AN APPLIED STUDY OF SOCIAL SKILLS TRAINING

WITH PSYCHIATRIC PATIENTS

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This thesis contains no material which has been accepted for the award of any other degree or diploma in any University, and to the best of my knowledge, contains no material previously published or written by another person, except when due reference is made in the text of the sub-thesis.

Signed

[Signature]

Date Jan. 30th 1979
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ABSTRACT

This study assessed the effects of Social Skills Training on a group of psychiatric inpatients and outpatients. The training program included "in-vivo" tasks and assessment. Results indicated that the Social Skills Training program had positive effects. In contrast, the waiting-list control condition resulted in minimal subject change. Degree of involvement in the SST program was tentatively indicated as a relevant variable affecting outcome. In addition, for some individuals Social Skills Training also resulted in a change in locus of control (Rotter, 1954).
CHAPTER 1.

1.1 INTRODUCTION

Social skills training is a form of behaviour modification designed to provide or improve the social skills necessary for successful social interaction. The development of training programs in social skills is to a large extent due to the work of Michael Argyle at the Institute of Experimental Psychology, Oxford. Since 1963 Argyle and his associates have carried out much experimental research into the complex variables that constitute skilled social performance. This has produced a body of experimental results and conceptual formulations on the elements of social interaction, the function of non-verbal signals in relation to speech and in expressing interpersonal attitudes, self-presentation and taking the role of the other, and some of the rules underlying social behaviour (Argyle, 1969, 1975). One application of this laboratory research was the development of techniques of social skills training for psychiatric patients who were deficient in such skills.

Inadequate social behaviour has long been regarded as an important factor in psychiatric disorders. This is reflected in the pioneering clinical efforts of Salter (1949), and Wolpe (1958) on assertion training. It has been suggested by Sullivan (1947) and others that mental disorders are mainly disturbances of communication and interpersonal relations. Extensive studies conducted by
Zigler and his colleagues have related psychiatric disorder to social competence (Levine and Zigler, 1973; Phillips and Zigler, 1961, 1964; Zigler and Levine, 1973; Zigler and Phillips, 1960, 1961, 1962). Among the important findings resulting from this interrelated series of studies is the suggestion that a psychiatric patient's post-hospital success is directly related to his pre-morbid level of social competence or skill. Argyle and Kendon (1967) have also presented data relating psychiatric disorder to level of social skill at the clinical level. Gladwin (1967) underscored the importance of teaching social skills to patients in order to improve their resistance to environmental stresses.

Exploratory studies investigating the feasibility of training patients in the skills of socially effective behaviour have been carried out. Some empirical studies have compared the effectiveness of social skills training with other techniques currently employed in the treatment of interpersonal concerns, such as systematic desensitization and psychotherapy (Argyle, Trower and Bryant, 1974; Gutride, Goldstein and Hunter, 1974; Marzillier, Lambert and Kellett, 1976). Other investigations have attempted to isolate the effective components of treatment (Hersen, Eisler and Miller, 1974; Eisler, Hersen and Miller, 1975; Galassi and Galassi, 1976; McFall and Lillesand, 1971). Social skills training using various components has also been tested on a variety of populations and problems, including volunteer college
subjects, psychiatric outpatients and chronic and acute inpatients. Important differences between a student and a psychiatric population do, however, make it difficult to draw definitive conclusions about the clinical efficacy of social skills training from studies using volunteers.

Many investigations of social skills training have also suffered from methodological problems in the areas of treatment specification, subject selection, experimental control and statistical design. In addition, generalization and maintenance of behavioural change have not received adequate attention.

The present study was carried out in order to investigate the effects of a social skills training program on a mixed group of socially inadequate psychiatric inpatients and outpatients. Particular features included in vivo training to encourage generalization of learning, and a follow-up measure to assess durability and generalization of skills learnt. Another concern was to explore the degree of active participation and attentiveness displayed by subjects during training and the relationship of these variables to social skills acquisition.

Finally, the study investigated whether subjects' perception of personal mastery of events (locus of control) altered after Social Skills Training.
CHAPTER 2.

2.1 SOCIAL SKILLS TRAINING

Social skills training as developed by Argyle and his colleagues is aimed at generalized problems such as difficulties in "getting on with people", "being shy and lacking confidence with others". Further investigation usually reveals more specific behaviours which need altering, such as inappropriate non-verbal gestures or lack of conversational skills.

Training comprises the techniques of modelling, role-playing, feedback, instructions, coaching and task assignment.

2.1.1 Modelling consists of the social skills trainers or outside actors demonstrating effective ways of behaving (Bandura, 1969).

2.1.2 Role-play is used in the behaviour rehearsal sense (Wolpe and Lazarus, 1966) rather than psychodynamically as developed by Moreno (1947). The role-play exercises simulate the situations that the patient finds difficult. Outside people may be brought in for the role-playing and instructed to adopt roles. The trainers (or therapists) may also adopt roles. The patient is required to be himself in situations which approximate to real ones, but to vary his usual set of responses. Role reversal (Johnson, 1971) is also used in order to provide insight into the other person's point of view. Role-play usually follows a modelling procedure, and the patient attempts to
approximate the modelled behaviour.

2.1.3 Video-tape recordings are made of the role-playing exercises. These are played back and discussed afterwards with the patient for the purpose of feedback on his performance. Instructions are also given in the principles underlying social behaviour, for example, the use of verbal and non-verbal signals in communicating attitudes. In this way the patient is introduced to a repertoire of social responses (in conjunction with modelling) which also forms the basis for feedback and coaching on gaze, gesture, etc. Patients are asked to try out as homework assignments what they have learnt and to report at the next session. This is known as task assignment.

2.2 EXPERIMENTAL BASIS OF SOCIAL SKILLS TRAINING METHODS

Implicit in the term "training" is the notion of teaching people skills. Argyle (1969) has argued that social interactions may be viewed in an analogous manner to skilled behaviour in motor tasks. Accordingly, the social skills training methods outlined above draw upon the general principles of skills acquisition established in the fields of perceptual and motor skills (see Welford, 1968).

2.2.1 Model of skills acquisition

A model of the experimental findings as presented by Holding (1965) and Welford (1968) follows below. This information forms a general model of skills acquisition into which social skills training programs may be seen to fit.
Effective skills training programs include four important variables: practice, feedback, demonstration, and guidance. In general, skills training involves the demonstration of the skill, or components of it, by a model. With more complex skills, visual methods that draw attention to important components or cues may facilitate learning. Subjects might be guided through the initial stages in order to minimize error, but should be given some practice at alternative responses. Repeated practice at the task is an essential part of the program. With a complex task practice on components of the task is necessary. It is desirable to space practice trials at frequent intervals rather than carry out lengthy massed trials infrequently, as this should lead to immediate improvements and serve to maintain motivation. Finally, subjects receive clear and informative feedback on their performance. This can take place concurrently during the trial and terminally when the trial is completed. The most useful terminal feedback is that which enhances the feedback intrinsic to the task itself, so that subjects learn to respond successfully when performing without extra feedback. This is particularly important with regard to ensuring successful generalization.

The major components of skills training will now be discussed more fully.

2.2.2 Demonstration

Demonstration can take many forms. An instructor may simply tell subjects what to do, or he could show them
by carrying out the task with expertise. He might provide a film or videotape of others performing the tasks successfully.

Demonstration is important firstly in drawing attention to and magnifying the important components in a task. It sets a standard for future attempts (Holding, 1965) and serves as a basis for imitation (Bandura, 1971). With more complex tasks, filmed or videotaped demonstrations of components of the tasks can prove very beneficial by focussing on a particular action and repeating particular sequences.

The kind of person found most effective as a model is one perceived by the subject to be of higher status than himself and as exercising more influence over others. If more than one model is observed then imitation is more likely, and also if models are not perceived as experts, whose degree of skill might seem impossible to attain (Meichenbaum, 1971).

In social skills training programs therapists, actors or other patients may model successful ways of interacting. Videotape recordings are sometimes used to illustrate particularly important components such as eye contact, or smiling. Instructions on effective interpersonal functioning may also be given by the therapist or videotape medium.

2.2.3 Practice

In order to acquire complex skills, practice or repetition of components of the task is necessary (Holding, 1965). Crossman (1959) has demonstrated that there is a
simple, linear relationship between the amount of practice and the degree of skill and that even over several years people continue to improve with frequent practice.

Practice can be carried out frequently with short intervals intervening between sessions (massed practice) or infrequently with longer intervals (spaced practice). Massed practice generally leads to initial depression of performance and subsequent gains between trials. Spaced practice shows a gradual progression during the trials. In the long term, however, both methods produce substantially similar levels of improvements. Spaced practice may be of greater value in situations where it is necessary to keep the subject's motivation sufficiently high to persist at a task.

Holding (1965) also points out that practice in the sense of silent rehearsal of activities, or mental practice, has been found to improve performance on skilled activities.

Practice in social skills training occurs via role-playing as well as graded tasks to carry out outside therapy. Training sessions are usually held once weekly, utilizing a spaced practice schedule to assist in maintaining patient motivation. Covert cognitive rehearsal or mental practice has also been utilized in some programs of social skills training (e.g. McFall and Twentyman, 1973).

2.2.4 Feedback

Although practice is necessary to skills acquisition it is not sufficient. In order to develop and improve skilled behaviour, individuals have also been found to
require information about the consequences of their actions (Annett, 1969). Information on the success or failure of attempts at a skilled task may reside in the task itself (intrinsic feedback), or may be supplied by factors external to the task (extrinsic feedback). Extrinsic feedback usually aids skilled performance by providing additional information in a form that is clear and easily understood.

Successful skills acquisition also relies upon timing the feedback immediately contingent on a response. This avoids intervention of other responses which prevent the subject from successfully using the information feedback to improve his performance, perhaps by muddling the relationship between the information from the response and that from the extrinsic feedback (Bilodea and Bilodea, 1958). Information presented during a task may obscure feedback in the task itself (Holding, 1965), therefore immediacy of feedback may best be provided by issuing information on completion of a task (terminal feedback).

Terminal feedback can improve skills acquisition by forcing subjects to attend to the intrinsic cues in the task during its performance and presenting information in a succinctly coded form at the end of the task.

Extrinsic feedback in social skills training may be provided by the role-play partner, therapist or group members in terms of discussion of the degree of success or failure achieved by the trainee. Additional information is very often provided by means of videotape or audiotape recordings of role-played interactions. These may be used to emphasise feedback intrinsic to the
task, such as the role-play partner's responses to particular verbal or non-verbal cues produced by the subject during an interchange.

2.2.5 Guidance

Tasks tend to be more effectively learned if error is minimized in the first stages of learning, as people tend to learn the errors they commit and repeat them (Kaess and Zeaman, 1960). Guidance refers to methods by which subject error is minimized in early learning of a skill. Holding (1965) lists four methods of guiding subjects on perceptual and motor tasks: physical restriction whereby a subject is harnessed so that he has to make the correct movements; forced response whereby a response is externally placed into the correct position; visual guidance which involves providing visual cues as additional sources of information on a task; and verbal guidance which is giving verbal instructions to a subject on the best way of performing the task. Holding (1965) recommends that practice of alternative responses be built into the learning sequence so that the subject learns to choose the most appropriate action. In order to avoid subjects becoming dependent on the additional information provided, guidance should be used to enhance the information intrinsic to the task itself.

In social skills training, patients are coached verbally and with visual demonstrations in their initial attempts at socializing. This is done in order to reduce the likelihood of mistakes or the interaction breaking
down and thus discouraging the patient. Patients are sometimes guided in their choice of an appropriate response by practising alternative responses such as aggressive and passive, as well as assertive responses. Guidance may also be used to draw attention to intrinsic factors in an interaction task, such as the feelings associated with a change of posture.

Social skills training programs then, can and do fit into the model derived from the experimental work on perceptual skills. Modelling, role-playing, coaching and feedback are in fact the general ingredients of most such programs.

2.3 SOCIAL SKILLS TRAINING AND ASSERTIVE TRAINING

Social skills training was foreshadowed by the behavioural method of treatment known as assertive training. It was developed by Joseph Wolpe (1958) as a treatment for neurotic patients who are excessively passive and submissive in their social relationships, drawing on the ideas and practices of Andrew Salter (1949). Wolpe's technique consists fundamentally of breaking down the problem into specific interactions and advising his patients on how to be more assertive. Assertiveness as originally defined by Wolpe (1958) consists of "standing up for one's rights". The salient features of Wolpe's procedures are modelling, instructions, role-playing and task assignment as defined earlier in this chapter. These procedures differ from Argyle's use of them, however, in that Wolpe's technique generally is applied on an individual basis within the
limits of the therapist's office, without the use of other personnel or any special equipment. Wolpe also emphasizes the reinforcement of appropriate assertive behaviour, and often uses another behavioural technique, systematic desensitization, in conjunction with assertiveness training.

Wolpe has since broadened his definition of the term assertiveness to mean "... the proper expression of any emotion other than anxiety towards another person" (1973). A number of variations of his treatment method have also been introduced. In particular, videotape recordings of assertive behaviour have been employed to emphasize some of the non-verbal components of assertiveness (Eisler, Miller and Hersen, 1973); audiotape recordings of assertive responses have been made and played back as additional feedback (McFall and Marston, 1970); and patients have been treated in small groups as well as individually (e.g. Bloomfield, 1973). These developments have served to enhance the modelling component of the therapy in particular. There has also been some attempt to break down assertiveness into its verbal and non-verbal components (Eisler, Miller and Hersen, 1973).

As Wolpe originally described assertive training, it did not explicitly draw upon a skills model. Rather, patients were seen as learning to be more assertive by means of counter-conditioning neurotic anxiety. Recent developments appear to have shifted assertive training more towards a skills model in the breaking down of assertiveness into particular components and the use of a wider range of assertive models.
The main apparent differences in technique between assertive training and social skills training are as follows. Firstly, there is a greater emphasis on videotape feedback and videotape modelling (Goldstein, 1974), in the latter, compared with modelling and role-playing in the former. Secondly, whilst assertive training aims to deal more specifically with excessive submissiveness and an inability to express positive emotions, social skills training is concerned with any deficits in social performance. That is, social skills training programs are more broadly based, dealing with a wide range of social difficulties, including lack of assertiveness. Social skills training, for example, is often used to teach patients simply to say more when interacting with others (Argyle, 1969), or to reward the other person by attending closely, smiling, etc. (Argyle, 1975). Nevertheless, there appears to be considerable overlap between social skills training and assertive training as they are currently practised and presented in the literature.

The term "social skills" has generally been used in reference to the compound abilities necessary for effective interpersonal functioning. "Assertiveness" commonly refers to a sub-category of social skills in which the emphasis is on the "... ability to express both positive and negative feelings in the interpersonal context without suffering consequent loss of social reinforcement" (Bornstein, Bellack and Hersen, 1977). For the purposes of the present study, the terms 'assertiveness' and 'social
skills' will be used in accordance with these definitions.

Social skills training may also be referred to in this paper as SST.
3.1  **EXPECTATIONS OF OUTCOME IN PRESENT STUDY**

In view of the social skills literature the following outcomes were expected in the present study:

1. SST subjects are expected to show pretest to post-test improvement in their social behaviour and attitudes.

2. General clinical improvement is also expected in SST subjects.

3. SST subjects will show greater improvement than no-treatment control subjects on all measures.

4. Skills learned in SST may or may not generalize to or be maintained in everyday life.

Several additional expectations were investigated. The first one was as follows:

5. Degree of subject involvement displayed during SST sessions will be related to individual outcome.

Involvement is defined as active participation and attentiveness.

