypotheses in the light of the presented results.

3.10 Acceptance/non-acceptance of hypotheses in the light of the presented results

As the 2 G Test was used first as a rough means of indicating significant differences, the t-test and Analysis of Covariance were then used as more exact techniques, however, with the reservation that in some cases, the sample size was small. The three techniques were used to complement each other, thereby utilizing the available data fully.

Therefore the results just presented are ordered for each section in the above statistical sequencing. This sequence made it difficult to confirm or disprove hypotheses for each table presented as some tables had relevance to more than one hypothesis. Thus for clarity the hypotheses will be stated again and their acceptance/non-acceptance will be indicated. The original reference number in Chapter 1 will appear against each hypothesis. This might seem repetitive but it is hoped that clarity will be achieved.

The factors which were considered were sex, social class, Child Scales A(2) and B(2) designations and total scores. The Parent and Child Interviews were considered when comparing Control Group II with Experimental Group I.

Pre-test Results

The sex distribution differences for Control Group I and Experimental Groups is really typical of a Child Guidance population (Phillips and Wiener, 1966). The social class distribution was almost equal for experimental and control groups for the largest percentage of the population in these

groups. Because of the pattern reversals occurring for the Child Scales A(2) and B(2) in Control Group I and Experimental Group I, it was deemed unnecessary to attempt an equalising of Control Group I to match the experimental group. Furthermore, it was felt that an equalisation would only have been justified had both the Child Scales A(2) and B(2) designations had a lower non-disturbance population for Control Group I than for Experimental Group I. In addition, the Child Scale A(2) totals for Control Group I versus Experimental Group I and Control Group II respectively showed no significant differences on the t-test. Moreover, when the non-referred Control Group I was contrasted with the referred Control Group II and Experimental Group I, Control Group I had a higher mean total on the Child Scale A(2) than Control Groups I and II combined.

For the Child Scale B(2) Control Group I had a lower mean total than Experimental Group I and the combination of Experimental Group I and Control Group II.

The two experimental groups showed no differences for social class or sex male/female distribution, thus confirming that the type of population the University of Cape Town Child Guidance Clinic was drawing was consistent.

Control Group II, the referred untreated clinic sample, when contrasted with Experimental Group I, showed no significant differences on the Parent and Child Interviews.

The clinic population Control Group II and Experimental Group I approximate each other more closely with regard to age than

Control Group I. Despite Control Group I having the higher age range adding the standard deviation, it still falls within the age range stipulations for the present study, and then too the research on age as a variable is far from conclusive. So it was decided to make no adjustment for age by equalising the age of all groups.

The results presented for change score pre- to post-test and the results of Follow-ups I and II illustrate that those factors that were not ideally compatible for all groups had no or minimal effect on outcome.

### Hypotheses

#### Principal Hypotheses

Hypotheses based on the pre- to post-test change score results are presented followed by an overall discussion.

1.2.1.1  $H_1$  It is hypothesised that those subjects who had received treatment, Experimental Group I, will improve significantly more than the two control groups after a set period. Pre- to post-test change scores will be investigated.

Table 14, presenting the results of the 2 G Test, showed that Experimental Group I did not improve significantly more than Control Groups I and II. Thus the alternative hypothesis is not accepted but rather the null hypothesis is accepted. The combined control groups showed a significant improvement for

reading age, arithmetic age and number correct on the Benton Visual Retention Test.

Tables 17 and 18, presenting the results of a two-tailed t-test of significance of mean differences, also appear to indicate that the null hypothesis should be accepted. Experimental Group I and Control Groups I and II combined showed a similar change pattern excepting for the following factors which emerge significantly only on the combined Control Groups I and II: increase for arithmetic age and extraversion, and a decrease in reading quotient and neuroticism.

Tables 21, 22, 23 and 24, presenting the results of the Analysis of Covariance and the inspection tables, show an improvement and again a striking similarity between Experimental Group I and Control Group I for reading age, arithmetic age, reading quotient, extraversion and protectiveness. While social and total adjustment on the California Test of Personality all show increases for Control Group I, Control Group II and Experimental Group I, the increases for Control Group I and Experimental Group I approximate each other more closely than Control Group II.

The Analysis score indulgence for Control Group II and Experimental Group I shows an increase, while Control Group I shows a decrease. Again this suggests that the null hypothesis be accepted.

1.2.1.2  $H_1$  It is hypothesised that subjects from Control Group II, waiting list control, will improve significantly more than Control Group I, the non-referred, untreated, school control. The rationale here is that the mere fact that someone has realised that outside help is required and has applied for it, may already have a beneficial therapeutic effect.

The results of the 2 G Test, Table 11, show that Control Group II did not improve significantly more than Control Group I, and thus the null hypothesis is accepted and not the alternative hypothesis as stated above.

Control Group I compared with Control Group II showed a significant improvement on arithmetic age, while Control Group II showed a greater deterioration for the Child Scale B(2) designation and total score.

Inspection of Tables 15 and 16, showing the results of a two-tailed t-test of significance of mean differences, Control Group I shows a significant improvement on 9 factors, while Control Group II shows only a significant improvement on 1 factor.

Tables 21, 22, 23 and 24, presenting the results of the Analysis of Covariance and inspection tables, show that Control Group I contrasted with Control Group II shows an improvement for reading age, arithmetic age, reading quotient, extraversion and protectiveness, while the only improvements shown for Control Group II are indulgence and rejection.

The California Test of Personality, social and total adjustment, shows an improvement in both Control Group I and Control Group II



but greater for Control Group II than Control Group I.

1.2.1.3  $H_1$  It is hypothesised that subjects from the referred, untreated, Control Group II, waiting list control, combined with the subjects who received treatment, Experimental Group 1, would improve significantly more than those who had not been referred and treated, school control, Control Group I.

2 G Test, Table 13, shows that Control Group I improved significantly more than Control Group II and Experimental Group I combined in arithmetic age, reading age, and number correct. However, Control Group II and Experimental Group I combined improved significantly more than Control Group I in the B(2) designation.

Tables 15, 16 and 18 present the results of a two-tailed t-test of significance of mean differences and again confirm the findings of the above. The null hypothesis is accepted as Control Group II and Experimental Group I only improve on Child Scales A(2) and B(2) total scores, while Control Group I improves on arithmetic age, extraversion and neuroticism.

Tables 21, 22, 23 and 24, showing the results of the Analysis of Covariance and the inspection tables as discussed previously, bear out these findings above.

Table 19 shows the results of the changes in the A(2) and B(2)

designation. As reported, there was no significant improvement for Control Group I, Control Groups I and II combined for both the Child Scales A(2) and B(2). Experimental Group I for these tests does not reach significance.

Table 20, however, shows that for the Parent and Child Interviews there is no change from pre- to post-test rating. The ratings of improvement on these three screening tests range from 10-13% improvement, very much lower than 72% spontaneous remission rate.

Thus after a set interval of plus/minus three months the pre- to post-test improvements reflected are greater for Control Group I than for Control Group II and Experimental Group I respectively. Thus for the present study a non-referred, untreated school control improves not only on more factors but by and large also shows the greatest improvement on factors that improve in all the groups.

#### Subsidiary Hypotheses

Hypotheses based on the pre- to post-test change score results.

1.2.2.1  $H_1$  It is hypothesised that there will be a significant difference in the change scores from pre- to post-test on the factors Child Scale A(2) designation, Child Scale B(2) designation, Parent Interview, Child Interview and the four treatment groups, i.e. broad spectrum psychotherapy, broad spectrum behaviour therapy, parental therapy and short term

therapy, for Experimental Group I.

The results of the 2 G Test, Table 53, indicate that comparing the four treatment groups contained in Experimental Group I with respect to the above factors there were no significant relationships between change scores from pre- to post-test.

Thus no one form of therapy in the present study shows superiority in the role of improvement and hence the null hypothesis is accepted and the alternative hypothesis is rejected.

1.2.2.2  $H_1$  It is hypothesised that there will be a significant difference in the change scores from pre- to post-test on the factors Child Scale A(2) designation, Child Scale B(2) designation, for parental therapy, Experimental Group I, against all other types of therapy, Control Group I, Control Group II and short term therapy, broad spectrum behaviour therapy and broad spectrum psychotherapy in Experimental Group I.

The results of the 2 G Test, Table 54, showed that there was no significant relationship between change scores for the above two screening tests, and parental therapy versus all other types of treatment. Hence the acceptance of the null hypothesis instead of the alternative hypothesis is necessitated.

These findings will be elaborated in conjunction with those findings related to improvement in Follow-ups I and II in the next section.

1.2.2.3  $H_1$  It is hypothesised that there will be a significant difference in the change scores from pre- to post-test on the factors Child Scale A(2) designation, Child Scale B(2) designation for Control Group I, Control Group II, broad spectrum behaviour, broad spectrum psychotherapy, parental therapy and short term therapy in Experimental Group I.

The results of the 2 G Test, Table 55, showed that there was no significant relationship between change scores for the two above screening tests and all types of treatment carried out in the programme. Thus acceptance of the null hypothesis is indicated.

These findings will be elaborated in conjunction with those findings related to improvement in Follow-ups I and II in the next section.