This variable was regarded as affecting performance on social skills training tasks and contributing to individual differences in results. This opinion was formed following consideration of the information outlined below.

Holding (1965) has explained that more effective learning takes place with active participation as opposed to passive observation. Apart from preventing attention loss, participation ensures that the particular skill
demonstrated is immediately translated into practice.

Lewin (1947) initiated a sequence of experiments designed to determine whether participation in a group decision might not strengthen attitude change; he found that 3 percent of women who heard only a lecture on the desirability of changing food habits to less familiar meats actually served one of the meats in the next week, in contrast with 32 percent of women who had participated in the discussion group decision.

There have also been demonstrations of attitude change in connection with another kind of participation, that involved in role-playing. Under rewarding conditions subjects induced to justify or debate in favour of some position quite discrepant from their initial attitudes will show real attitude change which endures after the role-play is over (Scott, 1957).

Related findings have occurred in the field of cognitive dissonance theory. Secord and Backman (1964) discuss the research, which establishes that dissonance is aroused when a person commits himself either by choosing one of two or more alternatives, or to engaging in actions contrary to his attitudes. Resolution of the dissonance is achieved by attitude change. For example, when an individual joins a group, it is unlikely that he possesses to the fullest extent the same attitudes as the typical group member. Having joined, however, he behaves in accordance with the demands of the group, and to the extent that his behaviour is discrepant with his attitudes, he is likely to shift them so as to conform to the group norms.
Also of relevance is the work of Bandura (1965). He has pointed out the efficiency of learning which takes place by simple observation of or paying attention to a model's behaviour. To a large degree this would logically require looking behaviour for such learning to take place.

In view of the above discussion 'Involvement' as defined earlier was regarded as a relevant outcome variable.

A final expectation was investigated as follows:

6. SST may or may not have an effect on subjects' expectations about how reinforcement is controlled in the world (Locus of Control).

It was considered that a possible outcome of SST might be to increase the subject's sense of personal mastery of events. The following information provides a basis for this expectation.

Lefcourt (1971) has presented material which supports a theoretically probable relationship between increased effectiveness and increased perception of personal control. That is, as persons successfully cope with immediate difficulties, they do seem to experience an increase in perceived control as measured by the I-E scale. For example, Lefcourt quotes a study by Dua (1970), who contrasted the effects upon locus of control of two different approaches to improving interpersonal skills. One treatment was action oriented involving joint therapist-client planning and practising of specific behaviours for improving relationships with given persons; the re-educative therapy was directed toward influencing
the clients' attitudes toward those persons. With both approaches Dua found decreases in externality in comparison to an untreated control group. However, it was the more action-oriented training which produced the most change.

Bandura (1977) has proposed a theory, within the social learning model, that psychotherapeutic procedures, whatever their form, serve as a means of creating and strengthening expectations of personal efficacy. His findings with treatment of phobics suggest that this effect is greatest for enactive (participant modelling), vicarious (modelling) and no treatment conditions, in descending order, as measured by efficacy-expectation rating scales.

In view of all the above findings it was decided to explore the influence of SST on subjects' views of their own effect on life events.
4.1 Outcome Studies

Most outcome studies on social skills training have utilized designs in which subjects are randomly allocated to treatment and control groups, and the Treatment is evaluated by comparing the average response of the treated subjects to that of the subjects in the various control groups. While controlled studies allow generalisations to be made with more confidence than in uncontrolled experiments, the reporting of average response to treatment can mask large individual variations within the treated group (see Paul, 1969). Some research has included no-treatment control groups and attention-placebo controls, in which an "inactive" treatment is given, and this is important in the light of Rachman's (1971) report that patients tend to recover without any formal treatment and to respond to the "non-specific" aspects of receiving treatment as opposed to the treatment itself.

Only a few controlled within subject designs have been carried out, where the effects of treatment are instigated by systematic variation of periods of treatment and no treatment on an individual patient. This method yields precise and careful monitoring of treatment effects but is limited in generalizability of conclusions, and Leitenberg (1973) has pointed out the best outcome research combines both designs. No reported studies of social skills training have used this combined approach as yet.

Outcome research in social skills training has been conducted for several different populations of subjects:
psychiatric inpatients and outpatients, plus volunteer subjects, the latter being largely college students. This review will report on the findings emanating from controlled studies, sampling the better controlled reports for each subject population.

4.1.1 Psychiatric Inpatients

Several studies using the rigorous controlled within subject design have obtained experimentally and clinically significant effects with both assertive and social skills training. For example, Eisler, Hersen and Miller (1974) using a multiple base-line design demonstrated that assertive training consisting of instructions, role-playing and feedback successfully and rapidly modified specific components of assertive behaviour in two unassertive psychiatric inpatients. In one of the cases this was also associated with substantial clinical improvement.

In an attempt to draw more general conclusions about the effects of training methods, group studies have also been carried out, including several controlled investigations.

Gutride, Goldstein and Hunter (1973) carried out an investigation of Structured Learning Therapy on the social behaviour of long-stay predominantly schizophrenic and asocial patients in a Veterans Administration Hospital. Patients were divided into acute and chronic groups ("acute" was defined as having had less than one year in hospital and no more than two hospitalizations altogether).
Within each group patients were randomly assigned to treatment or no-treatment. 133 patients were originally selected but only 87 completed the trial because of early discharge or drop-out. Treatment was carried out in small group form with two leaders in each group. It comprised the video-taped demonstration of ways of initiating and responding to conversation both in a dyad and a group. Following the tape, the leader pointed out and discussed the important aspects of the social interactions portrayed and attempted to relate the tape to individual difficulties presented by the patients. The interactions were then role-played in the group. The leaders were instructed to dispense social reinforcement whereever appropriate. The group met three times a week for a period of 4 weeks. The patient's response to therapy was assessed on mood rating scales and by means of behavioural observation in both a standardised and natural setting. Patients were observed for a 5-minute period in the waiting room in the presence of an accomplice of the experimenter, ostensibly also a patient (Standardized Setting), and for a ten minute period at mealtimes in the hospital (Natural Setting). Behaviours rated included (a) eye contact, (b) leaning forward, (c) physical contact, (d) smiling, (e) initiates conversation, (f) responds to conversation, (g) talks 10 or more consecutive seconds, (h) seated alone, and (i) seated with others. A semantic differential was also filled in.
Structured Learning Therapy resulted in significant increases in the specific behaviours of forward leaning, smiling, frequency and length of responses to conversation in the standardized 'waiting room' setting. In the 'natural' dining-room setting no significant changes in similar behaviour were demonstrated. However, treatment patients were rated as improved on the Semantic Differential scales of social skills, interaction with others, and social impact on others.

In addition, the researchers studied whether the presence or absence of psychotherapy contributed to the efficacy of Structured Learning Therapy, and found what appeared to be a mutually inhibiting effect of these therapies. Unfortunately, the authors have not defined the nature of the psychotherapy to which they refer. There was no significant treatment effect for psychotherapy alone on their measures, and on some measures patients only improved with S.L.T. if there were not undergoing psychotherapy. The mood scales did not pick up any changes.

Gutride et al (1974) carried out a second investigation in which some of the deficiencies of the first study were corrected. 120 inpatients were randomly assigned to one of five groups: (1) Structured Learning Therapy which was carried out as before over a period of 5 weeks, (2) Structured Learning Therapy plus 2 weeks of more treatment called transfer training, in which patients were seen and given treatment in the hospital dining-room, (3) Structured Learning Therapy for 7 weeks in order to match the additional 2 weeks of treatment in the second group, (4) a companionship control group in which patients were assigned an
individual therapist who spent an equivalent amount of time simply interacting with the patient over the 7 weeks period and (5) a no-treatment control group. Thus, in contrast to the first study they included a control for the attentional effects of a new treatment. Moreover, no substantial loss from the original sample was reported in this experiment. Using a similar form of behavioural observation of the components of social interaction in a standardized and natural setting, Gutride et al reported that Structured Learning Therapy groups proved superior to both the companionship and untreated control groups, thus giving further support to the effectiveness of the training in producing at least short-term changes. The addition of transfer training to the treatment, which would appear to have considerable face validity, failed to produce any significant incremental effects over Structured Learning Therapy alone.

These two studies have demonstrated the clear positive effects of a social skills training approach on samples comprising chronic psychiatric subjects. Unfortunately Gutride did not provide any information on the effects of the training on the general clinical adjustment of the patients. Nor was any follow-up carried out. Thus these two studies alone give no indication of the longer-term clinical effects of training on this population.

Goldsmith (Jean) and McFall (1975) have also reported social skills training to produce positive change in a group of psychiatric inpatients. 36 male inpatients were randomly assigned to three groups: (1) an interpersonal skill training programme, (2) a pseudo-therapy control group, and
(3) a no-treatment control. During the skill training program patients listened to the description of a particular problem situation, and were instructed in the principles of effective behaviour in that situation. They then heard a model make an appropriate competent response to the problem and heard a review of a number of possible responses and their likely consequences. Patients then rehearsed a response into a tape recorder and this was played back to them and evaluated by the experimenter. The sequence was repeated until each patient had met agreed criteria for an effective response on two consecutive occasions. The training as a whole covered 11 pre-selected problem situations in three 1-hour sessions over a period of 5 days. Patients in the pseudo therapy control group received identical treatment except that no training in specific response alternatives was given. Instead they were asked to explore their feelings about each situation and seek insight into the psychological and historical reasons for these feelings.

Treatment was assessed at post-test by means of subjective rating scales, an Interpersonal Situation Inventory covering 55 problem situations (to be rated by the patient on 5 point scales which assessed each probable response in terms of discomfort experienced and competence displayed), and a Behaviour Role-Played test. The latter comprised 25 tape recorded simulated interpersonal situations to which the patients had to role-play a response. Their responses were recorded and rated by independent judges on a 5 point scale ranging from unqualified
acceptance to unqualified refusal. In addition, each patient was required to carry out a general conversation with a male confederate who presented him with 3 problematic interpersonal situations. Finally, eight months after treatment patients in the three groups were compared in terms of their re-admission rates.

Results at post-test revealed that the training programme had been successful. In particular, patients receiving training were rated as significantly more improved on the Behaviour Role-Played Test than either of the two control groups, who had not made any significant gains. Some generalization of training had occurred, as indicated by the training group's significant improvement on role-play items not used in training. A similar result was found on analysing the general conversation assessment. Patients in the training group were perceived as significantly more skilful than both control groups and rated their own performance as more comfortable and competent than the controls. Analysis of the self-report measures also revealed significant treatment effects for the patients in the training group. The re-admission rates at follow-up reflected the positive trends of training results, with patients in the training group having a lower re-admission rate than the patients in the other two groups. However, 28% of the subjects were lost at follow-up and the results just failed to reach statistical significance.

The degree of clinical benefit to patients from social skills training is still unclear, as re-admission rates are only a crude criterion of clinical improvement. Nevertheless,
despite this limitation the excellent experimental design of the study and the positive effects obtained suggest that this sort of training approach has value.

4.1.1.1 Summary

Controlled evaluations of social skills training, or its equivalent, indicate that positive changes in the social behaviour of psychiatric inpatients can be achieved. Despite variations in extent of treatment and methods used, some common successful components emerge.

(a) Most programs use modelling, either by therapist, audiotape or videotape. Studies by Hersen, Eisler and Miller (1973, 1974) have shown that modelling alone or in conjunction with "instructions", was a key factor in producing change in a chronic population.

(b) All training programs involved practice at the skills being taught, usually in the form of role-playing, which proved possible despite the social withdrawal of patients.

(c) Feedback on patients' performance was given by encouragement or audiotaped playback, but no evidence has emerged as to the most appropriate method of providing feedback. Videotape feedback, in use in other areas, has not been included in programs for chronic patients, and further research is needed on these points.
4.1.2 Psychiatric Outpatients

While Wolpe (1958, 1973) and Bloomfield (1973) have reported successful outcomes using assertive training with neurotic outpatients, few experimental investigations of social skills training methods have been carried out on this population.

Argyle, Trower and Bryant (1974, 1976) have carried out several evaluative studies, the latest of which (1976) compared SST with systematic desensitization as modes of treatment using as subjects 20 socially inadequate outpatients. Patients were randomly allocated to one of the two treatment groups and given 10 sessions of individual treatment. The patients were assessed before and immediately after treatment and again 6 months later. SST comprised modelling, role-playing and videotape feedback with homework assignments carried out between sessions as was described earlier in the discussion of Argyle's methods.

Argyle et al's main dependent measures were a Social Skills Rating Scale and a Social Situations Questionnaire. The rating scale was used to assess particular components of social performance (e.g. volume of speech, facial expressions, speech content, etc.), and ratings were made on a videotaped sample of each patient in conversation with a man or woman. The Social Situations Questionnaire comprised a list of 30 everyday social situations and the patients were asked to rate the degree of difficulty they experienced in each situation on a 5 point scale.
Both treatments led to immediate clinical improvement, but SST did not prove superior to systematic desensitization. Neither group demonstrated significant changes on verbal and non-verbal behavioural components of social skills. Subjects who received SST did, however, report decreased feelings of difficulty in social situations. They also reported an increase in social activities. Thus while the study partially supported the clinical and social effectiveness of social skills training, it did not demonstrate that the treatment produced significant behavioural changes. In the absence of a no-treatment or placebo control, it is also difficult to attribute the obtained changes to the effects of social skills training rather than the non-specific effects of treatment itself.

Marzillier, Lambert and Kellett (1976) carried out a similar study. 21 psychiatric outpatients who complained of major social difficulties were randomly assigned to 3 groups: Social skills training, Systematic desensitization and a no-treatment control. SST consisted of modelling by the therapist, role-playing and audiotaped feedback of interactions with which the patients had difficulty. Tasks were assigned between sessions and advice and encouragement given. The Systematic Desensitization treatment followed Wolpe (1958) with patients progressing up a hierarchy of imagined scenes. In addition, this was supplemented by 'in vivo' practice where necessary. Patients in both treatment groups were seen individually by one therapist who carried out all the treatment. They were seen over an average period of 3½ months for a maximum of 15 once-weekly treatment sessions. Patients
in the control group were told that they were on a waiting list and were re-assessed after 3½ months before receiving treatment.

A pre- and post-test battery of measures included social anxiety questionnaires, a social diary in which the range and frequency of patients' social activities and contacts was recorded, general clinical ratings and a behavioural assessment of social competence. The latter consisted of a brief conversation with a female stranger (experimental 'stooge') which was recorded on videotape. Conversational skills, social anxiety and general ability to cope were rated by the subjects themselves, the experimental 'stooge' and by independent judges. A follow-up was carried out 6 months later as follows: subjects in the Systematic Desensitization and SST groups were sent a Social Diary to fill in prospectively for 1 week and return to the experimenters. All assessments were carried out 'blind' by two independent assessors.

A multi-variate analysis of results showed that all three groups improved from pre- to post-test on most measures. Both treatment groups, however, showed significantly greater improvements than the control on the social diary measure. In particular they had increased their range of social activities and contacts as a result of treatment.

At 6 month follow-up only patients in the SST group provided a sufficient number of returns for statistical analysis, and these showed maintained gains.
Marzillier et al (1976) comment on the practical difficulty some patients reported in transferring the skills learned in therapy to social situations in real life. In addition, it is difficult to attribute the positive effect on the patients' social lives to the specific effects of either treatment, given the small number in each group, the absence of an attention-placebo group and the confounding of therapist and treatment effects by the use of one therapist to carry out all the treatment.

4.1.2.1 Summary

The paucity of studies assessing social skills training or its equivalent on psychiatric outpatients may reflect the major difficulty experienced by Marzillier et al (1976) in ensuring that the skills learned in therapy transfer to social situations outside therapy. Marzillier points out that in an inpatient hospital setting there is closer affinity between the therapy sessions and the patients' social lives. Treatment is generally more frequent and the people with whom the patients interact can be brought into therapeutic sessions. All in all, the therapists are much more in touch with the patients' lives in general. With outpatients the therapist has at best a poor contact with events outside treatment. He is generally unable to program these events so that they reflect material covered in training. Moreover, he relies exclusively on the patient as a source of information about his social progress, and the patient may misperceive or misunderstand the significance of social events.
No conclusions may be drawn confidently until further studies of training are carried out on outpatient populations, but it does appear that task assignment alone is insufficient to ensure generalization of skills from therapy to real life.

4.1.3 Volunteer Subjects

Most of the studies with this population have been carried out on American college students, and are of importance largely in elucidating the most effective components of the social skills training treatment.

Richard McFall and associates have conducted several carefully designed experimental studies. Treatment was brief varying from 2 to 4 sessions. Their major dependent measure was the behavioural role-played test of assertiveness in which subjects were required to respond to several tape-recorded situations that demanded assertive refusals. These responses were recorded and rated by independent judges on a 5 point scale ranging from unqualified acceptance (non-assertiveness) to unqualified refusal (assertiveness). Other post-test measures included:

(a) An Assertiveness rating-scale.

(b) A Conflict Resolution Inventory: this comprised 43 situations. Subjects rated whether they would refuse and whether they would feel uncomfortable in each specific situation.

(c) A follow-up measure which was an attempt to introduce a real-life social skills situation. This consisted of an unreasonable request by telephone, made between 3 days and 1 months after treatment. Subject responses
were recorded and analysed for degree of refusal, but there was some difficulty with this measure since some subjects regarded the request as reasonable.

The McFall Studies (McFall and Marston, 1970; McFall and Lilesand, 1971; McFall and Twentyman, 1973) demonstrated that while rehearsal (both covert and overt) and coaching were highly significant factors in subject improvement, modelling (including several types and mode of presentation) added nothing to the treatment program. This is in notable contrast to the findings of Eisler et al (1973) with psychiatric patients. McFall and Twentyman (1973) suggest that this may reflect the role of modelling in establishing novel responses. Modelling may well be necessary with a psychiatric population who are deficient in basic social skills, but not with students who already possess a basic repertoire of skills.

A study by Hedquist and Weinhold (1970) illustrates the importance of adequate follow-up assessment. Student teachers who rated themselves as highly anxious and unassertive on two inventories were randomly assigned to one of 3 groups: a Behaviour Rehearsal or Social Learning treatment, or control.

(a) Behaviour Rehearsal comprised role-playing of difficult interpersonal situations, with the counsellor modelling appropriate assertive behaviour and providing feedback and encouragement. Subjects were also assigned tasks to carry out outside therapy.
(b) **Social Learning** consisted of subjects committing themselves to rules of successful social behaviour, which the counsellor modelled and subjects attempted to imitate.

(c) **Control** - met for discussions.

Response to the treatments was assessed in terms of number of assertive responses reported by subjects in a weekly diary of interpersonal events. Both treatments showed marked improvements in assertive behaviour at the end of 5 weeks of therapy, but on a one week follow-up after the experimental treatment, neither treatment group was significantly different from the control. Hedquist and Weinhold note: "The treatment effects appeared to be maintained only as long as treatment continued". Given the tendency of subjects to return to baseline demonstrated in this study, adequate follow-up measures would appear to be a serious lack in other studies.

Young, Rimm and Kennedy (1973) assessed the additional contribution of social reinforcement to a brief assertive training programme for female college students. Assertive training in this experiment comprised modelling of an appropriately assertive response to a selected situation by the experimenter with the subject being encouraged to imitate experimenter's behaviour. Social reinforcement consisted of the experimenter saying 'good' or 'well done' after an appropriately assertive response. Social reinforcement was not found to result in significantly more assertive behaviour than modelling alone. This result
is contrary to expectation, since clinical applications of assertive training usually incorporate a substantial social reinforcement element by the therapist (e.g. Wolpe, 1970).

The effectiveness of social reinforcement as a behaviour change technique has been amply demonstrated in the laboratory (see Kanfer and Phillips, 1970). Krasner, (1962) has called the therapist a "social reinforcement machine", and it is assumed that social skills training programs incorporate this technique in shaping up desirable behaviour. Only a few studies, however, refer to it explicitly as a treatment component (e.g. Gutride, et al., 1973).

The study by Young et al (above), on the specific contribution of social reinforcement to social skills training, is inconclusive, however. The degree of unassertiveness of the study population was not clearly established, and social reinforcement procedures may well be clinically important only where assertive responses are markedly deficient, as in a psychiatric population.

Rimm, Hill, Brown and Stuart (1974) applied a group assertive training program to students who reported difficulty in controlling their tempers. Subjects receiving assertive training were rated as significantly more assertive, less 'uptight' and less angry on a behavioural test, than those receiving a non-directive verbal therapy, but no differences between groups were evident on an assertiveness inventory. The effectiveness of assertive training for inappropriately aggressive subjects thus remains unclear as yet.
Kazdin (1974), using the assessment methodology developed by McFall and Lillesand (1971), has studied the effects of entirely imaginal treatment on the behaviour of unassertive volunteers. He demonstrated that a treatment procedure in which the subjects imagine an assertive model can produce significant changes in assertive behaviour. His study also suggests that a treatment in which subjects imagine a model receiving favourable consequences for assertiveness is more effective than treatment in which subjects imagine a model alone.

Kazdin also reported that changes on an assertive behavioural test were not significantly correlated with changes in self rated assertiveness. This is consistent with the findings of Rimm et al (above) and points to the need for studies on social skills training to include behavioural as well as questionnaire assessments. Kazdin's study also failed to demonstrate that the increased assertiveness which resulted from imaginal treatment (a) generalized to situations outside the laboratory; or (b) lasted appreciably.

Thorpe (1975) carried out a carefully controlled study with unassertive college students comparing assertive training, systematic desensitization, self-instructional training (a treatment loosely based on Ellis's Rational-Emotive Therapy) (Ellis, 1973). Treatment lasted 6 weeks and was assessed on a battery of self-report measures, a Behavioural Test and telephone follow-up (after McFall and Marston, 1970). Post-test results show greater improvement on self-report
measures for the assertive and self-instructional groups. Significant treatment effects were found for all treatment groups on the Behaviour Test, role-plays which had been used as training situations in the treatment program. On other 'Generalization' (novel) role-plays, all groups including the control group showed improvement. No significant treatment effects were demonstrated on the telephone follow-up measure.

Once again these results reiterate the general finding of lack of generalization of treatment gains to 'real-life' situations. The results of self-instructional training are particularly interesting, however. Taken together with Kazdin's evidence of the effectiveness of covert procedures, they indicate that cognitive rehearsal of productive cognitions may be an important adjunct to methods of social skills training.

4.1.3.1 Summary

The experimental studies on college students demonstrate that defining the active components of social skills training or its equivalent is a complex matter. There is likely to be an interaction between treatment and the degree of social deficits in the population treated. Modelling, for example, may only be necessary where subjects are clearly deficient in social skills, i.e. where socially skilled behaviour is novel rather than just inhibited by other factors such as timidity. Experiments also suggest that subjects' cognitions may be important in producing changes in socially skilled behaviour. In addition, clarification
of the role of social reinforcement is required. The most important finding, however, would appear to be the lack of evidence that SST as currently practised generalizes to real-life encounters, and that treatment changes are stable over time. This issue may be confounded, however, by poor follow-up measures.

4.1.4. CONCLUSIONS

1. Experimental studies on both psychiatric and volunteer subjects have demonstrated that social skills training can produce positive changes in social behaviour, at least in the short term. In the better designed studies it has been shown that this is not due to chance factors or the non-specific effects of receiving treatment.

2. Clinical studies of training on psychiatric patients indicate a more favourable outcome for inpatients than for outpatients. This may be due to practical difficulties in carrying out the treatment with outpatients.

3. The research has failed to demonstrate long term beneficial changes from training. Generalisation from the experimental setting to social behaviour in real life is also questionable. These limitations may be partly due to inadequate follow-up assessments.

4. Modelling, role-playing, instructions and various types of feedback are the basic components of most training programs. This reflects application of what is known about skills acquisition in general.
Social reinforcement is another, largely implicit, component, and where specified is justified on the grounds of research into human learning principles.

5. The degree to which each component of a training programme is important has not been clearly established. Most investigations have looked at modelling. Modelling has not been found necessary for subjects possessing a basic repertoire of social skills. For psychiatric patients, however, who are severely deficient in such skills, the evidence suggests modelling may well be useful.

There is a clear need for more empirical data on social skills training. It is essential to establish reliably whether generalization of training gains can be achieved, particularly with outpatients; this might be achieved by direct training in real life settings, or, as suggested by Marzillier et al (1976), involvement of the patient's social contacts in treatment.

The longer term effects of training also need further attention, by means of a thorough investigation of the effects of training on the patients' social lives rather than a telephone call or questionnaire. As various researchers point out, it is also important to establish more clearly the importance of different components of training, more particularly the effects of different types of modelling and feedback. The use of videotape, for example, would appear to have face validity in providing feedback on non-verbal social skills, but its effectiveness is yet to be established experimentally.
5.1 DESIGN AND METHOD

5.1.1. Design

This study used a test-retest design as follows: Subjects were first divided according to sex (male or female) and patient category (inpatient-outpatient), then randomly assigned to either an experimental treatment group or a non-treatment waiting-list control group. All subjects were tested at Week 0 and re-tested at Week 9. For treatment group subjects only, monitoring was also carried out during the treatment period, and two follow-up assessments were made. The first follow-up measure was taken three weeks after the treatment period ended, and a further follow-up measure was made six months after the end of treatment.

5.1.2 Subjects

The initial subject pool for this investigation consisted of ten in-patients and sixteen outpatients of a public psychiatric hospital. Inclusion in this pool was determined as follows:

In each case a screening procedure was conducted jointly by the psychiatrist to which a particular patient was assigned, and an independent clinical psychologist. The criterion for inclusion in the sample was agreement by the screening panel that the patient consistently displayed social interaction difficulties or deficiencies.

Fifteen of the patients thus selected were unwilling or unable to carry out the pre-testing requirements. The remaining eleven subjects were divided into a treatment
group (n=6) and a control (n=5). One of the experimental subjects and two of the control subjects dropped out before post-testing, leaving a final n of 8.

5.1.2.1 Description of Subjects: Central deficits

Table 1 shows subject characteristics at the time of referral. The final sample comprised a mixed group of psychiatric inpatients and outpatients, with subjects in the treatment and control groups showing a similar range of characteristics on most baseline measures (Tables 1 and 2). The exceptions were as follows:

(a) The treatment group comprised largely females (four out of five subjects) whereas the control group contained all males.

(b) There were three outpatients and two inpatients in the treatment group, as opposed to exclusively outpatient control subjects.

(c) Two out of five treatment subjects were/had been in marital relationships, whereas all the control subjects were single.

(d) Raw score means at Week 0 (Table 2) indicate the control group to be different on several measures, but these differences are in each instance largely due to the influence of only one subject score, and are not indicative of a trend.

The following descriptions of individual subjects were provided by the screening personnel as justification for referral to the SST program. They give an indication of each subject's central deficits and any treatment current at the time of referral.
<table>
<thead>
<tr>
<th>Group</th>
<th>Subjects</th>
<th>Sex</th>
<th>Age</th>
<th>Marital Status</th>
<th>Education</th>
<th>Employment</th>
<th>Inpatient or Outpatient</th>
<th>Length of contact with Mental Health Services</th>
<th>Psychiatric Diagnosis</th>
<th>Psychiatric Hospital Admissions</th>
<th>Past treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>F</td>
<td>34</td>
<td>M</td>
<td>B.A.</td>
<td>Home Duties</td>
<td>O.P.</td>
<td>2 years</td>
<td>0</td>
<td>Neurotic disorder</td>
<td>Medication</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>F</td>
<td>19</td>
<td>S</td>
<td>Year II High Sc.</td>
<td>Enrolled Nurses Course</td>
<td>I.P.</td>
<td>1 year</td>
<td>5</td>
<td>Hysterical Personality</td>
<td>Medication, Psychotherapy</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>F</td>
<td>20</td>
<td>S</td>
<td>Year II High Sc.</td>
<td>Enrolled Nurse</td>
<td>I.P.</td>
<td>1 year</td>
<td>5</td>
<td>Paranoid Schizophrenic</td>
<td>Medication, ECT, Psychotherapy</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>F</td>
<td>32</td>
<td>S, Separated</td>
<td>Year 9 High Sc.</td>
<td>Factory Worker</td>
<td>O.P.</td>
<td>1½ years</td>
<td>4</td>
<td>Reactive Depression</td>
<td>Medication, ECT</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>M</td>
<td>26</td>
<td>S</td>
<td>B.Sc.</td>
<td>Factory Worker</td>
<td>O.P.</td>
<td>3 years</td>
<td>1</td>
<td>Schizoaffective disorder</td>
<td>Medication, Psychotherapy</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>M</td>
<td>30</td>
<td>S</td>
<td>Year 8 High Sc.</td>
<td>Copy Reader</td>
<td>O.P.</td>
<td>1 year</td>
<td>1</td>
<td>Paranoid schizophrenia</td>
<td>Psychotherapy</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>M</td>
<td>25</td>
<td>S</td>
<td>B.Sc.</td>
<td>Lecturer C.A.E.</td>
<td>O.P.</td>
<td>8 months</td>
<td>0</td>
<td>Neurotic disorder</td>
<td>Medication</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>M</td>
<td>30</td>
<td>S</td>
<td>M.Sc.</td>
<td>Factory Worker</td>
<td>O.P.</td>
<td>4 years</td>
<td>5</td>
<td>Schizoaffective disorder</td>
<td>Medication, Psychotherapy</td>
</tr>
</tbody>
</table>
### TABLE 2: Raw scores on systematic measures at Week 0 for all Ss.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Behavioural Ratings</th>
<th>Subjective Difficulty</th>
<th>Social Anxiety</th>
<th>Assertiveness Questionnaire</th>
<th>1-E scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>173</td>
<td>3</td>
<td>102</td>
<td>70</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>155</td>
<td>10</td>
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<td>195</td>
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<td>118</td>
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<td>5</td>
<td>141</td>
<td>6</td>
<td>154</td>
<td>39</td>
<td>8</td>
</tr>
<tr>
<td>mean score</td>
<td>146.1</td>
<td>7.8</td>
<td>150.4</td>
<td>42.4</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subject</th>
<th>Behavioural Ratings</th>
<th>Subjective Difficulty</th>
<th>Social Anxiety</th>
<th>Assertiveness Questionnaire</th>
<th>1-E scale</th>
</tr>
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<tr>
<td>1</td>
<td>151</td>
<td>9</td>
<td>222</td>
<td>40</td>
<td>9</td>
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<tr>
<td>2</td>
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<td>144</td>
<td>7</td>
<td>166</td>
<td>49</td>
<td>13</td>
</tr>
<tr>
<td>mean score</td>
<td>156.6</td>
<td>8</td>
<td>182.3</td>
<td>51.6</td>
<td>12.6</td>
</tr>
</tbody>
</table>
a) **Treatment group subjects**

\[ S_1^F \]: This subject's central problem was seen as marked indecisiveness and lack of initiative in interpersonal relationships, particularly her family. When required to make decisions about such matters as outings, rules for the children or how she should behave towards her husband, she became depressed and withdrawn and required others to make such decisions for her. She was highly ambivalent towards her husband and could not decide whether to leave him or not. Previous medication and psychotherapy had failed to improve matters.