1.2.2.4  $H_1$  It is hypothesised that there will be a significant difference in the change scores from pre- to post-test between male and female subjects for Control Group I, Control Group II and Experimental Group I respectively and combined.

The results of the 2 G Test, Table 56, showed that there is no significant relationship between male and female subjects and change scores from pre- to post-test for the two level screening tests, Child Scale A(2) designation and B(2) designation and the Parent and Child Interview.

Table 57 confirms the above findings showing the results of the

Analysis of Covariance for all the factors used in the pre- to post-test assessment and shows no significant sex differences for these factors for the above groups, thus leading to the acceptance of the null hypothesis and not the alternative hypothesis.

These findings are rather interesting as in the pre-test analysis there were even distributions of male and female in Control Group I, while the clinic sample had a large number of males in relation to females, almost to the ratio 3:1.

Sex as an outcome variable will be discussed in conjunction with those findings under the hypothesis related to improvement in Follow-ups I and II in the next section.

1.2.2.5  $H_1$  It is hypothesised that there will be a significant difference in the change scores from pre- to post-test between the age groups 96 to 114 months and 115 to 144 months for Control Group I, Control Group II and Experimental Group I combined.

Table 59 shows the results of the 2 G Test indicating that there is no significant relationship between the above age groups and change scores from pre- to post-test for the Child Scales A(2) and B(2) designation and Child Interview. Thus for these factors on this test the null hypothesis is accepted instead of the alternative hypothesis.

However, Tables 60 and 61, the results and inspection of the Analysis of Covariance, show that the older age group improves significantly more than the younger age group on arithmetic age; Child Scale B(2) total score; and number of designs correct on the Benton Visual Retention Test. The older group in comparison with the younger group showed significantly greater deterioration for arithmetic quotient.

Age as an outcome variable will be discussed in conjunction with those findings under the hypothesis related to improvement in Follow-ups I and II in the next section.

1.2.2.6  $H_1$  It is hypothesised that there will be a significant difference in the change scores from pre- to post-test between the six social classes for Control Group I, Control Group II and Experimental Group I combined.

Table 62 shows the results of the 2 G Test indicating that there is no significant relationship between the six social classes and change scores from pre- to post-test for Child Scale A(2) designation and Child and Parent Interviews thus retaining the null hypothesis for these tests. However, there is a significant difference between the six social classes with respect to the Child Scale B(2).

Social Class II had the highest improvement rate and Social Class III had the highest deterioration rate, 9%, thus retaining the above alternative hypothesis for the 2 G Test only.

Tables 63, 64 and 65, the results and inspection of the Analysis of Covariance, show that there is no difference between the five social classes in all factors except

- (i) number of errors on the Benton Visual Retention Test. Social Classes IV, V and II show an improvement in the number of errors made, i.e. less errors are made on average, and Social Class VI shows a deterioration in the number of errors made, i.e. more errors are made on average;
- (ii) the Maryland Parental Attitude Score of Rejection. Social Classes II and IV show an improvement, i.e. decrease on average, and Classes III, V and VI show a deterioration, i.e. increase on average.

Therefore the null hypothesis was accepted for all factors except for those detailed above.

Social Class II is the only social class showing consistent slightly superior improvement for the factors discussed in both 2 G and Analysis of Covariance.

An elaboration of these findings will be fully considered in the subsection dealing with social class and improvement in Follow-ups I and II.

For this Analysis of Covariance five social classes were used, II to VI, as Social Class I was deleted on the grounds of it having only one observation. This was, however, not applicable to the 2 G Test where any cell could be used.

Hypotheses based on the Results of Follow-ups I and II

1.2.3.1  $H_1$  It is hypothesised that patients seen by experienced therapists, Experimental Group II, will improve significantly more than those seen by inexperienced therapists, Experimental Group I, at both the Follow-up I and Follow-up II stage.

Table 33, presenting the results of the 2 G Test, showed that patients seen by experienced therapists, Experimental Group II, did not improve more than those seen by inexperienced therapists, Experimental Group I, at the Follow-up I stage and, therefore, the null hypothesis is accepted in favour of the above alternative hypothesis.

However, at the Follow-up II stage, the results showed that those patients seen by inexperienced therapists, Experimental Group I, improved more than those seen by the experienced therapists, Experimental Group II. This was the reverse of what was expected. Therefore, the above hypothesis cannot be accepted.

1.2.3.2  $H_1$  It is hypothesised that patients from Experimental Group I seen by inexperienced therapists, and those from Experimental Group II seen by experienced therapists will improve significantly more at the Follow-up II stage than at Follow-up I.



Tables 34 and 35, presenting the results of the Analysis of Covariance, show that the patients of both Experimental Group I, inexperienced therapists, and Experimental Group II, experienced therapists, improved significantly more at the Follow-up II stage than at Follow-up I. Thus the alternative hypothesis stated above is accepted and not the null hypothesis.

1.2.3.3  $H_1$  It is hypothesised that there will be a significant relationship between the degree of improvement and the severity of the problem. The greater the severity of the problem, the greater the improvement at the Follow-up I and Follow-up II stages respectively.

Table 25 shows the results of the 2 G Test and indicates a significant relationship between the degree of improvement and the severity of the problem for both Experimental Groups I and II respectively at the Follow-up I stage. The relationship that exists is not in the predicted direction and thus the above hypothesis cannot be accepted.

For Experimental Group I, inexperienced therapists, the greatest number of patients rated not severe, 82% improved and 12% deteriorated. However, of those patients regarded as very severe, only 20% improved, 30% deteriorated and the rest remained the same. Of those patients designated slightly severe, 37% improved, 19% deteriorated with the largest percentage, and 44% remained the same.

For the category not severe, Experimental Group II, experienced therapists, showed that 75% improved and 25% deteriorated demonstrating a similar pattern to Experimental Group I. For very severe, 25% improved, 5% more than Experimental Group I for the same designation. Twenty-five percent remained the same, 25% less than for Experimental Group I. However, 50% deteriorated, 25% more than Experimental Group I. For the designation slightly severe, 20% improved, 73% remained the same and 7% deteriorated. The last two percentages differ markedly from Experimental Group I for improvement.

The results for the combined Experimental Groups I and II reveal a similar trend; those slightly/very severe show the least improvement. Slightly severe shows the largest percentage remained the same and 39% of the very severe deteriorated.

Table 26 shows the results of the 2 G Test and indicates a significant relationship between the degree of improvement and the severity of the problem for Experimental Group II at the Follow-up II stage, but not for Experimental Group I at this stage. Thus the null hypothesis is accepted for Experimental Group I at this stage, but not for Experimental Group II.

For Experimental Group II, the experienced therapists, it was shown that of those that improved, the greatest proportion was not rated severe. Of those that remained the same or deteriorated, the problem was either slightly severe or very severe.

This patterning is in accordance with the two foregoing patterns described.

1.2.3.4 H<sub>1</sub> It is hypothesised that there will be a significant relationship between client satisfaction and the degree of improvement.

Table 25 shows the results of the 2 G Test supporting the above hypothesis for the combined Experimental Groups I and II at the Follow-up II stage, but not at the Follow-up I stage.

Furthermore, the above hypothesis is not confirmed for Experimental Groups I and II independently at the Follow-up II stage.

For the combined Experimental Groups I and II at the Follow-up II stage the following intriguing results are shown and they bear repetition.

Satisfaction with services received	How is the problem now?		
	<u>Improved</u>	<u>Remained the same</u>	<u>Deteriorated</u>
Satisfied	56%	33%	11%
Indifferent	89%	11%	0%
Dissatisfied	67%	7%	26%

Thus the greatest proportion showed the problem had improved irrespective of satisfaction with services received.

These results are unusual and it is difficult to account for them as they appear here.

However, on a detailed examination of the percentage distributions for Experimental Group I on the same questions we find:

Satisfaction with services received	How is the problem now?		
	<u>Improved</u>	<u>Remained the same</u>	<u>Deteriorated</u>
Satisfied	94%	6%	0%
Indifferent	92%	8%	0%
Dissatisfied	73%	9%	18%

Thus for Experimental Group I, inexperienced therapists, the greatest number improved.

For Experimental Group II the following percentage distributions are shown:

Satisfaction with services received	How is the problem now?		
	<u>Improved</u>	<u>Remained the same</u>	<u>Deteriorated</u>
Satisfied	32%	50%	18%
Indifferent	50%	50%	0%
Dissatisfied	50%	0%	50%

Thus for Experimental Group II, experienced therapists, the pattern differs from Experimental Group I. A larger percentage in Experimental Group II remains the same than in Experimental Group I, whereas Experimental Group I shows a higher improvement percentage all round irrespective of satisfaction and furthermore has a lower deterioration representation than Experimental Group I.

The results obtained for the combined experimental groups are to be seen rather as a result of combining these groups rather than as any significant meaningful relationship existing between satisfaction and improvement.

Tables 27, 28 and 29, presenting the results of the 2 G Test for Experimental Group I, inexperienced therapists, show that the

greatest proportion of parents who agreed to return to the Clinic were: satisfied with the services received; felt the problem had improved; felt the change was mostly attributable to the Clinic. The greatest number satisfied with the services received at the Clinic felt the changes were mostly attributable to the Clinic.