**Other treatment at week 0**: none.

\[ S_2^F \]: For this subject central deficits prompting referral comprised vacillation between extremely passive behaviour and aggressive outbursts involving attacks on herself and others. She was generally unable to express her feelings or stand up for her rights, and in response to a build-up of frustration tended to lash out physically at others or was destructive towards herself (wrist-slashing and drug-overdosing). Previous medication and psychotherapy had produced no change in her behaviour.

**Other treatment at week 0**: medication, stable for 3 weeks.

\[ S_3^F \]: The central deficits of this subject comprised extreme social withdrawal (was housebound when not an inpatient) and high anxiety associated with interaction with others. She exhibited large across-the-board deficits in social skills, including flat affect, a lack
of conversational skills and general inability to express her feelings, and inappropriate staring behaviour. Previous courses of medication, ECT and psychotherapy had no noticeable effect on these problems.

Other treatment at Week 0: medication, stable for 4 weeks.

\( S^P_4 \): This subject was seen as globally deficient in social skills, with an I.Q. score at the borderline of retardation level. The central deficits were identified as lack of conversational skills, and an inability to express her feelings or to assert her rights, particularly in the face of either disapproval or opposition. Her perception of these deficits in relating to others was associated with withdrawal and depression. She had not responded well to previous courses of medication, except that frequent bouts of weeping had ceased.

Other treatment at Week 0: Medication, stable for 3 weeks.

\( S^M_5 \): This subject exhibited marked avoidance of social contacts and situations. He lacked any confidence in his social ability, and was able to make only minimal conversation. Other major deficits comprised flat affect, very limited eye contact, and constant jerking body movements. Previous medication and psychotherapy had not produced any change in this behaviour.

Other treatment at Week 0: Medication, stable for 5 weeks.
b) Control Group Subjects

$S_1^M$: This subject was regarded as globally deficient in social skills. Central deficits noted were extremely passive behaviour, avoidance of strangers and females in particular, plus stammering and shaking in the hands when in social situations. A poor self-concept was associated with subject's perception that he failed the extremely rigid standards of behaviour he set himself, e.g. to avoid upsetting others at all cost. Previous courses of medication and psychotherapy had produced no noticeable change in his behaviour.

Other treatment at Week 0: Medication, stable for 5 weeks.

$S_2^M$: Central deficits for this subject were very passive behaviour and avoidance of social situations. In particular, he found it impossible to refuse any requests made of him and was unable to express any negative feelings. His speech was hesitant and he expressed anxiety about his social competence. Previous medication had failed to change this behaviour.

Other treatment at Week 0: none.

$S_3^M$: For this subject the major social deficiencies were very flat affect and withdrawal from social situations where more than one person was present. He lacked conversational skills, and his speech was interspersed with very long silences. In addition, he was afraid to live anywhere other than the parental home for fear of loneliness. Previous medication and psychotherapy had not achieved a change in
this behaviour.

Other treatment at Week 0: Medication, stable for 3 weeks.

5.1.3 Instrumentation

Following the initial screening and acceptance into the program, all subjects were given a pre-test assessment. This comprised a battery of 5 self-report questionnaires and a behavioural role-played test.

The questionnaires included measures of social anxiety, social skills, locus of control, success in personal relationships, and difficulty experienced during the behavioural role-plays. The behavioural role-played tests measured both verbal and non-verbal behaviour in standardized social interactions.

This battery of measures was administered again immediately after the 8-week study period, in conjunction with obtaining a clinical report on all subjects' progress.

Three weeks following the SST program—a report was obtained from a close contact of each subject, commenting on the subject's behaviour over the previous 11 weeks. For treatment group subjects only, several extra measures were obtained as follows:

1) Ongoing Monitoring.

(a) During the course of SST subjects were measured on several indices of 'Involvement'.

(b) During the last session of SST treatment subjects were assessed on in-vivo task performance.
2) Further Follow-up.

Six months after the course of SST ended, patient files were investigated to provide information on admission rates and other treatment during that period. Anecdotal evidence on treatment subjects' progress was also obtained. This information was not gathered for control group subjects as they had been referred to another psychiatric hospital for social skills training.

The measures used in this study are described further in the remainder of this section. For each measure, the information provided comprises a rationale for inclusion, and a summary of the content and procedures involved. More specific details are contained in the Appendices.

5.1.3.1. Systematic Measures

5.1.3.1.1. Behavioural Role-Play Test

A rationale for inclusion of the Behavioural role-play test follows below.

Paper and pencil self-report measures of social skills basically measure socially skilled or assertive attitudes. The validity testing of such measures has been on a test-retest basis using the same test (and subjects) or validation against another paper and pencil test measuring the same dependent variable. The problem is that they have not been validated against a measure of the behaviours themselves. Kazdin (1974) reported that changes on an assertive behavioural test were not significantly correlated with changes in self-rated assertiveness. Consequently, standardised role-playing situations are useful in providing a measure of socially skilled behaviour per se, as opposed to attitudes. Various isolates of para-linguistic behaviour, speech content and matrix behaviour have been substantiated as discriminative variables.
The non-verbal communication behaviours that have been isolated as discriminative variables are facial expression (Laws and Serber, 1971; Serber, 1972), body movement and head orientation (Laws and Serber, 1971), eye contact (Serber, 1972), duration of looking and frequency of smiles (Eisler, Miller, Hersen and Alford, 1974) and proxemics (Booraem and Flowers, 1972). However the same and other behavioural isolates have not always proved to be discriminative variables - duration of looking (Eisler, Miller and Hersen, 1973; Eisler, Hersen and Miller, 1973) and frequency of smiling (Eisler, Miller and Hersen, 1973).

The non-content speech characteristics that have been isolated as discriminative variables are - duration of speech or number of words (Rhem and Marston, 1968; Eisler, Miller and Hersen, 1973; Eisler, Hersen and Miller, 1973; Eisler Miller, Hersen and Alford, 1974), response latency (Eisler, Miller and Hersen, 1973; Eisler, Hersen and Miller, 1973), loudness of speech (Eisler, Miller and Hersen, 1973), speech fluency (Serber, 1972; Laws and Serber, 1971) and affect as judged by voice tone (Eisler, Miller and Hersen, 1973; Eisler, Hersen and Miller, 1973). However some of these behavioural isolates have not been substantiated as discriminative variables. These include response latency (Rhem and Marston, 1968; McFall and Lillesand, 1971; Eisler, Hersen and Miller, 1973), speech fluency (Eisler, Miller and Hersen, 1973; Rhem and Marston, 1968) and duration of speech and number of words (McFall and Lillesand, 1971). It must be noted, though, that contradictory findings are not surprising since the reviewed literature is not investigating a homogeneous response class of socially
skilled behaviour. It is probable that a combination of the reviewed isolates are components of each social skills response class, although not necessarily all at one time.

One factor which makes it difficult to interpret the results of previous research is the variety of behavioural tests implemented. These have ranged from a wide variety of videotaped interpersonal encounters assessed on thirteen different behavioural components with 5-point rating scales (Eisler, et al., 1975) to a single situation encounter rated on two global characteristics (Marzillier et al., 1976).

The role-playing situations selected for the present study met the following criteria:

(1) They covered a range of situations designed to elicit the major categories of socially skilled behaviour.

(2) They included situations in which the subject sample showed deficient social skills.

The Behavioural isolates measured were selected on the following basis:

(1) They covered a range of para-linguistic, speech content and motoric behaviour which are characteristic of task-oriented motor behaviour.

(2) They included behavioural isolates which presented as main deficits in the subject sample.

The rating scales were chosen to reflect the goals of the SST program. Subjects in the role-playing test were therefore rated on appropriateness of behaviour for success in a particular interaction.
5.1.3.1.1. Role-play situations

The behaviour test utilized standardized role-play situations which simulated real-life encounters. The majority of the role-played scenes were adapted from previous research (Eisler, Miller and Hersen, 1973, 1975) and required subjects to respond to a stimulus statement. These situations had been found to typically elicit both positive (commendatory) and negative Confrontive responses. The experimenter constructed several different scenes which required the subjects to initiate interaction ("initiatory behaviour").

Eight role-playing situations were presented at initial testing. These were designed to measure the following social skills:

1. Acceptance and expression of praise and appreciation (2 role-play scenes).
2. Refusal of unreasonable requests (2 role-play scenes).
3. Dealing with personal criticism (2 role-play scenes).
4. Initiating conversation (2 role-play scenes).

At post-testing subjects were presented with parallel rather than identical role-playing scenes, in order to provide a measure of generalization of skills gained in training. Equivalence of pre-test and post-test role-play scenes was judged by agreement of six clinical psychologists familiar with social skills training methods.

5.1.3.1.1.2. Stooges

The role-plays were conducted with the assistance of several stooges, who acted as interpersonal partners. At both pre-test and post-test, a female stooge was used in
half the role-plays, and a male stooge in the other half. This practice was intended to cancel out any effect which sex of interpersonal partner may have had on subject performance. A female psychologist and a male psychologist role-played all interactions at pre-testing. Different psychologists role-played the post-test scenes.

Each of these stooges was trained to deliver a pre-determined prompt (verbal or non-verbal) to the subject being tested, following introduction of each scene by the experimenter.

5.1.3.1.3. Videotape Ratings

The behavioural role-play test was videotaped. Ratings of subject responses were then made independently by two judges who observed the videotape replays.

Similar ratings of interactive behaviours from videotape have been shown to be highly reliable and equivalent to rating from live observation (Eisler, Hersen and Agnas, 1973).

1. Raters

The two raters were both clinical psychologists with limited experience in SST, but who had no previous experience in rating social behaviours on the scales used in this study. The judges received a scoring manual and were provided with one or two examples of each scoring category. Although essentially untrained, similar judges have been shown to achieve satisfactory agreement on ratings in previous studies. For example, McFall and Lillesand (1971) achieved inter-rater correlation equal to .95 with naive judges.
In the present study inter-rater agreement was checked as follows: one judge carried out ratings for all subjects, whilst the other judge completed ratings for only half the number of subjects (4). On the ratings for which two judgements were obtained raters agreed 78% of the time. Subject results were calculated from the ratings of the first judge, who rated the total subject sample.

2. Behavioural Ratings

Components of social interactive behaviour were broadly categorized in terms of verbal behaviour and non-verbal behaviour. Behaviours rated were:

Verbal Behaviours: (1) Latency of response.
(2) Volume of speech.
(3) Affect of speech.
(4) Fluency.
(5) Assertive content.

Non-verbal Behaviours: (1) Eye contact.
(2) Movement (Face and body).

Scoring

All behaviours were rated on a 5-point scale of appropriateness, ranging from 0 (very poor) to 4 (very good). These judgements were linked to behavioural correlates for each parameter.

The subject's total score on the behavioural role-played test was obtained by summing the scores for each behaviour category across all role-played situations.
5.1.3.1.2. **Subjective Difficulty Scale**

Self-perception of lack of social skills relevant to a particular situation (subjective difficulty) has been isolated as a discriminative variable in social behaviour which can be improved by social skills training (Argyle, Trower and Bryant, 1974). Self-ratings of degree of subjective difficulty experienced in role-plays was regarded as the most direct way of measuring this variable.

In the present study, subjects rated the ease or difficulty they experienced in each situation of the behavioural role-play test. Ratings were made on a 5 point scale ranging from "not difficult at all" (score = 0) to "extremely difficult" (score = 4) immediately after each role-play.

5.1.3.1.3. **Social Anxiety Scale**

Anxiety in and about social situations has often been reported as a feature of people who present for SST (e.g. Booraem and Flowers, 1972; Galassi and Galassi, 1976; Marzillier, Lambert and Kellett, 1976). Various explanations have been offered for the presence of such anxiety, including past punishment and anticipation of failure (unfortunate learning history), interfering cognitions or awareness of behavioural deficits, but whatever the cause, anxiety is seen as interfering with or preventing socially skilled behaviour (Whiteley and Flowers, 1978). SST, whether it functions by desensitization, flooding, re-conditioning or new skills learning, has been hypothesized
to reduce social anxiety (e.g. Galassi and Galassi, 1976). However, the problem with interpreting anxiety measures is that merely exposing the clients to the behavioural pre-test may reduce their anxiety reactions at post-testing, and a review of the literature in this area indicates that thus far anxiety measures have not proved sensitive to anxiety reductions that may be occurring (Lacks and Jakubowski, 1975). In the present study, therefore, a standardized anxiety scale was modified in an attempt to produce a more sensitive measure.

The social anxiety scale used was a modified version of a test devised and standardized by Watson and Friend (1969). It comprises two subscales: Fear of Negative Evaluation (F.N.E.) and Social Avoidance and Distress (S.A.D.).

The F.N.E. scale measures the extent of fear of receiving negative evaluations from others. The S.A.D. scale assesses the experience of distress and fear in social situations, and the extent of deliberate avoidance of social situations.

Test-retest reliability for both subscales is satisfactory. For a sample of University students (U.S.A.) a test-retest correlation of .78 is reported for the F.N.E. scale, and .69 for the S.A.D. scale. Both scales correlate negatively with social-desirability ($r = -.25$). However, the scales have been found to correlate to an extent which indicates a failure to measure independent dimensions ($r = 0.51$).

The modifications made in the present study were as follows:
(a) In view of the degree of common variance between the scales the scales it was decided to look at overall test scores only, rather than at subscale scores separately.

(b) Response categories were widened to achieve greater sensitivity to any changes which might occur in social anxiety from pre-test to post-test. Thus True/False categories were altered to a 5 point rating scale, ranging from 0 ("practically always or entirely") to 4 ("No or never").

5.1.3.1.4 The Social Skills Questionnaire

The most frequent procedure used to evaluate therapeutic gains in social skills training and assertiveness training has been the assessment of attitudes by means of paper and pencil self-report tests. Various tests have been devised for this purpose, but few test-retest reliability measures or standardized procedures for investigating the validity of these tests have been undertaken (Horsell, 1977).

The present study utilized a scale designed by Alberti and Emmons (1970) in order to assess individual perception of social skillfulness.

No reliability or validity data are available for the scale, but the authors and clinical colleagues have found that high and low socially skilled clients differed notably in their responses to the questionnaire, and that changes on the test occur as a function of SST.

The original 35-item scale has been reduced to 29 by omitting 6 items considered to be ambiguous (see Appendix). Each item is rated on a 5 point scale ranging from 0 ("practically always or entirely") to 4 ("No or never").
5.1.3.1.5. The I-E Scale

This test was developed by Rotter (1954, 1966). The scale was designed to measure to what extent an individual perceives that reinforcement and reward follows from, or is contingent upon, his own behaviour or attributes, versus the degree to which he feels that reward is controlled by forces outside of himself and may occur independently of his own actions. These attitudes are respectively labelled a belief in internal control versus a belief in external control.

The test-retest reliability of the 29-item scale is consistent and satisfactory, ranging from 0.49 to 0.83 for varying samples and intervening time periods (Rotter, 1966; Hersch and Scheibe, 1967). Norms for samples of psychiatric patients, however, have not been established.

Correlations with such test variables as adjustment, social desirability or need for approval and intelligence, are low for a variety of samples (.03 to .41), indicating discriminant validity is acceptable (Rotter, 1966; Hersch and Scheibe, 1967).

The I-E scale is a 29-item, forced-choice test which includes 6 filler items intended to make the purpose of the test somewhat more ambiguous. The 23 test items consist of two statements about the nature of the world, or more specifically, how reinforcement is controlled. The score is the total number of external choices.
The ultimate goal of SST is to increase performance competence in social/life situations (Goldsmith and McFall, 1975). Various measures have been used in previous investigations in attempting to assess the degree of generalization of skills from the training situation to real-life. One such measure has been a social diary, in which social skills trainees were asked to keep a record of their social behaviour outside the SST program, with a view to assessing behavioural changes in relating (Fensterheim, 1972; Shoemaker and Paulson, 1973).

Previous experience by clinical colleagues, however, had shown the response rate in completing social diary entries to be very poor in settings similar to that of the present study. It was therefore considered appropriate to devise another measure aimed at providing similar information.

Consequently subjects were asked to complete an information sheet about personal relationships outside the group at both pre-test and post-test. This consisted of six items selected on the basis of face validity; 3 items pertained to the number and closeness of friendships, while the other 3 items referred to the kind of relationship an individual had with his/her family. Scoring consisted of noting Improvement/No improvement on each item.
5.1.3.2. **Additional Unsystematic Measures**

In order to provide a comprehensive view of the outcome of the SST program, further information was needed in addition to that provided by the systematic measures.

The measures used are outlined below and are regarded as providing indications of qualitative change in different areas of subject behaviour. The information gathered by such measures is recognized as not being on any systematic rating scales, and therefore does not provide quantitative data.

5.1.3.2.1. **Clinical opinion**

Social skills training (including assertiveness training) has often been assessed by global clinical impressions (e.g. Lazarus, 1966; Rimm, 1967; Bloomfield, 1973; Argyle, Trower and Bryant, 1974). This technique, despite its unsystematic, purely descriptive nature, has provided additional information on the successes and limitations of SST with psychiatric patients (Whiteley and Flowers, 1978). Various studies have indicated that SST produces general clinical improvement in terms of both symptoms and social behaviour (e.g. Argyle, Trower and Bryant, 1976; Marzillier, Lambert and Kellett, 1976) although it is not clear whether such improvement could be attributed to non-specific treatment effects.

Nevertheless, since clinical change can be seen as a dependent variable of SST, it was considered useful to incorporate a measure of clinical adjustment in the present study.
Consequently, following the 8-week experimental period, supervising therapists who had referred clients to the social skills program were asked to write a report on the clinical status of their respective clients. Reports were obtained for both treatment and control group subjects, asking for comments on any changes in symptoms or social behaviour which might have occurred over the previous 8 weeks. Therapists were blind as to whether a client was a treatment or control subject.

5.1.3.2.2. Close Contact Opinion

This measure was included as a further attempt to assess the degree of generalization of training skills to everyday life. It was regarded as an adjunct to the Personal Relationships Information Sheet, and was contrived to provide a more objective view of subject behaviour outside the training setting. Such additional measures are seen as important, since there remains enough artificiality in the role-playing assessment procedure to cause question of the validity of the procedure for measuring what behaviour would be like in real life situations.

In assessment of generalization of skills there has also been some limited use of the contrived situation where a confederate of the therapist would try to persuade the client to do something (e.g. buy magazines, volunteer time) or deprive the client of a promised reward (McFall and Lillesand, 1971; McFall and Marston, 1970; Hersen et al, 1974). Whilst such approaches have the advantage of being direct measures, they can sample only a small area
of subject behaviour and may yield an unrepresentative result. In addition, there is the ethical problem that such measures involve deception of clients.

An alternative measure that has been utilized is questioning of individuals who are important in the client's environment as to any change observed (Wolpe, 1958; Alberti and Emmons, 1970; Argyle, Trower and Bryant, 1974). This alternative was chosen in the present study.

Clients were asked to nominate one or more persons who could be contacted to comment on whether or not any changes were noticeable in their behaviour both during and following the training program or waiting list period. Persons nominated were to have had frequent contact with the client during the time specified. Of the persons nominated by each client, one was randomly chosen. Three weeks after the 8-week experimental period, a letter was sent to each selected contact indicating the client's approval that they be contacted and requesting comments as outlined above. Contacts were asked first to comment on the client's behaviour in reference to the 8-week period of training or waiting, and secondly on the 3-week period following that. The purpose of the latter was to indicate whether any gains in behavioural skills were maintained after training ceased. The 3-week follow-up period was chosen in view of research findings that on a 2-week follow-up level of social skills in social skills trainees had declined to the pre-test baseline, i.e. the treatment effects appeared to be maintained only as long as treatment continued (Hedquist and Weinhold, 1970).
5.1.3.2.3. **6-month follow-up**

Maintenance of social skills after training is an ultimate goal of social skills training, in conjunction with generalization of skills. Six months has often been regarded in the literature as a sufficiently substantial period for assessment of long-term social skills maintenance (Marzillier, Lambert and Kellett, 1976) and this time period was subsequently chosen for follow-up in the present study.

Follow-up information was obtained for treatment subjects only, as control subjects had been referred to another hospital for SST after the 11-week close-contact report was obtained.

The planned follow-up procedure included a request for a second report by close contacts of subjects, and an investigation of subjects' record of contact with Mental Health services post-SST (via patient files).

However, a very poor response rate (1) was obtained for the second close contact report, and there were difficulties such as contacts no longer having much interaction with the subject concerned. An alternative follow-up procedure was chosen, consisting of gathering anecdotal evidence from various sources.

5.1.3.2.4. **Intra-training Measures**

1. **In-vivo task assessment**

   In-vivo training was carried out in order to facilitate transfer of skills from the laboratory to real-life events.
During session 8 of the SST program treatment subjects performed social interaction tasks in a real-life setting. Subjects had been previously trained in these tasks in the laboratory setting. The tasks used are outlined in Appendix H. Selection and allotment of tasks was carried out with a view to testing central deficits for each subject.

In order to obtain some measure of the skills demonstrated in this setting, subjects were assessed by an assistant (clinical psychologist) on each task. The parameters used were:

1. No prompting required.
2. Attempted task.
3. Fluent speech.
4. Appropriate eye contact.
5. Assertive content.

Subjects scored 1 or 0 on each parameter. The degree of success achieved on the in-vivo tasks was regarded as a limited measure of transfer or generalization of skills to real-life settings.

2. Involvement Indices

A rationale for this measure was outlined in an earlier discussion (section 3.1), where 'involvement' was defined as the degree to which subjects actively participated and were attentive in the SST sessions. The relevant indices selected included talking and role-play behaviour (both measures of participation) plus any Looking Away from the training events (a measure of non-attending).
Scoring was conducted by two independent raters over 6 sessions (sessions 2-7). A time-sampling method was used, with each subject being rated for an average of 7 one minute intervals per 2½ hour session.

a) talking:- 1 point was allotted for each word/group of words uttered between interruptions by other group members/therapists.

b) role-play:- 1 point was allotted for each role-play participated in.

c) not-looking: 1 negative point was allotted for each 5 second interval the subject failed to look toward the ongoing role-play or speaker.

5.1.3.2.5 Control of other variables

During the social skills training period therapists attending subjects in both the control and treatment groups were asked to keep drug regimes stable and give other treatment only in emergency.

5.1.3.2.6 Procedures

All subjects completed pre-test measures one week prior to the commencement of the treatment program. Experimental subjects then participated in an 8-week social skills training program. Control subjects were told they were on a waiting list for social skills training, and would be assessed again at the end of 8 weeks in order to determine whether they still required such training.
5.1.3.2.6.1. Social Skills Training Program

The program consisted of eight 2½-hour sessions with a 15-minute break at mid-session. Sessions were held once a week in the evening.

The social skill trainers were one male and one female (the experimenter) clinical psychologist, both of whom had previous experience in social skills training on an individual basis.

Videotapes which presented models of desired behaviour were developed for use as stimulus materials. This method enabled the portrayal of heterogeneous models, readily observable rewards provided to the model contingent on his social interaction behaviour, and emphasis on specific social interaction behaviours. These stimulus characteristics reflect laboratory research findings that have identified characteristics of the observer, the model, and the modelling display that function to enhance the level of vicarious learning that occurs (Gutride, Goldstein and Hunter, 1973). Details of the videotape segments are contained in Appendix I.

Program content

The content of the SST program was chosen to include general components of socially skilled responding, plus specific skills relevant to presenting deficits in the subject group. Treatment subjects were trained in the following skills (sessions 1-6):

1. General components of socially skilled responding.
   a) speaking clearly
   b) making eye contact
c) putting feelings into words
d) expressing feelings by voice characteristics
e) expressing feelings by facial expressions and gestures.

2. Distinguishing between assertive, passive and aggressive responses.

3. Specific defensive skills for dealing with instances of extreme aggression, manipulation or discounting (examples of the technique may be found in Appendix J).
   a) Repeated assertion (or Broken Record - Smith, 1975):
      persistent verbal repetition of a refusal, request or expression.
   b) Agreeing in principle (or Fogging - Smith, 1975):
      continually acknowledging the possibility that there may be some truth in the statement (criticism, etc.).

4. Positive Cognitive structuring. This comprised covert rehearsal of cognitions likely to promote socially skilled behaviour. These included:
   a) The subject's right to be assertive
   b) imagining favourable consequences arising out of the subject's assertive behaviour
   c) challenging irrational anxiety feelings in a manner loosely based on Ellis's Rational-Emotive Therapy (Ellis and Harper, 1975).
5. **Rewardingness.** Rewardingness has been suggested by Argyle (1969) as a dimension of social performance. A rewarding person is defined as "....attentive to another, in terms of proximity, orientation and gaze; he adopts a friendly bodily posture, and smiles; he nods his head to indicate approval and agreement; he has a friendly tone of voice and does not interrupt; his utterances mesh smoothly; the content of his speech is rewarding... (This)

(R)ewardingness can take a number of forms - warm and affiliative behaviour, submissive and admiring behaviour, helping with tasks, giving advice, taking an interest in another and endorsing his self-image, and sexual responsiveness" (p.327).

Such behaviours are seen as interactional rewards usually given by popular people and sought by others.

Patients were trained in the following skills, seen as components of 'rewardingness'.

**A. Conversational skills**
- small talk
- self disclosure
- asking questions
- making positive comments

**B. Non-verbal skills**
- smiling
- leaning forward
- appropriate gestures of interest, e.g. nodding of head.
Method of Training

Videotape or therapist modelling procedure was followed by discussion of the skills demonstrated. Each modelling procedure was immediately followed by an "idosyncratising" group discussion in which the behaviours and circumstances depicted were related to each subject's personal experiences and environmental demands. Subjects then participated in role-playing both the depicted and personalized social interaction sequences. The role-playing enactments were themselves videotaped and played back to the group for comment and corrective feedback. Both the group leaders and, frequently, other group members provided the role-play enactor with social reinforcement as his depiction more closely approximated that of the model's.

Each session the training skills previously presented were revised. Group members were also instructed to generalize use of the training skills to everyday situations (Homework) and report back verbally on their progress; Feedback and social reinforcement were also given on this reported performance.

In-vivo training

In order to aid transfer of social skills training gains to real-life settings, subjects were allotted tasks relevant to individual deficits and trained in these (session 7) prior to in-vivo performance.

The setting was a restaurant and discotheque where group leaders, subjects, and unfamiliar assistants were to dine and dance:- this constituted session 8 of the social
skills training program. Cooperation of the restaurant staff was obtained in setting up training situations.

Details of in-vivo tasks are contained in Appendix H.

The group leaders and assistants gave performance feedback and social reinforcement (praise) as the evening progressed. Task performance was also assessed as described earlier in this section.
6.1. **RESULTS**

Results will be presented in the following order: systematic measures, unsystematic measures, assessment conducted during the SST program, six-month follow-up evidence, individual subject results. The latter was included since reporting of the average response to treatment can mask large individual variations. In addition, in view of the small number of subjects it was regarded as appropriate to discuss individual results in a more detailed way.

Subject numbers were too small to allow meaningful use of statistical tests. Alternatively, percentages, means and in some instances, raw scores, are used in presentation of the results.

6.1.1. **Systematic Measures**

Several trends are apparent in the results of systematic measures shown in Table 3, although in some instances these are largely due to the influence of several individual scores (e.g. Externality measure) and must be regarded with caution. The figures show that the mean percentage change in scores from Week 0 to Week 9 tended to be greater for subjects undergoing SST, with control subjects showing minimal change on most measures. This indicates that treatment group subjects were able to demonstrate increased social skills at re-testing, as predicted and this tended to be associated with a move toward greater internality. The difference between treatment and control group change scores was greatest on behavioural ratings and self-reported assertiveness, indicating that SST subjects were much improved in socially skilled behaviour and perceived themselves as far more assertive at post-testing. The minimal difference in group scores on subjective difficulty ratings, however, indicate that SST and the control experience had similar influence on reducing
TABLE 3: Test-retest change on systematic measures: percentage difference in scores.*

<table>
<thead>
<tr>
<th>Subject</th>
<th>Behavioural Ratings</th>
<th>Subjective Difficulty</th>
<th>Social Anxiety</th>
<th>Social Skills</th>
<th>Externality</th>
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<tr>
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<td>mean % change</td>
<td>20.4</td>
<td>-24.98</td>
<td>-17.9</td>
<td>19.4</td>
<td>-12.2</td>
</tr>
<tr>
<td>CONTROL GROUP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>-8.5</td>
<td>-25</td>
<td>-7.8</td>
<td>-1.7</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>-0.9</td>
<td>-12.5</td>
<td>-12.5</td>
<td>-2.6</td>
<td>-4.3</td>
</tr>
<tr>
<td>3</td>
<td>4.3</td>
<td>-25</td>
<td>-5.2</td>
<td>-3.4</td>
<td>13</td>
</tr>
<tr>
<td>mean % change</td>
<td>-1.7</td>
<td>-20.8</td>
<td>-8.5</td>
<td>-2.6</td>
<td>2.9</td>
</tr>
</tbody>
</table>

* Figures are expressed as a percentage of the total possible score on each measure.
difficulty subjects experienced in coping with social (role-played) situations.

6.1.1. **Behavioural Role-Play Test**

Treatment group gains on behavioural ratings were considerable, with the mean score increasing by 20.4% from Week 0 to Week 9. This comprised individual rating improvements of greater than 10% in all five treatment subjects. It also included improvement in appropriateness of both verbal and non-verbal skills in commendatory, hostile, and initiatory interaction. Such results indicate efficacy of the SST program in producing changed social behaviour, at least in role-play situations.

Subjects not undergoing SST exhibited no change in their social behaviour on this measure.