The greatest proportion of those parents not wishing to return to the Clinic were: indifferent about the services received; felt the problem had remained the same or improved; felt the change was not attributable to the Clinic. The greatest number indifferent to the services received felt the change was only partly attributable to the Clinic.

The greatest number dissatisfied felt the change was not at all attributable to the Clinic.

Experimental Group II, experienced therapists, only showed one significant set of relationships, i.e. the greatest proportion of parents who agreed to return to the Clinic were satisfied while those not returning were dissatisfied. For Experimental Groups I and II combined the pattern was the same except for those not agreeing to return to the Clinic who were indifferent to the services received.

For the combination of Experimental Groups I and II of those parents who agreed to return to the Clinic, a slightly greater proportion felt the change was mostly due to the Clinic, while those who would not return felt the change was both equally mostly due or not due at all to the Clinic.

For the combined Experimental Groups I and II it was shown that the greatest number who improved, remained the same and deteriorated, felt the Clinic was mostly responsible for the change.

1.2.3.5  $H_1$  It is hypothesised that male and/or female patients seen by male therapists will improve significantly more than male and/or female patients seen by female therapists.

Table 36, presenting the results of the 2 G Test, showed that at the Follow-up I stage for Experimental Group I the combination male and/or female patients seen by male therapists recorded the higher improvement than the combination male and/or female patients seen by female therapists. Thus the above alternative hypothesis is accepted and not the null hypothesis.

Furthermore, the majority of male-male combinations improved or remained the same; and the greatest proportion of female therapist-male child deteriorated; the same proportions improved or remained the same or deteriorated with the female therapist-female child combination.

There was no significant relationship for the four sex pairings for Experimental Group II at either Follow-up I or at Follow-up II. Thus the null hypothesis is accepted.

It was decided to further examine this question of the sex of the therapist. Table 37 shows that at Follow-up II inexperienced

male therapists from Experimental Group I recorded a 90% improvement with 10% remaining the same, while experienced male therapists showed a 64% improvement, 18% deterioration and 18% remaining the same.

The inexperienced and experienced therapists showed no significant difference at the Follow-up I stage but at the Follow-up II stage.

The experienced female therapists recorded a higher percentage improved, 55%, and remaining the same 36%, while a higher deterioration percentage, 36%, was recorded by the inexperienced female therapists with an improvement percentage of only 27%.

Taking the investigation even further as the above findings were rather distressing in terms of female trainee inexperienced therapists and their progress as clinical interns, the results of Follow-up I, QIII were inspected. These showed no significant difference between the experienced and inexperienced therapists. The percentage distributions showed that the inexperienced therapists had achieved an identical improvement rate of 91% to that of the experienced therapists. They had thus caught up to and equalled the improvement rate of the experienced therapists. Furthermore, they had a lower deterioration percentage.

Thus with regard to the intern inexperienced male therapist it was shown that they surpass the male experienced therapists. The female inexperienced therapists equal the results of the female experienced therapists.

Thus, the experienced male therapist showed a final improvement rate of 64%, while the inexperienced male therapists recorded a rate of 90% and both the experienced and inexperienced therapists recorded a rate of 91% improvement.

Finally, Table 58 showed there were no significant differences between the four sex combinations with respect to the change scores from pre- to post-test on the Child Scales A(2) and B(2) designations and the Parent and Child Interviews, in Experimental Group I.

1.2.3.6  $H_1$  It is hypothesised that the younger patients, 96 to 114 months, will improve significantly more than the older patients, 115 to 144 months, at Follow-up I and Follow-up II.

Table 30, presenting the results of the 2 G Test, showed no significant interaction between age and improvement neither at Follow-up I nor at Follow-up II. Hence the above hypothesis is not accepted and therefore the null hypothesis is accepted.

These results confirm those shown in Table 59 on the Child Scales A(2) and B(2) designations.

Tables 60 and 61, showing the results of the Analysis of Covariance, do show that the older age group improves significantly more on only three factors compared with the younger group. This finding is hardly spectacular when there were 19 other factors that showed no significant differences. Therefore, it



would be extremely irresponsible to postulate age as a crucial variable in the outcome results of the present study.

1.2.3.7  $H_1$  It is hypothesised that the higher social class patients will improve significantly more than those from the lower social classes.

Table 31 shows the results of the 2 G Test. No significant interaction between the six social classes and improvement is recorded for Follow-up I and Follow-up II for both Experimental Groups I and II respectively. Thus the null hypothesis can be accepted, i.e. the higher social class patients do not improve significantly more than those from the lower social classes.

The results of the 2 G Test for Table 62 and the results of the Analysis of Covariance, Tables 63, 64 and 65, largely confirm the acceptance of the null hypothesis on all but three factors. Social Class II, the second highest social class, was the only social class showing consistent slightly superior improvements for the three factors.

1.2.3.8  $H_1$  It is hypothesised that there will be a significant difference in the outcome of the four treatment groups, i.e. broad spectrum psychotherapy, broad spectrum behaviour therapy, parental therapy and short term therapy, for Experimental Groups I and II respectively.

Table 51, presenting the results of the 2 G Test, showed that there was no significant difference in the outcome of the four types of therapy used in Experimental Groups I and II respectively and hence the null hypothesis is accepted.

Table 53, presenting the results of the 2 G Test, showed that there was no significant relationship between change scores from pre- to post-test for the Child Scales A(2) and B(2) designation and the Parent and Child Interviews for the four types of therapy used in Experimental Group I, thus indicating acceptance of the null hypothesis.

Table 55, presenting the results of the 2 G Test, showed that there was no significant relationship between change scores from pre- to post-test for the Child Scales A(2) and B(2) designation and all types of treatment carried out in the programme, i.e. Control Groups I and II and the four types of therapy used in Experimental Group I. Thus once again the null hypothesis was accepted.

1.2.3.9  $H_1$  It is hypothesised that there will be a significant difference in the outcome of parental therapy versus short term therapy, broad spectrum behaviour therapy and broad spectrum psychotherapy in Experimental Groups I and II respectively.

Table 52, presenting the results of the 2 G Test, showed no significant results between parental therapy versus the three

other therapies in Experimental Groups I and II respectively for Follow-up II-QIII and Experimental Groups I and II respectively for Follow-up I-QI for Experimental Group II. Thus the null hypothesis is accepted.

However, the above alternative hypothesis is accepted for Experimental Group I, Follow-up I-QI.

Thus parental therapy versus the other three types of therapy emerges as different only initially at the Follow-up I stage and does not maintain this difference. The greatest difference between parental therapy and the other three therapies lies in the category, remained the same. The lower percentage is for parental therapy and at the same time it has the highest deterioration rate. Parental therapy therefore does not emerge as a superior mode of treatment at the Follow-up I stage.

Table 54, presenting the results of the 2 G Test, showed that there was no significant relationship between change scores from pre- to post-test for the Child Scales A(2) and B(2) designation and parental therapy versus all other types of treatment, i.e. Control Groups I and II and the other three types of treatment carried out in Experimental Group I, thus indicating the acceptance of the null hypothesis.

#### Hypotheses based on Therapists' Attitudes

1.2.4.1  $H_1$  It is hypothesised that the following therapists' attitudes will show interdependence:

- . therapists' initial ease in dealing with the case;

- . the appropriateness/inappropriateness of the type of treatment to which the case had been assigned;
- . therapists' ease or difficulty to assess or treat children within the rigours of the research programme;
- . therapists regarding the allocation of children to a specific treatment group as immoral;
- . therapists feeling research in psychotherapy to be necessary;
- . therapists' assessment that the difficulty they had in keeping the different therapy groups separate was caused by their basic hostility to the study.

The following therapists' attitudes were significantly inter-related.

Therapists feeling research in psychotherapy to be necessary and therapists' attitudes regarding the allocation of cases to a specific treatment programme:

all of those therapists who felt research in psychotherapy to be unnecessary regarded the allocation of cases to a specific treatment programme as immoral and of those that felt research necessary, 62% felt allocation to be morally justifiable.

Therapists' ease or difficulty in treating children within the rigours of the research programme and the appropriateness of the type of treatment the case had been assigned:

of those that were indifferent to the treatment assigned, all experienced difficulty; of those that felt assignment inappropriate, 72% found it easy

and of those that thought it appropriate, 47% found it difficult to assess and treat children within the rigours of the research programme;

and the allocation of children to a specific treatment programme as morally justifiable or not:

of those that felt allocation to be immoral, 75% had difficulty and of those that felt allocation to be moral, 67% found it easy;

and therapists' assessment that the difficulty they had in keeping the different groups separate was caused by their basic hostility. All the therapists who felt their hostility was responsible, experienced difficulty in treating children within the rigours of the programme:

of those that felt indifferent only 23% experienced difficulty. For the category, none of these, 44% found it difficult to assess and treat children within the rigours of the programme.

Thus when the therapists were either indifferent to treatment assigned, or felt allocation to be immoral, or felt their hostility played a part in keeping the therapy groups separate, they experienced difficulty 100%, 75% and 100% respectively in treating children within the rigours of the research programme.

The therapists' assessment of allocation of children to a specific treatment group as moral or immoral is significantly related to therapists' assessment that the difficulty they had in keeping therapy groups separate was caused by their basic

hostility to the study:

all those that felt hostile, felt allocation to be immoral; of those that felt indifferent and 'none of these', only 23% and 36% respectively felt allocation was immoral.

Therapists' initial ease in dealing with the case was significantly related to the appropriateness of the type of treatment the case had been assigned. All those that were indifferent to the allocation of treatment, experienced initial difficulty in dealing with their cases:

of those that felt allocation to treatment to be inappropriate, only 17% experienced initial difficulty in dealing with the case.

Thus the above hypothesis cannot be completely rejected.

Hypotheses based on Therapists' Attitudes and their relationship to Follow-ups I and II

1.2.5.1  $H_1$  It is hypothesised that those patients whose therapists experienced initial ease in dealing with their patients will improve, feel satisfied with the services received and attribute the improvement to the treatment received at the Clinic, significantly more than those patients whose therapists experienced initial difficulty.

Table 44, presenting the results of the 2 G Test, reflects no significant relationships as hypothesised above and conse-

quently the above alternative hypothesis is not accepted and thus the null hypothesis is accepted, i.e. those patients whose therapists experienced initial ease in dealing with their patients did not improve, feel satisfied with the services received and attribute the improvement to treatment received at the Clinic significantly more than those patients whose therapists experienced initial difficulty.

1.2.5.2  $H_1$  It is hypothesised that those patients whose therapists regarded the type of treatment the patient/case had been assigned to, to be appropriate will improve, feel satisfied with the services received and attribute the improvement to the treatment received at the Clinic, significantly more than those patients whose therapists regarded the type of treatment the patient/case had been assigned to, to be inappropriate.

Table 45, presenting the results of the 2 G Test, reflects no significant relationship as hypothesised in the above alternative hypothesis and thus the null hypothesis is accepted, i.e. those patients whose therapists regarded the type of treatment the case had been assigned to, to be appropriate did not improve, feel satisfied with the services received and attribute the improvement to treatment received at the Clinic significantly more than those patients whose therapists regarded the type of treatment the case/patient had been assigned to, to be inappropriate.

1.2.5.3  $H_1$  It is hypothesised that those patients whose therapists found it easy to work within the rigours of the research programme will improve, feel satisfied with the services received and attribute the improvement to the treatment received at the Clinic, significantly more than those patients whose therapists found it difficult to work within the rigours of the research programme.

Table 46 presents the results of the 2 G Test showing a significant relationship between those patients whose therapists found it easy to work within the rigours of the research programme and improvement. It was shown that of those who found it easy to work within the rigours of the research programme, 45% improved, and of those who found it difficult, only 12% improved at the Follow-up I stage. Thus the alternative hypothesis is accepted for improvement. And the null hypothesis is accepted, i.e. those patients whose therapists found it easy to work within the rigours of the research programme did not feel satisfied with the services received and did not attribute the improvement to the treatment received at the Clinic significantly more than those patients whose therapists found it difficult to work within the rigours of the research programme.

1.2.5.4  $H_1$  It is hypothesised that those patients whose therapists regarded the allocation of cases to a specific treatment programme to be morally justified will improve,



feel satisfied with the services received and attribute the improvement to the treatment received at the Clinic, significantly more than those patients whose therapists regarded the allocation of cases to a specific treatment programme to be immoral.

Table 47 presents the results of the 2 G Test showing no significant relationship as hypothesised in the above alternative hypothesis and hence the null hypothesis is accepted, i.e. those patients whose therapists regarded the allocation of cases to a specific treatment programme to be morally justified did not improve, feel satisfied with the services received and attribute the improvement to the treatment received at the Clinic significantly more than those patients whose therapists regarded the allocation of cases to a specific treatment programme to be immoral.

1.2.5.5  $H_1$  It is hypothesised that those patients whose therapists' preferred mode of treatment was the same as that to which the patient/case had been allocated will improve, feel satisfied with the services received and attribute the improvement to the treatment received at the Clinic, significantly more than those patients whose therapists' preferred mode of treatment was different to that to which the patient/case had been allocated.

Table 48, presenting the results of the 2 G Test, shows no

significant relationship as hypothesised in the above alternative hypothesis and therefore the null hypothesis is accepted, i.e. those patients whose therapists' preferred mode of treatment was the same as that to which the case had been allocated did not improve, feel satisfied with the services received and attribute the improvement to treatment received at the Clinic significantly more than those patients whose therapists' preferred mode of treatment was different to that to which the case/patient had been allocated.

1.2.5.6  $H_1$  It is hypothesised that those patients whose therapists regarded research in psychotherapy to be necessary will improve, feel satisfied with the services received and attribute the improvement to the treatment received at the Clinic, significantly more than those patients whose therapists felt research in psychotherapy to be unnecessary.

Table 49 presents the results of the 2 G Test showing no significant relationship for the above alternative hypothesis, and hence the null hypothesis is accepted, i.e. those patients whose therapists regarded research in psychotherapy to be necessary did not improve, feel satisfied with the services received and attribute the improvement to treatment received at the Clinic significantly more than those patients whose therapists felt research in psychotherapy to be unnecessary.

1.2.5.7  $H_1$  It is hypothesised that those patients whose therapists felt hostile to the treatment programme and as a result had difficulty in keeping the different therapy groups separate will deteriorate, feel dissatisfied with the services received and attribute the deterioration to the Clinic, significantly more than those patients whose therapists did not feel hostile.

Table 50, presenting the results of the 2 G Test, reflects no significant relationship as hypothesised in the above alternative hypothesis and thus the null hypothesis is accepted, i.e. those patients whose therapists felt hostile to the treatment programme and as a result had difficulty in keeping the different therapy groups separate did not deteriorate, feel dissatisfied with the services received and attribute the deterioration to the Clinic, significantly more than those patients whose therapists did not feel hostile.

However, it was found that hostility to the treatment programme by therapists and their resultant inability to keep the different therapy groups separate was significantly related to the severity of the problem. For the category, hostile and unhappy, 13% of the cases were very severe; for the category, indifferent, 0% were very severe; and for the category, none of these, 30% were very severe. For the category, severe, those that were indifferent had an 85% representation, those that were hostile 50%, and none of these 33%.

It is indeed most interesting that therapists' attitudes were not significantly related to improvement/deterioration, client

satisfaction, and improvement/deterioration being attributable to the Clinic. Only therapists' ease to work within the rigours of the research programme was related to improvement at Follow-up I.

C H A P T E R 4

DISCUSSION OF RESULTS AND CONCLUSION

4.1 Discussion of Results

The present study was designed to evaluate the efficacy of different types of psychological treatment. It employed two experimental groups, referred and treated, and two different types of controls, a non-referred, untreated control and a referred, untreated control that remained on the waiting list.

4.1.1 Principal Hypotheses

The statistical analysis did not support the principal hypotheses, 1.2.1, related to pre- to post-test change scores. The null hypotheses were then accepted.

Experimental Group I, the referred, treated, therapy conducted by inexperienced therapists, group did not improve significantly more than the combined Control Groups I and II.

Control Group II, separate control from experimental groups, the referred, untreated group, did not improve significantly more than Control Group I, the non-referred, untreated group.

The referred Clinic population, Control Group II and Experimental Group I combined, did not improve significantly more than the non-referred, untreated Control Group I.

Control Group I, the non-referred, untreated group, improved not only on more factors but also showed the greater improvement on factors that improved in all groups.

The implications of these findings must be treated with caution. Generalizations must be confined to the specific geographical area of investigation, i.e. the Cape Peninsula, and to the particular clinic for the time period 1973 to and including 1974.

Thus at post-test children from Control Group I, non-referred and untreated, seem to have had a better chance of improvement than any other group. However, Control Group II, waiting list control, children referred and untreated, show the least number of factors improved and do not resemble the findings of Control Group I or Experimental Group I. The latter two groups show a closer similarity to each other than to Control Group II.

No treatment is better than treatment. If parents are sufficiently anxious to seek treatment then more treatment, albeit carried out by inexperienced therapists, is better than less treatment, i.e. being seen for diagnostic testing and being put on the waiting list.

What might the factors be that could account for these results? The factor of parental anxiety must be considered.

The parents of the children in Control Group I did not feel the need to refer their children for any form of treatment despite the fact that they had been found to be disturbed on either Child Scales A(2) and B(2) or both and/or to be scholastic under-achievers in reading and arithmetic.

The parents of children in Experimental Group I had referred

their children and obtained treatment; both parents and children were focused upon and anxieties might have been brought to the fore and this initial heightening of anxiety might have been responsible for the lesser degree of improvement when compared with Control Group I; in short, Control Group II, the referred, untreated group, had to wait for treatment, obtained no relief from their anxiety and possibly felt nothing would or could be done despite the fact that they felt they had a problem.

Shepherd et al (1966) indicated that referral to a child guidance clinic was directly related to the mothers' anxiety. Also the waiting period which was during the long summer school holidays might have engendered even more anxiety, i.e. the parents/ mothers might have felt desperate that their children would not be treated and cured before the new scholastic year. It is suggested that waiting per se could be the crucial variable, generating more anxiety in fact than actual treatment with its concomitant explorations, probes and uncertainties.