6.1.1.2. **Subjective Difficulty Scale**

Difficulty experienced by subjects during the standardized role-played situations decreased over time for both treatment and control groups, with the treatment group difference being slightly greater. This finding suggests that difficulty experienced in social role-plays decreased quickly from the initial experience (pre-testing) to the next, (post-testing), and that subsequent exposures (as in SST) had only minor effects, i.e. it is most likely that merely exposing subjects to the behavioural pre-test reduced their feelings of subjective difficulty.

6.1.1.3. **Social Anxiety Scale**

The mean score for anxiety experienced in social situations decreased from Week 0 to Week 9 for both treatment and control groups. The treatment group mean change score was reduced by a greater percentage, but this
figure was greatly affected by one very large individual score reduction \((S_3)\). In addition, for one treatment subject \((S_3)\) social anxiety had increased at post-testing. These factors together indicate that individual differences may be so great as to negate any meaningful statement of trend arising from comparison of mean percentage change figures.

6.1.1.4. Social Skills Questionnaire

The treatment group mean score on social skills increased considerably from Week 0 to Week 9, including four subjects raising their self-ratings by more than 10%. In contrast, the control group mean score remained relatively stable. These results indicate a major effect of the SST program was to increase subjects' perception of their own social skills.

6.1.1.5. The I-E Scale

The mean percentage reduction in externality score was greater for the treatment group, but this was largely influenced by the scores of two subjects only. Large individual differences in both treatment and control subjects' scores preclude any really meaningful statement of trend. It is apparent, however, that for some subjects \((S_3 \text{ and } S_4)\) SST resulted in a move toward internality which represents a considerable increase in perception of their personal effectiveness.
Table 4 indicates that only social skills trainees rated themselves as having improved relationships at post-testing.

Four treatment subjects reported improved relationships with friends after social skills training, including an increased number and/or closeness of friendships. In addition, two subjects noted getting on better with their families after the treatment program.

In the control group no subjects reported improved friendships or relations with families, although one subject reported a deterioration in interaction with his family.

These results suggest that SST increased perception of improved personal relationships.

**TABLE 4:** Number of items showing improvement on Personal Relationships Information Sheet.

<table>
<thead>
<tr>
<th>Personal Relationships Information</th>
<th>Personal Relationships Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject No. of items showing Improvement</td>
<td>Nos. of subjects</td>
</tr>
<tr>
<td>TREATMENT GROUP</td>
<td>2 5</td>
</tr>
<tr>
<td>1 1</td>
<td></td>
</tr>
<tr>
<td>2 5</td>
<td></td>
</tr>
<tr>
<td>3 6</td>
<td></td>
</tr>
<tr>
<td>4 /</td>
<td></td>
</tr>
<tr>
<td>5 2</td>
<td></td>
</tr>
<tr>
<td>mean 3.5</td>
<td></td>
</tr>
<tr>
<td>CONTROL GROUP</td>
<td>2 0</td>
</tr>
<tr>
<td>1 0</td>
<td></td>
</tr>
<tr>
<td>2 0</td>
<td></td>
</tr>
<tr>
<td>3 0</td>
<td></td>
</tr>
<tr>
<td>mean 0.0</td>
<td></td>
</tr>
</tbody>
</table>

/ = no information
6.1.2. **Unsystematic Measures**

**TABLE 5:** No. of comments indicating Improvement on Two Unsystematic Measures.

<table>
<thead>
<tr>
<th>Subject</th>
<th>No. of positive comments</th>
<th>No. of positive comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Clinical Improvement</td>
<td>Close Contact opinion</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>TREATMENT GROUP</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Mean</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>CONTROL GROUP</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Mean</td>
<td>0.3</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Comments obtained from both Clinical Opinion and Opinion of Subjects' Close Contacts show SST subjects were perceived as generally improved in functioning after the training program, as opposed to virtually no improvement for Waiting-List controls. 100% response rate was obtained on these measures.

The greater clinical improvements perceived in treatment subjects cover a range of variables, specified in Table 6.

The positive changes perceived by close contacts of the subjects cover a similar range (specified in Table 7) and indicate these post-test changes in subject behaviour were still present three weeks after the training program ended, i.e. maintainence of skills had occurred.

The similarity and specificity of these comments (Tables 6 and 7) suggest a degree of concurrent validity in these opinion measures, which lends weight to their contents.
**TABLE 6:** *Number of clinical comments indicating improvement of subjects in treatment and control groups.*

<table>
<thead>
<tr>
<th>CLINICAL COMMENTS</th>
<th>Treatment Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms generally improved</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Medication reduced or ceased</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Discharged from hospital</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Increased independence from family</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Stands up for rights more</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>More decisive</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Relates to people better</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Absence of attacks on self</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Expresses feelings more</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>25</strong></td>
<td><strong>1</strong></td>
</tr>
</tbody>
</table>

*The information contained in this table was based on open-ended reports so that not all items were commented on by all Clinicians, i.e. the information does not allow for comparison across subjects.*
**TABLE 7:** Number of comments by close contacts indicating improvement of Subjects in treatment and control groups.

<table>
<thead>
<tr>
<th>COMMENTS BY CLOSE CONTACT</th>
<th>Treatment Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changed for the better</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Changed maintained for 3 weeks</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>More confident</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Better decision-making</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>More interest in life</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Improved posture</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Less aggressive</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>More independent</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>More friends</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Talks more</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Expresses feelings</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Stands up for self</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>More hopeful</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Happier</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

**TOTAL** 30 1

*The information contained in this table was based on open-ended reports so that not all items were commented on by all close contacts, i.e. the information does not allow for comparison across subjects.*
6.1.2.1. Measures obtained during training

1. In-Vivo task

The mean score on task performance was 4.6, in relation to a possible maximum of 5 points, indicating that SST subjects obtained a large degree of success in demonstrating social competence in the in-vivo setting.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Task</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a) coordinate orders</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>b) initiate leaving</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>a) book table</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>b) request concession</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>a) request cutlery</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>b) compliment service</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>a) request table</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>b) re-order dish</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>a) short change</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>b) tip</td>
<td>5</td>
</tr>
</tbody>
</table>

Mean score 4.6

2. Involvement Ratings

Inter-rater reliability on this measure was high, with raters agreeing on judgements 96% of the time. Figure 1 shows that talking behaviour increased over time, with a definite peak just past the middle (session 5).

Looking-away behaviour tended to decrease over time, indicating increased attending as the sessions progressed.
FIGURE 1: Involvement Indices: mean frequency of occurrence per session for each of 3 behaviours.
Active participation by role-play behaviour remained relatively stable over time, increasing slightly in the last sessions. Those subjects showing greatest involvement as measured by Talking Behaviour (S₂, S₃, S₄) also showed positive change on a greater number of evaluation measures than did other subjects (Table 9). No such consistency is observed between Looking-away Behaviour or Role-play Behaviour in relation to subjects' performance on other measures. These results suggest a possible predictive relationship between degree of involvement by talking and successful learning in SST.

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Involvement-Indices - mean scores</th>
<th>No. of other measures which showed positive change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Looking-Away</td>
<td>Role-Play</td>
</tr>
<tr>
<td>S₁</td>
<td>0.2</td>
<td>1.5</td>
</tr>
<tr>
<td>S₂</td>
<td>2.2</td>
<td>1.7</td>
</tr>
<tr>
<td>S₃</td>
<td>5.3</td>
<td>1.8</td>
</tr>
<tr>
<td>S₄</td>
<td>0</td>
<td>1.6</td>
</tr>
<tr>
<td>S₅</td>
<td>12</td>
<td>1.8</td>
</tr>
</tbody>
</table>

* = highest scores
6.1.2.2.6-Month Follow-Up

Six months after completing the SST program only two treatment subjects had continuing contact with Mental Health Services: one attended an outpatient clinic on an irregular basis for monitoring of medication ($S_5$); the other ($S_4$) was admitted to hospital for instruction in basic domestic skills (e.g. cooking) after a move from hostel to independent accommodation revealed a lack of such skills. Apart from one psychotherapy session ($S_2$) no other treatment had been undertaken by SST subjects subsequent to the course.

Anecdotal evidence indicates that six months after SST all trainees were exhibiting some degree of social competence in their lives (Table 10). Such competence was apparently greater for subjects 1, 2 and 3.

This follow-up information provides a crude indication that some maintenance and generalization of skills occurred following the SST program.

<table>
<thead>
<tr>
<th>TABLE 10: Anecdotal evidence on subject progress 6 months after SST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>
6.1.3. CONTROL OF OTHER VARIABLES DURING STUDY PERIOD

Patient case notes provided information regarding other treatment variables operating during the period of the study. From Table 11 it can be seen that variable drug dosage, electro-convulsive shock treatment, and psychotherapy occurred in several instances during Weeks 0 to 9; this fact makes it difficult to confidently attribute differences at post-testing in the subjects concerned to the specific effects of SST.

Other treatment during the six months following SST was very limited in occurrence, and may be regarded as having minimal effect on the follow-up results.

TABLE 11 Other treatment conducted during study period.

<table>
<thead>
<tr>
<th>Group</th>
<th>Ss</th>
<th>DRUG DOSAGE</th>
<th>PSYCHOTHERAPY</th>
<th>ECT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0-9 weeks</td>
<td>6 mths post SST</td>
<td>0-9 weeks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0-9 weeks</td>
<td>6 mths post SST</td>
<td>0-9 weeks</td>
</tr>
<tr>
<td>TREATMENT</td>
<td>1</td>
<td>stable</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>variable</td>
<td>ceased 2 months post SST</td>
<td>2 sessions individual</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>variable</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>stable</td>
<td>ceased 1 week post SST. Recommended at 2 mths</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>stable</td>
<td>stable</td>
<td>-</td>
</tr>
</tbody>
</table>

where - = nil

/ = no information
6.1.4. **INDIVIDUAL RESULTS - IMPROVEMENT IN CENTRAL DEFICITS**

Central deficits of subjects at Week 0 are presented earlier in this paper, and Chapter 5 should be referred to for the purposes of comparison with the results presented below.

In general the individual assessment profiles show treatment group subjects to be much improved in central skills deficits. In contrast, control group subjects were seen to have changed very little during the waiting list period.

$S_F$: At Week 9 changes in subject's central skills deficits was evident on several measures. In other skills areas, however, changes were minimal, although slight positive improvement was the trend. The central changes were as follows:

1. **Clinical report** - "More decisive".
2. **Close contact report** - "Better decision-making".
3. **Behavioural ratings** - 53% improvement in ratings of behaviour in role-play situation which required subject to initiate behaviour (situations numbers 7 and 8).
4. **In-vivo tasks** - No prompt was required in one out of two tasks.
   - Subject demonstrated skill in making decisions regarding timing of courses, drinks, and initiated a transfer from restaurant to discotheque.

At follow-up, **anecdotal evidence** indicated that subject had initiated divorce proceedings 3 months after SST.
Such data indicates that SST resulted in improvements in the central skills deficits of this subject.

S$^2$ F: At Week 9 results relevant to this subject's Passive-aggressive behaviour were mixed.

1. Behavioural Ratings improved by 19.6%, indicating greater performance competence in expressing feelings and standing up for rights in role-played situations.

2. The Social Skills score had increased by 37%, indicating a considerable decrease in passivity. However, the items relating to aggressive behaviour remained unchanged, suggesting that subject still regarded herself as behaving aggressively to the same extent as before SST.

3. The Close Contact reported the subject as "less aggressive" after SST, and more assertive in terms of "knows her rights as a person now" and "expresses feelings more".

4. The Clinical Report indicated that attacks on the self (slashing of wrists and overdosing) had ceased. Prior to SST such attacks had occurred on an average of once per week. The last such incident had occurred between sessions 1 and 2 of SST. Aggressive outbursts toward others were reported as still occurring in the ward situation. On closer investigation, however, it appeared that at least some of these behaviours had been assertive in nature and content, but were interpreted by ward staff as aggressive, since they were seen as undermining their authority, e.g. the patient had insisted (without shouting or threatening) on a visit
to the hospital hairdresser when it was her turn, although the staff had cancelled the appointment on the basis that it was not necessary. On another occasion, however, aggression was obvious when the patient hit a staff member.

Other variables: $S_2$ received two sessions of individual psychotherapy during the SST program, and this may have had a bearing on results. The case notes confirm, however that $S_2$ had not responded to psychotherapy previously, and it is therefore considered likely that the sessions conducted during the SST period contributed significantly to the improved results.

Two months after SST, $S_2$ was discharged from hospital and the patient file indicated no further self-destructive acts had occurred (to the knowledge of the hospital) up until the 6-month follow-up.

In summary, these results indicate that after SST assertive skills had replaced passive behaviour to a notable degree. Aggressive attacks on the self had ceased, but aggression towards others continued, with some indication that this occurred less than it did prior to SST, i.e. central skills deficits were regarded as improved.

$S_3^F$: For this subject relevant results are concerned with changes in global social skills behaviour, in particular, social anxiety and avoidance.

A post-testing all scored measures had moved positively by greater than 20%, with Social anxiety showing the most marked change (reduced by 71.1%).

The Behavioural Ratings had increased by 23.2%, including improved ratings on affect, appropriateness of
eye-contact, and assertive content. After SST, difficulty experienced in the role-played test situation had reduced to nil, and the subject reported having more friends and a better relationship with her family. Both the Clinical and Close contact reports indicated a wide range of positive improvement, and in relation to the central deficits, they note an increase in competence and confidence in the area of friendships.

$S_3$ was discharged from inpatient treatment after session 6 of the SST program, with her clinician noting "dramatic improvement".

It is important to consider the possible role of variables other than SST in producing these desirable results. In particular, this subject underwent ECT on one occasion during the SST period, and her drug dosage was also changed (reduced). The case notes demonstrate, however, that this subject had not responded to either drug treatment or ECT courses given over a long period (1 year), and there is therefore a lack of evidence that either of these treatment regimes led to the change in her condition. This view is supported by the psychiatrist who attended this patient.

The follow-up data indicates that 6 months after SST, $S_3$ was continuing to function well in the community, as opposed to being either housebound or hospitalized prior to SST.

Overall $S_3$ showed evidence of considerable improvement in all areas following SST.
$S_4^F$: Results of concern here relate to degree of success in social relationships and assertion in hostile situations.

At Week 9, this subject exhibited positive change on all measures (except for the Personal Relationships Information sheet, which was incorrectly completed and could not be used in assessment).

The Social Skills scale, I-E Scale and Behavioural ratings had improved by greater than 20%, indicating that $S_4$ both perceived herself as more competent in relation to others and was able to demonstrate this in an interpersonal role-play setting.

In addition, $S_4$ was able to successfully assert herself despite opposition on the In-vivo task (score = 5/5). The Close contact report and the Clinical report indicate that the subject was seen as both happier and relating more successfully to others after SST.

At follow-up $S_4$ had been admitted to hospital for instruction in basic domestic skills after a move from hostel to independent accommodation revealed the lack of such skills. However, anecdotal evidence indicates that interpersonal functioning had much improved compared with the social skills demonstrated during an admission one month prior to SST.

These results indicate that SST resulted in noticeable improvement in the central skills deficits of this subject.
M: The central deficits of the subject included lack of confidence in and avoidance of social situations, associated with both verbal and non-verbal performance deficits.

At week 9 most measures indicated improvement. Of particular relevance are the Behavioural ratings which increased by 19.2%, indicating a move to more skilled social performance. All the behavioural parameters showed improvement in ratings, including affect, assertive content, fluency, eye-contact, and appropriateness of body movement.