The patients of Control Group II in comparison with those from Control Group I and Experimental Group I had relatively no formal schooling during their waiting period, while Control Group I and Experimental Group I had formal schooling during their period of pre- to post-assessment and this may have been a cause of the poor improvement.

#### 4.1.2 Subsidiary Hypotheses - Pre- to post-test change

For the subsidiary hypotheses, 1.2.2, based on the pre- to post-test change results, the statistical analysis did not confirm any of the hypotheses postulated and the null hypotheses were accepted.

There were no significant differences in change scores from pre- to post-test on the Child Scales A(2) and B(2) designations:

for parental therapy versus Control Group I, Control Group II, and the three therapies, short-term therapy, broad spectrum behaviour therapy and broad spectrum psychotherapy from Experimental Group I;

for Control Group I, Control Group II and the four therapies, short-term therapy, broad spectrum behaviour therapy, broad spectrum psychotherapy and parental therapy from Experimental Group I;

for male/female subjects for Control Group I, Control Group II and Experimental Group I respectively and combined;

for the age groups 96-114 months and 115-144 months for Control Group I, Control Group II and Experimental Group I combined;

for the social classes for Control Group I, Control Group II and Experimental Group I combined.

No significant differences in change scores from pre- to post-test were found on the Child Scales A(2) and B(2) designations and the Parent and Child Interviews for Experimental Group I.

Thus it was shown that parental therapy versus other forms of treatment does not emerge as superior. This finding is supported by Levitt's (1971) statement concerning the efficacy



of parental therapy which he feels still remains to be demonstrated.

No one treatment condition, no treatment and non-referred, Control Group I, no treatment and referred Control Group II, and for Experimental Group I, short-term therapy, broad spectrum psychotherapy, broad spectrum behaviour therapy and parental therapy included or versus the above treatments emerge as showing the greater improvement. Hence, too, no psychotherapeutic approach could be labelled superior.

These findings are in accordance with the general body of published research in child therapy which does not conclusively support the superiority of any one treatment method.

The absence of significant differences between males/females is confirmed by reviews of the literature (Meltzoff and Kornreich, 1970) on both adult and child outcome studies, showing that there is no clear relationship between the sex of the patient and the results of outcome studies. The Levitt, Beiser and Robertson (1959), and Gluck, Tanner, Sullivan and Erikson (1964) studies of outcome reported only small differences in symptom improvement between the sexes.

Age differences for the younger and older groups of children were not significant. The majority of research studies covering both adult and child research show no relationship between outcome and age (Meltzoff and Kornreich, 1970).

Those studies which do suggest the hypothesis that younger children tend to improve significantly more than older children cover a different age range than this study and thus valid

comparisons cannot be made. Age differences were also investigated in relation to all test variables for the combined groups, Control Groups I and II and Experimental Group I. The older age group improved significantly more than the younger age group on three of the 19 test battery variables, and deteriorated on only one variable.

In the present study age did not prove to be a significant variable in outcome.

#### 4.1.3 Subsidiary Hypothesis. The Efficacy of Experienced and Inexperienced Therapists at Follow-ups I and II

Statistical analysis supported the null hypothesis, experienced therapists, Experimental Group II, did not improve significantly more at Follow-ups I and II. However, a significantly greater improvement was shown for the inexperienced therapists, Experimental Group I, at Follow-up II.

The value of experience needs to be looked at: Truax and Carkhuff (1972) warn that experience is not synonymous with maturity. The evidence of their (1972) review

"suggested strongly that, on average, highly experienced therapists show no great ability to induce or facilitate constructive change in the patient. We suspect that this lack of correlation between experienced therapists to offset this growing ability by an increased acceptance of professional prejudices and consequent unconcern with feedback from the client he seeks to help" (p.354).

Bergin and Strupp (1972) drew attention to the global quality of the term experience stating that it includes not only maturation but also training and personal therapy.

A review of the literature shows that researchers who have undertaken this field of investigation of neophyte versus experienced therapist are Katz, Lorr and Rubenstein (1958), Cartwright and Vogel (1960), Grigg (1961), Barrett-Lennard (1962), McNair, Lorr and Callahan (1963), Fiske, Cartwright and Kirtner (1964) and Baun, Felzer, D'Zmura and Shumaker (1966).

In these studies in no instance did the inexperienced therapists do better. Yet, the above studies do not yield a conclusive picture because experience levels were not stated clearly and other variables were seldom controlled.

A few studies have favoured the efficacy of experienced therapists (Ashby, Ford, Guerney and Guerney, 1957; Bohn, 1965; Cartwright and Vogel, 1960; Fiedler, 1950a, 1950b; Rice, 1965; Strupp, 1955).

However, Strupp's 1960 and 1962 research on neophytes led him to support the assertion that

"analysts sometimes seem to achieve their greatest success when they are beginners" (p.100).

What might have happened in the present study is that at Follow-up I, the neophytes were relatively inexperienced. However, at Follow-up II, three months later, they had gained not only more experience but in fact had received more training and knowledge both in the therapeutic sense and as far as their own personal growth was concerned. In comparison with the experienced therapists, some of whom had done internships but

not clinical degree courses for registration and some of whom had obtained registration by means of the grandfather clause, the inexperienced therapists were being systematically trained and stimulated in a variety of approaches, were being constantly monitored, and were voicing their anxieties and uncertainties as well as seeing their strengths in frequent group discussions.

Perhaps when one obtains registration and goes immediately into private practice as well as working at several different institutions on a session basis, one is not as involved or committed in the sessional work. Furthermore, should one encounter problems in therapy, there might be a greater reluctance to voice these difficulties at case conferences in the presence of the inexperienced therapists.

It had been observed that a number of the experienced therapists were very concerned with the turnover of their case load - the higher the better. Maybe the anxiety to prove that one was working through the waiting list led to the quality of the therapy and its efficacy being lower than that of the inexperienced therapists. However, it must be stressed that there was no coercion from top management to work through the waiting list at any particular pace, but this pressure did exist and was exerted from the secretariat. The latter allocated cases.

The statistical analysis supported the alternative hypothesis, both Experimental Groups I and II improved significantly more at Follow-up II than at Follow-up I.

After the first period of Follow-up I a low improvement rate is shown for the experienced and inexperienced therapists, but three

months later there is a dramatic increase. Thus nine months after initial intake a high degree of improvement is shown but not six months after initial intake. Many factors might be responsible for this.

The question that must now be posed is: for change to occur in an 8-11 year age group of patients is a period of nine months the critical time limit required "to shorten the duration of the disorder" (Rutter 1970, p.71).

This question could only be answered had there been a possibility to use the same follow-up procedures on the school control, Control Group I, the non-referred, untreated group and the waiting list control, Control Group II, the referred, untreated group. Furthermore, the latter group would have had to have remained without treatment for nine months. In the present study regrettably these two stipulations could not be met for reasons detailed previously.

In addition there remains the strong possibility that even with all the necessary controls, nine months is a rather long period in a family's life and should they be repeatedly followed-up in this manner, one might simply be obtaining an acquiescence response. The parents might finally say the child had improved simply to placate the research staff, in order to resume their one routine and possibly forget their need for help which might have been a negative, painful or simply a very inconvenient experience.

The statistical analysis led to the support of the null hypothesis. There was no significant relationship between the

category, very severe, and the magnitude of improvement.

The greatest percentage improvement was obtained from the category, not severe.

These results are supported by the findings of Barron (1953), Katz, Lorr and Rubenstein (1958) and Morgenstern, Pearce and Rees (1965); they are contrary to the findings of Ewing (1964), Levis and Carrera (1967) and Campbell and Rosenbaum (1967), who found that the greater the severity of the problem, the greater the change produced. Others (Raskin, 1949; Page, 1953; Frank, Gliedman, Imber, Nash and Stone, 1957) have found no relationship between severity of the problem and outcome.

The statistical analysis confirmed the alternative hypothesis at the Follow-up II stage for the combined Experimental Groups I and II showing that the greatest proportion of patients showed an improvement irrespective of satisfaction with the services received.

It was shown that this was the result of superimposing two different patterns of improvement, one for Experimental Group I and the other for Experimental Group II. For Experimental Group I, inexperienced therapists, the greatest number improved irrespective of client satisfaction with services received. For Experimental Group II, experienced therapists, a larger percentage remained the same and deteriorated than in Experimental Group I.

Examination of the client satisfaction questionnaire showed that for Experimental Group I, clients were not necessarily dissatisfied with the inexperienced therapists, but rather with

another member of the staff with whom they had minimal contact, whereas for Experimental Group I, the therapist was more often the cause of dissatisfaction.

Furthermore, for Experimental Group I, inexperienced therapists, those parents who indicated their willingness to return to the Clinic felt the Clinic was responsible for the change, improvement, and were satisfied with the services received.

Experimental Group II, the experienced therapists, showed only one significant relationship: the greatest proportion of parents who would return to the Clinic felt satisfied with the services received.

It has been shown that Experimental Group I, inexperienced therapists, emerges with positive significant relationships between different aspects of client satisfaction. Experimental Group II, experienced therapists, are conspicuous by their absence of positive significant relationships between the varied aspects of client satisfaction. It is concluded that the concern often expressed by members of staff regarding the incompetency of the inexperienced trainee clinical psychologist, for the initial two years of the clinical programme at the University of Cape Town Child Guidance Clinic, is without foundation.

Subsidiary hypothesis: Follow-ups I and II and therapist-child gender.

The statistical analysis supported the hypothesis that for Experimental Group I, the inexperienced therapists, male and/or female

patients seen by male therapists improved overall significantly more than male and/or female patients seen by female therapists only at Follow-up I.

The majority of male therapist-male child combinations improved or remained the same, whereas the majority of female therapist-male child deteriorated.

No significant relationships for the four sex pairings were shown for the experienced therapists at either Follow-up I or Follow-up II.

However, at Follow-up II the inexperienced male therapists recorded a higher improvement rate surpassing the experienced male therapists; the female inexperienced therapists showed an initial lower rate of improvement than the experienced female therapists but finally at Follow-up II equalled the results of the experienced female therapists. The particular composition of male experienced therapists and female inexperienced therapists for this particular Clinic for the specific years of the investigation may contribute to this occurrence.

Furthermore, there is no clear indication in the literature whether a relationship exists between patient and therapist sex and outcome (Meltzoff and Kornreich, 1970).

Subsidiary hypothesis: Follow-ups I and II and age.

The statistical analysis supported the null hypothesis: the younger age group did not improve significantly more at Follow-up I



and at Follow-up II in either Experimental Group I or Experimental Group II.

According to Meltzhoff and Kornreich (1970) research studies do not show a relationship between age and outcome. The few studies that do support the hypothesis that younger children show a superior rate of improvement do not cover the age ranges of the present study.

Subsidiary hypothesis: Follow-ups I and II and social class.

The statistical analysis supported the null hypothesis: the higher social class patients did not improve significantly more than those from the lower social classes at either Follow-up I or at Follow-up II for either Experimental Group I or Experimental Group II.

Researches supporting the null hypothesis are: Albronda, Dean and Starkweather (1964), Frank et al (1957), and Baker and Wagner (1966). Other studies come to the opposite conclusion. There is a need for further research aiming more specifically at

"establishing what therapist attitudes are and of modifying them and the therapeutic methods to meet the needs of large numbers of patients for whom psychotherapy as we know it was not designed for in the first place" (Meltzhoff and Kornreich, p.250).

Meltzhoff and Kornreich here refer to the lower socio-economic classes.

Subsidiary hypothesis: Follow-ups I and II and four types of therapy in Experimental Groups I and II.

The statistical analysis supported the null hypothesis, there was no significant difference in the outcome of broad spectrum psychotherapy, broad spectrum behaviour therapy, parental therapy and short term therapy, for Experimental Groups I and II respectively.

It was once again shown that no one method of treatment was superior to another. These findings were supported by the results of the pre- to post-test differences and by the overall research findings which show no clear-cut indication for the superiority of one form of treatment over another.

There are two possibilities here:

- (1) the treatments are different but equally ineffective;
- (2) the treatments are the same, labelled differently, and are ineffective.

#### 4.1.4 Subsidiary Hypotheses based on Therapists' Attitudes

Statistical analysis confirmed the hypothesis that therapists' attitudes would show an interdependence for Experimental Group I, inexperienced therapists. The general pattern that emerged is presented below.

Those therapists who regarded research in psychotherapy as unnecessary and those who felt their hostility was attributable to their not keeping the different therapy groups from Experimental Group I separate, all felt the allocation to a specific

treatment programme to be immoral.

The above results are not surprising.

If one holds the view that research in psychotherapy is unnecessary and one then participates in a research programme, it is understandable that one would regard the allocation of children to a specific treatment programme as immoral.

The hostility might have been the result of anxiety about therapeutic know-how and skills and this anxiety converted into hostility. This feeling of hostility is then dealt with by labelling the allocation of children to a specific treatment programme as immoral.

Those therapists who felt the allocation to treatment groups to be immoral and those who felt indifferent to treating children within the rigours of the research programme, experienced difficulty in treating their cases within the rigours of the research programme.

It was suggested that hostility might be the result of anxiety about coping with different types of treatment and hence they felt allocation to be immoral. It then becomes feasible that they will have difficulty treating children within the rigours of the research programme because it has been judged to be immoral.

Those therapists who were indifferent to treating children within the rigours of the research programme, were by definition, indifferent, lacking in drive, motivation, positive expectations, confidence, and most probably tackled the task with an

obvious indifference and found it proved difficult.

Those therapists who felt indifferent to the allocation of patients to a specific treatment programme, all experienced initial difficulty in dealing with their cases.

The same line of reasoning presented immediately above holds for this finding.

4.1.5 Subsidiary Hypotheses based on Therapists' Attitudes and their relationship to Follow-ups I and II

The statistical analysis indicated that the null hypothesis be accepted for the following hypotheses based on therapists' attitudes and their relationship to Follow-ups I and II, for Experimental Group I, inexperienced therapists. There was no significant relationship between these therapists' attitudes:

- . initial ease in dealing with their cases;
- . Appropriateness of the type of treatment the case had been assigned;
- . morally justified for assigning cases to a specific treatment programme;
- . therapists' preferred mode of treatment being the same as treatment to which the case was allocated;
- . feeling research in psychotherapy to be necessary;

for Follow-ups I and II, and greater improvement, satisfaction with services received, and attributing the improvement to the treatment received at the Clinic.

In addition therapists who felt hostile to the treatment programme and as a result had difficulty in keeping the different therapy

groups separate did not deteriorate, feel dissatisfied with the services received, and attribute the deterioration significantly more to the Clinic.

With those therapists who found it easy to work within the rigours of the research programme, patients improved significantly more than with those who found it difficult, but only at the Follow-up I stage.

Overall there was no significant relationship between therapists' attitudes and the results of Follow-ups I and II. It has been shown that improvement did occur, and one is led to believe irrespective of therapists' attitudes.

At Follow-up I, with those therapists who found it easy to work within the rigours of the research programme, patients improved significantly more than with those therapists who found it difficult.

This relationship was not maintained at the Follow-up II stage. The reasons are unclear. However, those who found it difficult initially may have become more sure of themselves and more proficient.

There is no literature on these particular therapists' attitudes in the studies reviewed.

#### 4.2 Conclusion

In conclusion, for Follow-up I, six months after initial intake, the combined results for Experimental Groups I and II (Table 32) show a 33% improvement rate, a 19% deterioration rate and 48% of the cases remained the same. Comparing 33% improvement at the

Follow-up I stage with a 65,2% improvement rate of Levitt's (1963) survey, there is a significant difference at the ,01 level of significance. The improvement percentage of the present study is significantly lower. Comparing improvement of 33% at Follow-up I with the defector studies of Witmer and Keller (1942) and Lehrman (1949) which yielded a 72,5% improvement rate, the improvement rate of the present study at Follow-up I was again significantly lower at the ,01 level of significance.

However, at Follow-up II the improvement rate was 84% for the present study compared with Levitt's (1963) improvement rate of 65,2% and defector studies of Witmer and Keller (1942) and Lehrman (1949) which was 72,5%. The present study shows a significant improvement at the ,01 level of significance.

These findings are compatible with Subotnik's (1973) observations:

"Studies of psychotherapy with children have generally been ignored by reviewers.....

The interesting point thus seems to have escaped notice that in contrast to the spotty results of adult therapy studies, controlled studies of child psychotherapy have been almost uniformly favourable with respect to the effects of treatment. Levitt's reviews of child therapy (1967b, 1963) did not bring this point out since he omitted consideration of controlled studies" (p.166).

Table 33, showing the results of the 2 G Test, showed that for Experimental Group I, conducted by inexperienced therapists, at Follow-up II they had a higher percentage improvement, 91%, had a lower percentage remained the same, and a lower deterioration rate than Experimental Group II, conducted by

experienced therapists.

Table 32, showing the results of the 2 G Test, indicate that for the combined Experimental Groups I and II 25% of the cases seen were severe, 30% slightly severe and 45% not severe.

Eighty-six percent of the parents expressed satisfaction with the services received at the Clinic, 7% were dissatisfied and a further 7% were indifferent to the services received.

Forty-seven percent of parents felt the Clinic was mostly responsible for the change, 43% felt the Clinic was partly responsible and 10% felt the Clinic was not responsible at all for the change.

Table 33 shows that there was a significant difference between experienced and inexperienced therapists; in Experimental Group I, inexperienced therapists, a higher percentage of parents felt the Clinic was mostly or not at all responsible for the change, than in Experimental Group II.

#### 4.3 Suggested Guidelines for Future Research

Bergin and Strupp (1972) have investigated the feasibility of major collaborative research efforts and stress the problems associated with administration, scientific controls and interpersonal relationships and conclude that it is not feasible at the present time or in the future.

It is thus suggested that planning be started now for collaborative research studies that would one day be feasible by starting a system that would streamline and ameliorate

some of the difficulties detailed by the above authors.

Resistance to research and more specifically efficacy research is seen as the greatest obstruction of all. However, should institutions adopt as one of their main reasons for existence an ongoing research programme that monitors its efficacy and client satisfaction, it should then have as part of its service contract with clinicians that research is to be one aspect of their clinical functions. This would be applicable to both full-time and part-time staff.