The Social Skills score also increased by 10%, indicating a greater preparedness and perceived ability of S₅ to deal with interpersonal situations.

Social anxiety, however, increased by 11.2%. This indicates that S₅ was tending to experience greater anxiety in social situations, despite demonstrating more competence and perceiving himself as more skilled. Comments from this subject toward the end of the skills training program throw some light on the matter. S₅ reported that he was placing himself in more social situations and attempting to be more assertive socially than previously, and discovered that the anxiety he experienced was actually greater than he had estimated it would be when he was avoiding such interactions.

The Clinical report at Week 9 found S₅ to be generally improved, including more socially skilled expressive, and relating to people better.

The Close contact report also indicated greater happiness and confidence in relating to others.
On the In-vivo Training Task S₅ successfully carried out the tasks of tipping the waitress and dealing with being shortchanged, failing only on eye-contact in the latter situation.

S₅'s drug dosage was reduced immediately following SST as a consequence of clinical improvement; 6 months later the dosage had not changed. Anecdotal evidence also indicated that at follow-up the subject was continuing to cope but some residual social timidity was evident.

In summary, after SST, S₅ showed evidence of general improvement in central deficits. There is evidence to indicate, however, that lack of eye-contact plus anxiety in and avoidance of social situations still occurred sometimes. Medication also continued to be necessary.

Control group

S₁M: Results of both systematic and unsystematic measures for this subject were largely unchanged from Week 0 to Week 9. Behavioural ratings actually worsened (-8.5%) and relationships with the subject's family were reported as less satisfactory. Social anxiety was somewhat less (-7.8%), as was difficulty experienced during the role-plays. The only improvements apparent after the waiting-list period thus related to some decrease in subjective negative feelings associated with social situations.

S₂M: For this subject test-retest results indicate only a few positive changes. Subjective feelings associated with social situations became less negative (scores = subjective
difficulty: -12.5; Social anxiety: -12.5; Clinical report: "less anxious"). There was a slight move towards greater internality. However, no improvements were noted in actual behaviour after the waiting-list period.

S₃^M: For this subject most measures showed no positive change at Week 9. A noticeable decrease in difficulty experienced during the behavioural test occurred (-25%), and a small decrease in social anxiety (-5.2%). There was considerable move toward greater externality on the 1-E scale, indicating a large decrease in subject 3's perception of his personal effectiveness. This latter result conflicts with the close contact comment that S₃ was "more hopeful". Thus only minimal improvement was noted for S₃ at post-testing.
7.1. DISCUSSION

7.1.1. Outcome in relation to expectations.

The major expectations of this study were confirmed. SST subjects showed pre-test to post-test improvement in their clinical symptoms, social behaviour and attitudes. This improvement was generally greater than any change shown by control subjects, though there were individual differences on some measures. Individual results profiles indicate that only subjects undergoing SST demonstrated noticeable change in central deficits. In addition, some evidence was provided that skills gained during the SST program both generalized to everyday-life and were maintained, in the short-term at least.

SST was shown to dramatically affect locus of control in some subjects, resulting in a shift toward greater internality. Other subjects, however, were not affected at all in this manner.

Degree of involvement by talking in the SST group showed a tentative relationship to individual outcome results, i.e. the more a subject talked, the greater improvement he/she tended to show after SST.

7.1.2. Relationship to previous studies.

The results of the present study are difficult to compare directly with others because of the mixed in-patient/outpatient subject sample. Certainly the results reflect the research findings of the generally positive effects of social skills training on psychiatric patients (Whiteley and Flowers, 1978). Previous studies have
generally failed to demonstrate generalisation from the training procedures to subject's everyday lives (Horsell, 1977). For example, McFall and Twentyman (1973) utilized a contrived in-vivo phone-call test of generalization, while Hersen, Eisler and Miller (1974) measured generalization of skills by performance on novel role-play situations; both studies found negative outcome. Some indication of successful generalization of skills was, however, provided by Marzillier et al's (1976) study, which utilized a social diary measure.

In support of Marzillier's finding, the present study gives some indication that a degree of generalisation occurred (In-vivo assessment; close contact reports; Personal Relationships Information; novel role-plays).

The measures used cover a range of subject behaviour in various contexts but there is still a need for more comprehensive, direct measures of generalisation effects before this can be adequately assessed.

SST subjects were also seen by those in close contact to have maintained skills learned in the training program for at least 3 weeks afterwards. Anecdotal evidence indicated some maintenance of skills up to 6 months following SST. This finding is in contrast to those of studies reported in the literature, which indicated a quick return to baseline after training ceased (Hedquist and Weinhold, 1970; Kirschner, 1976). Such non-agreement of results may, however, reflect the effect of different measures. The two studies just mentioned used a measure consisting of the number of assertive responses.
reported by subjects in a weekly diary. Using yet another measure, Marzillier et al (1976) found skills gained during SST were maintained at 6 month follow-up (data comprised diary entries of frequency of social contacts and activities).

Thus the question of maintenance of skills after training is as yet unresolved by the research, but the findings of the present study support the conclusion that on some measures at least maintenance of skills can be demonstrated in the short term.

The treatment group shift towards greater internality was far greater than that reported for college samples experiencing either summer school or working as volunteers in mental institutions (Hersch and Scheibe, 1967). However, no norms for samples of psychiatric patients are provided and it is difficult to interpret the significance of this shift.

With regard to the involvement measure, it appears that talking may be the variable most relevant to predicting individual outcome from SST, but there is little indication in the relevant literature as to why this should be so.

7.1.3. Limitations of Study

The results of the present study remain at most suggestive. The small number of subjects preclude any conclusion based on statistical significances, and the lack of a placebo-treatment control group means it is difficult to attribute results to the specific effects of SST rather than general treatment effects. Problems of interpretation of results also arise because of the lack
of standardization or normative data on some measures. There is also the added complication that in some instances concurrent treatments occurred for several experimental subjects, making it even more difficult to attribute results solely to the experimental treatment program.

7.1.4. Implications of study for future research

This study has given support to the view that SST produces positive results in both clinical and social behaviour for both inpatients and outpatients in a psychiatric setting.

It has also pointed to the further need for development of standardized follow-up measures which could give a comprehensive coverage of patient's functioning in their everyday lives. The present study suggested three measures which might contribute to such an assessment (Close-contact report; in-vivo task assessment; Personal Relationships Information sheet). It is likely, however, that the best method to ensure generalisation and maintenance of skills from training to everyday life may be to train patients in-vivo in their community of residence. Assessment might subsequently involve ratings by local residents with whom the patient had contact (e.g. the shopkeeper).

In view of the residual deficits present in some treatment subjects post-SST, attention should also be given to longer programs of SST fitted to individual needs. This may in fact point to a drawback of the group training method, and perhaps a combination of individual and group methods is indicated.
Further research is also needed into the relevance of involvement to individual outcome, as this may be a factor which can be manipulated to improve skills-learning.

A final contribution of this study has been an addition to the range of role-play behaviours sampled by behavioural tests (initiatory behaviour). There exists an ongoing need, however, for development of role-play situations which sample a wider range of behaviour, at least in the interim period until/or if psychologists move out to training and assessment of SST in the community.
APPENDIX A

BEHAVIOURAL ROLE-PLAY TEST

Setting

The behavioural role-played test was presented in a furnished room which also contained 3 television cameras mounted above eye level on the walls and a portable microphone. An adjoining control room contained recording equipment and a television monitor for observing subjects' responses.
BEHAVIOURAL ROLE-PLAY TEST (continued)

Procedure

Whilst in the waiting room the subject was asked if he/she would be prepared to participate in some short conversations which would be recorded on videotape. The general nature and purpose of the recording was carefully explained, and following the subject's agreement the experimenter took the subject into the videotape studio. The experimenter introduced the other participants (the stooges) and continued with the following instructions:

"As I mentioned before, the purpose of this procedure is to get some idea of how you respond to real-life situations with people. I will describe some everyday situations to you and I want you to imagine that you are really in each situation. For example, if I say that you are in a shop with a salesman, try to imagine that you are really there and that the other person is really the salesman. In order to make these situations seem more real, Miss Jones will play the part of a woman who may be in the scene, and Mr. Smith will play the part of a man who may be in the scene.

First, I will describe the situation and the other person will say or do something. Then I want you to say or do what you normally would if you were actually in the situation.

Do you have any questions?"

(Subject response)

Experimenter clarifies any difficulty.

"It is possible that you would say nothing in a particular situation, so if you have not replied after about 10 seconds we will move onto the next situation."

At this point the experimenter narrated a practice scene:
BEHAVIOURAL ROLE-PLAY TEST (continued)

"You are in a shop. You have just asked the shopkeeper for a large battery. He returns with a small battery and says: 'Here you are, Madam/Sir.'"

Once it appeared the subject understood the instructions and gave a response, the experimenter moved on to the test situations. Recording began at this point.

After introducing each situation the experimenter retired to a chair out of sight of the patient. The stooge not involved in an ongoing scene was also seated out of the patient's sight. At the end of each situation the experimenter said "Thank you".

The subject then rated each situation on subjective difficulty level before the experimenter narrated the next situation.
ROLE-PLAY SITUATIONS – PRETEST

1 + 2. **Accepting Praise** – female stooge. Designed to elicit positive (commendatory) responses.

You meet and acquaintance and begin to chat. She says to you:

1) "Gee, you really look nice today".

(subject response)

2) "Those clothes really suit you".

(subject response)


You are getting ready to leave work. An acquaintance asks you for a lift home. Normally you wouldn't mind, but tonight you are in a hurry, and besides the acquaintance lives in the opposite direction to you. The acquaintance says to you:

3) "Could you give me a lift home tonight please?"

(subject response)

4) "I really need a lift home tonight".

(subject response)

5 + 6. **Dealing with Criticism** – female stooge. Designed to elicit negative (Confrontive) responses.

You are out with some friends and you get into a bit of an argument with one of them. You express your feelings pretty strongly. A while later another member of the party criticises you for what you said. She says to you:

5) "That was a pretty thoughtless thing you said!"

(subject response)

6) "You really ought to think before you speak!"

(subject response)
ROLE-PLAY SITUATIONS (continued)

7 + 8. Initiating Conversation - Male stooge. Designed to elicit positive (initiatory) behaviour.

You are in the tearoom and you find yourself sitting near a new employee. No one is talking to him. He looks in your direction:

7) Stooge looks at subject and smiles.

(subject response)

8) "Yes (or No)......hello".

POST-TESTING SITUATIONS

1 + 2. Accepting Praise - Female stooge. Designed to elicit positive (commendatory) responses.

You meet a friend. You talk together for a while. The friend is obviously enjoying your company. She says to you:

1) "Gee I'm glad I met you today, its really cheered me up".

(subject response)

2) "I certainly feel much brighter now".

(subject response).

3 + 4. Refusal behaviour - Male stooge. Designed to elicit negative (confrontive) responses.

You are in a crowded supermarket, and in a hurry. You are already late for an appointment. You pick up a couple of items and get in line to pay for them. Then a person with a trolley full of groceries cuts in front of you. The person says to you:

3) "You don't mind if I cut in here? I'm in such a hurry".

(subject response)

4) "I really am in a great rush".

(subject response)
ROLE-PLAY SITUATIONS (continued)

5 + 6. Dealing with Criticism - Female stooge. Designed to elicit negative (confrontive) responses.

You are having morning tea at work. You get into a discussion with someone on a newspaper report you read the previous day. The discussion gets a little heated. She raises her voice and says to you:

5) "You didn't read it right - the paper didn't say that!"

(subject response)

6) "I'm sure you're wrong!"

(subject response)

7 + 8. Initiating conversation - Male stooge. Designed to elicit positive (initiatory behaviour).

You enter a doctor's waiting room. There is one other person in the room. You recognize him as an old acquaintance. He looks up from the magazine he is reading and looks toward you:

7) Stooge raises eyes from magazine and looks towards the subject.

(subject response)

8) "Yes".. (or "No", depending on response) "Hello".

(subject response)

RATING SCALES FOR BEHAVIOURAL COMPONENTS STUDIED

The behavioural isolates chosen for study were rated on the following scale of appropriateness for success in each simulated social situation:

<table>
<thead>
<tr>
<th>Very Poor</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Very Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Score
Behaviours rated:

A. Verbal Behaviours

1. **Latency of Response**: The subject's latency of response was observed from the time that the stooge delivered his prompt to the beginning of the subject's speech for each scene.

   0 (very poor) = delayed too long or cut in too quickly.
   4 (very good) = allowed partner to finish first.
   = partner still eye contacting subject.
   = small pause just sufficient to allow switch of attention.

2. **Volume of Speech**: Volume of subject's speech displayed throughout a role-play situation was given an overall rating.

   0 (very poor) = too soft, hard to hear.
   = too loud, offensive to ears.
   4 (very good) = easy to hear, pleasant to ears.

3. **Affect of Speech**: Subject's verbal expression of affect displayed throughout a role-play situation was given an overall rating.

   0 (very poor) = flat monotone.
   = exaggerated tone.
   4 (very good) = expression varied in a modulated fashion.
   = not distracting, but enhancing to meaning.

4. **Assertive content**: Subject's speech was rated for overall assertive content in each role-play situation.

   0 (very poor) = no response.
   = capitulation or very passive response.
   = a very aggressive response.
   4 (very good) = unqualified assertive content, i.e. direct, no excuses or retractions.
B. Non-verbal Behaviours

1. **Eye Contact**: Amount of time that a subject looked at the stooge in each situation was given an overall rating.

   0 (very poor) = no eye contact.
   = fixed stare.

   4 (very good) = moderate periods of eye contact punctuated by brief looking away or down.

2. **Movement**: Movements of the subject's face and body were rated on an overall basis for each situation.

   0 (very poor) = highly restricted or no movement.
   = excessive or incessant distracting movement.

   4 (very good) = Movement enhances meaning of conversation, is not distracting and expresses emotion relevant to context.
APPENDIX B.

SUBJECTIVE DIFFICULTY SCALE

NAME: ...........................................

SITUATION No: ..............

I found this situation:

- extremely difficult  __
- very difficult        __
- fairly difficult      __
- a little difficult    __
- not difficult at all  __

(Please mark the appropriate box with an X.)
APPENDIX C

SOCIAL ANXIETY SCALE

NAME....................AGE..........SEX...........

The items in this questionnaire refer to ways you might feel in various situations. Select the answer which is true for you and mark the appropriate box with an X. Please answer all questions.

COLUMN HEADINGS: Practically always or entirely.
                     Usually or a good deal.
                     Average.
                     Somewhat or sometimes.
                     No or never.