To facilitate that results of this ongoing programme would be available at regular intervals, a computer programme would be designed and set up; the institution would be linked with a computer terminal; data returns could thus be entered at regular intervals. The analysis would cover the present data fed in, compare it with previous data, and a cumulative analysis would be given.

The sine qua non for the above would demand the following hierarchial organisation:

full-time director;

full-time researcher staff in loco at the institution,

one member of the research staff must be a

statistician;

full-time clinical members of staff from the necessary

disciplines to constitute a fully complementary

interdisciplinary team.



The stipulation of full-time members of staff has multiple advantages over the employment of part-time staff.

Organisational problems diminish when all members are in loco and available to discuss policy making and goal setting. Through regular contact, e.g. staff meetings where exchange of ideas and opinions can take place, difficulties with policy, and personal differences can be resolved far more effectively as all channels of communication are available immediately and on the spot.

Such a constituted institution with regular continuous feedback systems of its efficacy and client satisfaction would gain further support should accreditation boards registering institutions for training clinical psychologists require as one of their criteria efficacy ratings of the institutions for registration.

Furthermore, registration of clinical psychologists with the accreditation board, once they had received their training, would have as one of their requirements for registration their student efficacy rating during their internship.

In this manner the trainee psychologist would be introduced into a research orientated milieu from the start. Efficacy research would not be taking place as an isolated phenomenon but as an integral part of his/her clinical development.

Maybe with this system in operation clinicians will no longer feel research in psychotherapy with control groups left untreated, is unethical, but rather to perceive that not to want to know how ineffective or effective one is, is the

highest form of being unethical.

A further advantage of a programme detailed for ongoing feedback is that trainees and supervisors would have a continuous progress rating to guide and assist the trainee to achieve his/her maximum potential as a therapist.

Should his/her optimal achievement meet the requirements of the institution, the trainee can at a very early stage be guided and channelled in accordance with his/her interests, skills and academic qualifications into other areas of psychology or related fields.

A further stipulation which might be made by the accreditation board is that all institutions as described in this context not only offer in-service training to trainee clinical psychologists, but also provide refresher courses for the registered clinical psychologists. Attendance at these refresher courses could be made mandatory by the accreditation board at say three yearly intervals. The accreditation board would be able to negotiate with the Receiver of Internal Revenue to have the expenses incurred and income lost through the mandatory attendance at the refresher courses made tax deductible for the registered clinician.

It is hoped in this manner to create facilitative conditions for psychotherapy research leading ultimately to collaborative studies and at the same time improving and maintaining standards in clinical psychology.

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APPENDIX A

SOCIAL 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.

	<u>1973</u>	<u>1974</u>
CLASS I: Traditional aristocracy, millionaires, cabinet ministers, chancellors and principals of Universities, managing directors or chairmen of boards of nationwide or international companies ...	0	0
CLASS II: Professionals, salaried executives, owners of large firms, operators of moderate sized enterprises, students of universities and colleges, prosperous farmers and landowners ...	120	81
CLASS III: Small businessmen, small farmers, clerical workers, white-collar workers, semi-professionals ...	188	115
CLASS IV: Skilled workers, qualified tradesmen, apprentices ...	66	56
CLASS V: Semi-skilled workers ...	7	6
CLASS VI: Unskilled workers, permanently unemployed, poor whites ...	1	4

APPENDIX B

Analysis of Covariance of pre-test to post-test change between three groups - Control Group I, Control Group II and Experimental Group I for the following factors:

CHILD SCALE A(2) total score

Source	df	S.S.	M.S.	F
Between	2	170,96	63,03	1,99
Error	144	4546,48	31,57	

CHILD SCALE B(2) total score

Source	df	S.S.	M.S.	F
Between	2	12,64	6,32	0,22
Error	143	41,10	28,74	

OTIS QUICK SCORING MENTAL ABILITY TEST - Full Scale

Source	df	S.S.	M.S.	F
Between	2	59,51	29,75	0,40
Error	160	11754,70	73,47	

HOLBORN READING INVENTORY - Reading Age

Source	df	S.S.	M.S.	F
Between	2	6513,72	3256,86	16,07
Error	147	29785,30	202,62	

HOLBORN READING INVENTORY - Reading Quotient

Source	df	S.S.	M.S.	F
Between	2	2906,55	1453,28	4,60
Error	144	45498,70	315,96	

SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS - Arithmetic Age

Source	df	S.S.	M.S.	F
Between	2	2279,04	1139,52	21,54
Error	157	8305,77	52,90	

SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS - Arithmetic Quotient

Source	df	S.S.	M.S.	F
Between	2	107,93	53,96	0,31
Error	153	26315,40	172,00	

BENTON VISUAL RETENTION TEST - No. Correct

Source	df	S.S.	M.S.	F
Between	2	19,53	9,77	2,44
Error	150	600,99	4,01	

BENTON VISUAL RETENTION TEST - No. of Errors

Source	df	S.S.	M.S.	F
Between	2	33,07	16,53	1,61
Error	150	1541,64	10,28	

JUNIOR EYSENCK PERSONALITY INVENTORY - Extraversion

Source	df	S.S.	M.S.	F
Between	2	102983,00	51491,50	5,18
Error	155	1539310,00	9931,03	

JUNIOR EYSENCK PERSONALITY INVENTORY - Neuroticism

Source	df	S.S.	M.S.	F
Between	2	64587,90	32293,95	2,72
Error	155	1837060,00	11852,00	

JUNIOR EYSENCK PERSONALITY INVENTORY - Lie Scale

Source	df	S.S.	M.S.	F
Between	2	6207,50	3103,75	0,30
Error	155	1617560,00	10435,87	

CALIFORNIA TEST OF PERSONALITY - Personal Adjustment

Source	df	S.S.	M.S.	F
Between	2	2818,14	1409,70	2,95
Error	155	73930,80	476,97	

CALIFORNIA TEST OF PERSONALITY - Social Adjustment

Source	df	S.S.	M.S.	F
Between	2	2580,88	1290,44	3,15
Error	154	63146,50	410,04	

CALIFORNIA TEST OF PERSONALITY - Total Adjustment

Source	df	S.S.	M.S.	F
Between	2	2750,85	1375,43	4,52
Error	154	46876,30	304,39	

MARYLAND PARENT ATTITUDE SURVEY - Disciplinarian Score

Source	df	S.S.	M.S.	F
Between	2	27507,00	13753,50	1,74
Error	68	538293,00	7916,07	

MARYLAND PARENT ATTITUDE SURVEY - Indulgence Score

Source	df	S.S.	M.S.	F
Between	2	50199,10	25099,55	5,18
Error	68	329611,00	4847,22	

MARYLAND PARENT ATTITUDE SURVEY - Protectiveness Score

Source	df	S.S.	M.S.	F
Between	2	46961,50	23480,75	4,26
Error	68	374797,00	5511,72	

MARYLAND PARENT ATTITUDE SURVEY - Rejection Score

Source	df	S.S.	M.S.	F
Between	2	88544,90	44272,45	9,14
Error	68	329390,00	4843,97	

APPENDIX C

Analysis of Covariance of pre-test to post-test change between males and females for the following factors for Experimental Groups - Control Group I, Control Group II and Experimental Group I combined.

CHILD SCALE A(2) total score

Source	df	S.S.	M.S.	F
Between	1	8,40	8,40	0,26
Error	143	4539,54	31,75	

CHILD SCALE B(2) total score

Source	df	S.S.	M.S.	F
Between	1	108,70	108,70	3,91
Error	143	3976,00	27,80	

OTIS QUICK SCORING MENTAL ABILITY TEST

Source	df	S.S.	M.S.	F
Between	1	24,53	24,53	0,34
Error	163	11783,50	72,29	

HOLBORN READING INVENTORY - Reading Age

Source	df	S.S.	M.S.	F
Between	1	67,94	67,94	0,32
Error	148	31129,30	210,33	

BENTON VISUAL RETENTION TEST - No. of Errors

Source	df	S.S.	M.S.	F
Between	1	33,27	33,27	3,20
Error	151	1570,80	10,40	

JUNIOR EYSENCK PERSONALITY INVENTORY - Extraversion

Source	df	S.S.	M.S.	F
Between	1	2421,56	2421,56	0,24
Error	156	1566720,00	10043,07	

JUNIOR EYSENCK PERSONALITY INVENTORY - Neuroticism

Source	df	S.S.	M.S.	F
Between	1	4583,49	4583,49	0,39
Error	156	1851570,00	11869,03	

JUNIOR EYSENCK PERSONALITY INVENTORY - Lie Scale

Source	df	S.S.	M.S.	F
Between	1	28,09	28,09	0,00
Error	156	1621520,00	10394,35	

HOLBORN READING INVENTORY - Reading Quotient

Source	df	S.S.	M.S.	F
Between	1	26,83	26,83	0,09
Error	145	45956,20	316,94	

SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS - Arithmetic Age

Source	df	S.S.	M.S.	F
Between	1	67,58	67,58	1,17
Error	158	9099,72	57,54	

SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS - Arithmetic Quotient

Source	df	S.S.	M.S.	F
Between	1	54,17	54,17	0,32
Error	154	26332,90	170,99	

BENTON VISUAL RETENTION TEST - No. Correct

Source	df	S.S.	M.S.	F
Between	1	0,27	0,27	0,06
Error	151	634,77	4,20	

CALIFORNIA TEST OF PERSONALITY - Personal Adjustment

Source	df	S.S.	M.S.	F
Between	1	41,97	41,97	0,09
Error	156	76010,40	487,25	

CALIFORNIA TEST OF PERSONALITY - Social Adjustment

Source	df	S.S.	M.S.	F
Between	1	17,45	17,45	0,00
Error	155	64762,50	417,82	

CALIFORNIA TEST OF PERSONALITY - Total Adjustment

Source	df	S.S.	M.S.	F
Between	1	43,05	43,05	0,14
Error	155	49134,00	316,99	

MARYLAND PARENT ATTITUDE SURVEY - Disciplinarian Score

Source	df	S.S.	M.S.	F
Between	1	6055,98	6055,98	0,76
Error	69	547735,00	7938,19	

MARYLAND PARENT ATTITUDE SURVEY - Indulgence Score

Source	df	S.S.	M.S.	F
Between	1	2082,16	2082,16	0,43
Error	69	330792,00	4794,07	

MARYLAND PARENT ATTITUDE SURVEY - Protectiveness Score

Source	df	S.S.	M.S.	F
Between	1	4834,23	4834,23	0,87
Error	69	385449,00	5586,22	

MARYLAND PARENT ATTITUDE SURVEY - Rejection Score

Source	df	S.S.	M.S.	F
Between	1	4502,06	4502,06	0,88
Error	69	53317,00	5120,54	



APPENDIX D

Analysis of Covariance of pre- to post-test change between the two age groups, 96-114 months and 115-144 months, for the following factors based on the groups: Control Group I, Control Group II and Experimental Group I combined.

CHILD SCALE A(2) total score

Source	df	S.S.	M.S.	F
Between	1	8,81	8,11	0,28
Error	143	4539,31	31,74	

CHILD SCALE B(2) total score

Source	df	S.S.	M.S.	F
Between	1	218,41	218,41	8,04
Error	143	3884,37		

OTIS QUICK SCORING MENTAL ABILITY TEST

Source	df	S.S.	M.S.	F
Between	1	23,09	23,09	0,32
Error	161	11788,50	73,22	

HOLBORN READING INVENTORY - Reading Age

Source	df	S.S.	M.S.	F
Between	1	568,22	568,22	2,72
Error	148	30877,80		

HOLBORN READING INVENTORY - Reading Quotient

Source	df	S.S.	M.S.	F
Between	1	1001,76	1001,76	3,21
Error	145	45218,50	311,85	

SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS - Arithmetic Age

Source	df	S.S.	M.S.	F
Between	1	2041,22	2041,22	42,67
Error	158	7558,27	47,84	

SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS - Arithmetic Quotient

Source	df	S.S.	M.S.	F
Between	1	900,41	900,41	5,43
Error	154	25556,30	165,95	

BENTON VISUAL RETENTION TEST - No. Correct

Source	df	S.S.	M.S.	F
Between	1	26,60	26,60	6,76
Error	151	594,22	3,94	

BENTON VISUAL RETENTION TEST - No. of Errors

Source	df	S.S.	M.S.	F
Between	1	25,60	25,60	2,50
Error	151	1543,17	10,22	

JUNIOR EYSENCK PERSONALITY INVENTORY - Extraversion

Source	df	S.S.	M.S.	F
Between	1	77063,40	77063,40	8,10
Error	156	1492130,00	9564,94	

JUNIOR EYSENCK PERSONALITY INVENTORY - Neuroticism

Source	df	S.S.	M.S.	F
Between	1	354,88	354,88	0,03
Error	156	1858870,00	11915,83	

JUNIOR EYSENCK PERSONALITY INVENTORY - Lie Scale

Source	df	S.S.	M.S.	F
Between	1	4335,63	4335,63	0,42
Error	156	1615870,00	10358,14	

CALIFORNIA TEST OF PERSONALITY - Personal Adjustment

Source	df	S.S.	M.S.	F
Between	1	467,50	467,50	0,97
Error	156	74898,80	480,12	

CALIFORNIA TEST OF PERSONALITY - Social Adjustment

Source	df	S.S.	M.S.	F
Between	1	26,80	26,80	0,07
Error	155	63815,70	411,71	

CALIFORNIA TEST OF PERSONALITY - Total Adjustment

Source	df	S.S.	M.S.	F
Between	1	555,60	555,60	1,83
Error	155	47179,70	304,39	

MARYLAND PARENT ATTITUDE SURVEY - Disciplinarian Score

Source	df	S.S.	M.S.	F
Between	1	25890,10	25890,10	3,39
Error	69	526547,00	7631,12	

MARYLAND PARENT ATTITUDE SURVEY - Indulgence Score

Source	df	S.S.	M.S.	F
Between	1	7784,59	7784,59	1,56
Error	69	34336,00	4975,88	

MARYLAND PARENT ATTITUDE SURVEY - Protectiveness Score

Source	df	S.S.	M.S.	F
Between	1	431,23	431,23	0,08
Error	69	389385,00	5643,26	

MARYLAND PARENT ATTITUDE SURVEY - Rejection Score

Source	df	S.S.	M.S.	F
Between	1	4865,89	4865,89	0,95
Error	69	353356,00	5121,10	

APPENDIX E

Analysis of Covariance of pre- to post-test change between the six social classes for the following factors based on Control Group I, Control Group II and Experimental Group I combined.

CHILD SCALE A(2) total score

Source	df	S.S.	M.S.	F
Between	5	253,00	50,60	1,63
Error	139	4326,44	31,13	

CHILD SCALE B(2) total score

Source	df	S.S.	M.S.	F
Between	5	272,52	54,50	1,94
Error	139	3910,83	28,14	

OTIS QUICK SCORING MENTAL ABILITY TEST - Full Scale

Source	df	S.S.	M.S.	F
Between	5	481,50	96,30	1,31
Error	157	11573,4	73,72	

HOLBORN READING INVENTORY - Reading Age

Source	df	S.S.	M.S.	F
Between	5	1541,40	308,28	1,48
Error	144	29984,80	208,23	

HOLBORN READING INVENTORY - Reading Quotient

Source	df	S.S.	M.S.	F
Between	5	2245,94	449,19	1,44
Error	141	43998,90	312,05	

SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS - Arithmetic Age

Source	df	S.S.	M.S.	F
Between	5	137,02	27,40	0,46
Error	154	9084,75	58,99	

SCHONELL TEST NO.5 MISCELLANEOUS COMBINATIONS - Arithmetic Quotient

Source	df	S.S.	M.S.	F
Between	5	619,03	123,81	0,72
Error	150	25787,90	171,92	

BENTON VISUAL RETENTION TEST - No. Correct

Source	df	S.S.	M.S.	F
Between	5	43,45	8,69	2,14
Error	147	595,89	4,05	

BENTON VISUAL RETENTION TEST - No. of Errors

Source	df	S.S.	M.S.	F
Between	5	186,95	37,39	3,72
Error	147	1478,44	10,06	

JUNIOR EYSENCK PERSONALITY INVENTORY - Extraversion

Source	df	S.S.	M.S.	F
Between	5	64454,60	12890,92	1,27
Error	152	1548490,00	10187,43	

JUNIOR EYSENCK PERSONALITY INVENTORY - Neuroticism

Source	df	S.S.	M.S.	F
Between	5	28263,70	5652,74	0,47
Error	152	1838410,00	12094,80	

JUNIOR EYSENCK PERSONALITY INVENTORY - Lie Scale

Source	df	S.S.	M.S.	F
Between	5	114944,00	22998,80	2,23
Error	152	1568610,00	10319,64	

CALIFORNIA TEST OF PERSONALITY - Personal Adjustment

Source	df	S.S.	M.S.	F
Between	5	2174,79	434,96	0,90
Error	152	73290,10	482,17	

CALIFORNIA TEST OF PERSONALITY - Social Adjustment

Source	df	S.S.	M.S.	F
Between	5	1458,31	291,66	0,70
Error	151	62908,10	416,61	

CALIFORNIA TEST OF PERSONALITY - Total Adjustment

Source	df	S.S.	M.S.	F
Between	5	1600,48	320,10	1,04
Error	151	46394,70	307,25	

MARYLAND PARENT ATTITUDE SURVEY - Disciplinarian Score

Source	df	S.S.	M.S.	F
Between	5	13348,90	2669,78	0,32
Error	65	540217,00	8311,03	

MARYLAND PARENT ATTITUDE SURVEY - Indulgence Score

Source	df	S.S.	M.S.	F
Between	5	40070,60	8014,12	1,63
Error	65	319813,00	4920,20	

MARYLAND PARENT ATTITUDE SURVEY - Protectiveness Score

Source	df	S.S.	M.S.	F
Between	5	23567,00	4713,40	0,8
Error	65	382730,00	5888,15	

MARYLAND PARENT ATTITUDE SURVEY - Rejection Score

Source	df	S.S.	M.S.	F
Between	5	77131,50	15426,30	3,04
Error	65	330292,00	5081,42	