1. I feel relaxed even in unfamiliar social situations.
2. I try to avoid situations which force me to be very sociable.
3. It is easy for me to relax when I am with strangers.
4. I have no particular desire to avoid people.
5. I often find social occasions upsetting.
6. I usually feel calm and comfortable at social occasion.
7. I am usually at ease when talking to someone of the opposite sex.
8. I try to avoid talking to people unless I know them well.
9. If the chance comes to meet new people, I often take it.
10. I often feel nervous or tense in casual get-togethers in which both sexes are present.
11. I am usually nervous with people unless I know them well.
12. I usually feel relaxed when I am with a group of people.
13. I often want to get away from people.
14. I usually feel uncomfortable when I am in a group of people I don't know.
15. I usually feel relaxed when I meet someone for the first time.
16. Being introduced to people makes me tense and nervous.
17. Even though a room is full of strangers, I may enter it anyway.
18. I would avoid walking up and joining a large group of people.
19. When my superiors want to talk with me, I talk willingly.
20. I often feel on edge when I am with a group of people.
21. I tend to withdraw from people.
22. I don't mind talking to people at parties of social gatherings.
23. I am seldom at ease in a large group of people.
24. I often think up excuses in order to avoid social engagements.
25. I sometimes take the responsibility for introducing people to each other.
SOCIAL ANXIETY SCALE (continued)

26. I try to avoid formal social occasions.
27. I usually go to whatever social engagements I have.
28. I find it easy to relax with other people.
29. I rarely worry about seeming foolish to others.
30. I worry about what people will think of me even when I know it doesn't make any difference.
31. I become tense and jittery if I know someone is sizing me up.
32. I am unconcerned even if I know people are forming an unfavourable impression of me.
33. I feel very upset when I commit some social error.
34. The opinions that important people have of me cause me a little concern.
35. I am often afraid that I may look ridiculous or make a fool of myself.
36. I react very little when other people disapprove of me.
37. I am frequently afraid of other people noticing my shortcomings.
38. The disapproval of others would have little effect on me.
39. If someone is evaluating me I tend to expect the worst.
40. I rarely worry about what kind of impression I am making on someone.
41. I am afraid that others will not approve of me.
42. I am afraid that people will find fault with me.
43. Other people's opinions of me do not bother me.
44. I am not necessarily upset if I do not please someone.
45. When I am talking to someone, I worry about what they may be thinking about me.
46. I feel that you can't help making social errors sometimes why worry about it.
47. I am usually worried about what kind of impression I make.
48. I worry a lot about what my superiors think of me.
49. If I know someone is judging me, it has little effect on me.
50. I worry that others will think I am not worthwhile.
51. I worry very little about what others may think of me.
52. Sometimes I think I am too concerned with what other people think of me.
53. I often worry that I will say or do the wrong things.
54. I am often indifferent to the opinions others have of me.
55. I am usually confident that others will have a favourable impression of me.
56. I often worry that people who are important to me won't think very much of me.
57. I brood about the opinions my friends have about me.
58. I become tense and jittery if I know I am being judged by my superiors.
APPENDIX D

SOCIAL SKILLS QUESTIONNAIRE

Name: Age: Sex: Date:

The following questions will be helpful in assessing your assertiveness. Be honest in your responses. Select the answer which is true for you and mark the appropriate box with an 'X'.

COLUMN HEADINGS: Practically always or entirely.
Usually or a good deal.
Average.
Somewhat or sometimes.
No or never.

Statement

1. When a person is highly unfair, do you call it to his attention?
2. Do you find it difficult to make decisions.
3. Do you speak out in protest when someone takes your place in line?
4. Do you often avoid people or situations for fear of embarrassment?
5. Do you usually have confidence in your own judgement?
6. Do you insist that your spouse or roommate take on a fair share of household chores?
7. Are you prone to "fly off the handle"?
8. When a salesman makes an effort, do you find it hard to say "No" even though the merchandise is not really what you want?
9. When a latecomer is waited on before you are, do you call attention to the situation?
10. Are you reluctant to speak up in a discussion or debate?
11. If a person has borrowed money (or a book, thing of value, garment) and is overdue in returning it, do you mention it?
12. Do you generally express what you feel?
13. Are you disturbed if someone watches you at work?
14. If someone keeps kicking or bumping your chair in a movie or a lecture, do you ask the person to stop?
15. Do you find it difficult to keep eye contact when talking to another person?
16. In a good restaurant, when your meal is improperly prepared or served, do you ask the waiter/waitress to correct the situation?
17. When you discover merchandise is faulty, do you return it for an adjustment.
18. Do you show your anger by name-calling or obscenities?
SOCIAL SKILLS QUESTIONNAIRE (continued)

19. Do you try to be a wallflower or a piece of the furniture in social situations?

20. Do you insist that your landlord (mechanic, repairman, etc.) make repairs, adjustments or replacements which are his responsibility?

21. Are you able openly to express love and affection?

22. Are you able to ask your friends for small favours of help?

23. When you differ with a person you respect, are you able to speak up for your own viewpoint?

24. Are you able to refuse unreasonable requests made by friends?

25. Do you have difficulty complimenting or praising others?

26. If you are disturbed by someone smoking near you, can you say so?

27. Do you shout or use bullying tactics to get others to do as you wish?

28. Do you get into physical fights with others especially with strangers?

29. When you meet a stranger, are you the first to introduce yourself and begin a conversation?
Items omitted from Social Skills Questionnaire on basis of ambiguity

1. Are you openly critical of others' ideas, opinions and behaviour?

2. Do you continue to pursue an argument after the other person has had enough?

3. Do you often step in and make decisions for others?

4. Do you think you always have the right answer?

5. Do you finish other people's sentences for them?

6. At family meals, do you control the conversation?
APPENDIX E.

I-E SCALE

INSTRUCTIONS FOR THE I-E SCALE

This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you're concerned. Be sure to select the one you actually believe to be more true rather than the one you think you should choose of the one you would like to be true. This is a measure of personal belief: obviously there are no right or wrong answers.

Your answers to the items on this inventory are to be recorded on a separate answer sheet which is loosely inserted in the booklet. REMOVE THIS ANSWER SHEET NOW. Print your name and any other information requested by the examiner on the answer sheet, then finish reading these directions. Do not open the booklet until you are told to do so.

Please answer these items carefully but do not spend too much time on any one item. Be sure to find an answer for every choice. Find the number of the item on the answer sheet and black-in the space under the number 1 or 2 which you choose as the statement more true.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned. Also try to respond to each item independently when making your choice; do not be influences by your previous choices.
I-E SCALE (continued)

I-E SCALE

1. a) Children get into trouble because their parents punish them too much.
   b) The trouble with most children nowadays is that their parents are too easy with them.

2. a) Many of the unhappy things in people's lives are partly due to bad luck.
   b) People's misfortunes result from the mistakes they make.

3. a) One of the major reasons why we have wars is because people don't take enough interest in politics.
   b) There will always be wars, no matter how hard people try to prevent them.

4. a) In the long run, people get the respect they deserve in this world.
   b) Unfortunately, an individual's worth often passes unrecognised no matter how hard he tries.

5. a) The idea that teachers are unfair to students is nonsense.
   b) Most students don't realise the extent to which their grades are influenced by accidental happenings.

6. a) Without the right breaks one cannot be an effective leader.
   b) Capable people who fail to become leaders have not taken advantage of their opportunities.

7. a) No matter how hard you try some people just don't like you.
   b) People who can't get others to like them don't understand how to get along with others.

8. a) Heredity plays the major role in determining one's personality.
   b) It is one's experiences in life which determine what they're like.

9. a) I have often found that what is going to happen will happen.
   b) Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. a) In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
    b) Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. a) Becoming a success is a matter of hard work, luck has little or nothing to do with it.
    b) Getting a good job depends mainly on being in the right place at the right time.
I-E SCALE (continued)

12. a) The average citizen can have an influence in government decisions.
    b) This world is run by the few people in power, and there is
not much the little guy can do about it.

13. a) When I make plans, I am almost certain that I can make
    them work.
    b) It is not always wise to plan too far ahead because many
things turn out to be a matter of good or bad fortune anyhow.

14. a) There are certain people who are just no good.
    b) There is some good in everybody.

15. a) In my case getting what I want has little or nothing to
    do with luck.
    b) Many times we might just as well decide what to do by
flipping a coin.

16. a) Who gets to be the boss often depends on who was lucky
    enough to be in the right place first.
    b) Getting people to do the right things depends upon ability,
lucky has little or nothing to do with it.

17. a) As far as world affairs are concerned, most of us are the
    victims of forces we can neither understand nor control.
    b) By taking an active part in political and social affairs
the people can control world events.

18. a) Most people don't realise the extent to which their lives
    are controlled by accidental happenings.
    b) There really is no such thing as "luck".

19. a) One should always be willing to admit mistakes.
    b) It is usually best to cover up one's mistakes.

20. a) It is hard to know whether or not a person really likes you.
    b) How many friends you have depends upon how nice a person
you are.

21. a) In the long run the bad things that happen to us are
    balanced by the good ones.
    b) Most misfortunes are the result of lack of ability,
ignorance, laziness, or all three.

22. a) With enough effort we can wipe out political corruption.
    b) It is difficult for people to have much control over the
things politicians do in office.

23. a) Sometimes I can't understand how teachers arrive at the
    grades they give.
    b) There is a direct connection between how hard I study and
the grades I get.
I-E SCALE (continued)

24. a) A good leader expects people to decide for themselves what they should do.

b) A good leader makes it clear to everybody what their jobs are.

25. a) Many times I feel that I have little influence over the things that happen to me.

b) It is impossible for me to believe that chance or luck plays an important role in my life.

26. a) People are lonely because they don't try to be friendly.

b) There is not much use in trying too hard to please people, if they like you, they like you.

27. a) There is too much emphasis on athletics in high school.

b) Team sports are an excellent way to build character.

28. a) What happens to me is my own doing.

b) Sometimes I feel that I don't have enough control over the direction my life is taking.

29. a) Most of the time I can't understand why politicians behave the way they do.

b) In the long run the people are responsible for bad government on a national as well as on a local level.
APPENDIX F

PERSONAL RELATIONSHIPS INFORMATION SHEET

Name: .................................................................

Home Address: ..........................................................

(1) How many people (excluding members of your family & therapist), do you know who:
   a) You only talk about things like the weather with; .........
   b) You talk about family and business matters with; .........
   c) You talk about really personal matters with; .........

For the following Questions, please mark the appropriate box with an X.

(2) Do you get on well with your family:

   Practically always or entirely
   Usually or a good deal
   Average
   Somewhat or sometimes
   No or never

(3) Do you get on badly with your family:

   Practically always or entirely
   Usually or a good deal
   Average
   Somewhat or sometimes
   No or never

(4) Do you generally get on with your family:

   Extremely well
   Well
   So/So, O.K.
   Badly
   Extremely badly
APPENDIX G

LETTER TO CLOSE CONTACT

Dear

As you know, ____ (Subject's name), has been (taking part in) or (on the waiting list for) a Social Skills Training group over the last eight weeks.

Some people change as a result of this experience, others do not. ____ (Subject's name) has given agreement for us to write to you and ask your opinion as to whether he/she has or has not changed at all, and if so, in what way/s. It would be extremely helpful if you could write us a letter in the near future including the above information.

We are attempting to decide how useful the procedure may or may not be and it is equally important to know whether this kind of experience does or does not change a person's behaviour.

Thanking you in anticipation.

Yours sincerely,

Wendy Dowel
Bob Duckmanton
PSYCHOLOGISTS
APPENDIX H

IN-VIVO TASKS

1. Booking of tables and trying to persuade the manager to grant a group concession charge even though this was not regular policy.

2. Requesting of tables on arrival at restaurant in the face of management insistence that the booking did not exist.

3. Playing "host": this involved ordering drinks, timing and conducting of course orders by everyone, and initiating the move to the dancing venue.

4. Requesting an extra cutlery placing for a person not previously included in the booking.

5. Refusing a wrongly served dish and ordering a replacement.

6. Complimenting the waiter/waitress on the meal.

7. Tipping the waiter/waitress.

8. Calling for and paying of bill, and dealing with being short changed.

9. Initiating a dance with an unfamiliar person (assistant) of the opposite sex. (Unscored).
APPENDIX I

VIDEO SEGMENTS - Details of content

Videotape Segment No. 1: - This scene showed a situation in which a customer had just been short-changed by a shopkeeper. Three alternative responses were modelled (assertive, passive and aggressive) with the assertive response showing the most successful outcome.

Videotape Segment No. 2: - This scene showed a dissatisfied customer in a shoe-shop. The customer was returning newly purchased shoes, which she had found to be damaged. The customer requested replacement of the shoes but the shop-assistant was very obstructive and rude. The technique of "broken-record" was used by the customer to achieve successful outcome.

Videotape Segment No. 3: - The same setting was used as for Videotape No.2. The combined skills of "broken-record" and "Fogging" were demonstrated in dealing with an abusive shop assistant.

Videotape Segment No. 4: - This segment showed a party scene. Alternative modes of joining a mixed-sex conversational group were modelled (assertive, passive and aggressive) with the assertive mode showing the most successful outcome.

Videotape Segment No. 5: - This tape illustrated successful, skilled management of unjustified criticism between a mother and daughter.

Videotape Segment No. 6: - In this section successful assertive management of justified criticism was demonstrated. The scene was between 2 spouses.

Videotape Segment No. 7: - This scene showed a female's successful refusal of aggressive and persistent male advances, using the "Fogging" and "broken-record" techniques.
VIDEO SEGMENTS (continued)

_Videotape Segment No. 8:_ - 'Recording' non-verbal behaviour and 'negative' non-verbal behaviour were modelled. The setting was a conversation between two persons, one male, one female.

_Videotape Segment No. 9:_ - This scene illustrated a male and female acquaintance having a conversation. Skilled giving of praise and accepting of praise were demonstrated.
APPENDIX J

SPECIFIC ASSERTIVE TECHNIQUES - Examples

Repeated Assertion: (Broken-Record)

An example of appropriate use of this technique:

In one case a mother quite often aggressively attacked her daughter whenever she saw her (S2), finding fault with most things the daughter did. The wave of criticism quickly reduced the daughter to silence and unhappiness. Other types of assertion in response to the criticism were ineffective since the mother completely ignored everything the daughter said. Finally the daughter kept repeating in a voice loud enough to be heard over her mother's, "I feel hurt by your criticism, please stop!"
This had to be repeated about 8 times before the mother stopped.

Agreeing in Principle: (Fogging)

An example of appropriate use of this technique:

Excessive criticism may be dealt with by 'fogging' as in the following dialogue.

Critic: I see you are dressed in your usual sloppy manner.
Subject: That's right, I am dressed in my usual way.
         (Fogging).
Critic: Those pants! They look like you stole them off the Goodwill rack without ironing them.
Subject: They are a bit wrinkled, aren't they.
         (Fogging).
Critic: Wrinkled is the understatement of the week. They are positively dreadful.
Subject: You may be right, they do look a bit worse for wear.
         (Fogging).

etc., etc.
APPENDIX K. i.

Raw scores on systematic measures at post-test.

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Behavioural Ratings</th>
<th>Subjective Difficulty</th>
<th>Social Anxiety</th>
<th>Social Skills Q.</th>
<th>I-E Scale</th>
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<td>5</td>
<td>184</td>
<td>16</td>
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<td>Mean</td>
<td>191.5</td>
<td>7.6</td>
<td>128.8</td>
<td>70</td>
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| Control Group |                       |                       |                |                  |          |
| 1             | 132                  | 10                    | 204            | 42               | 9        |
| 2             | 173                  | 12                    | 130            | 63               | 17       |
| 3             | 154                  | 6                     | 178            | 45               | 16       |
| Mean         | 173.6                | 9.4                   | 170            | 50               | 13.7     |
### Details of Ratings for Specific Behavioural Components - Pretest

#### Behavioural Isolates

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<tr>
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<th>Latency</th>
<th>Volume</th>
<th>Affect</th>
<th>Fluency</th>
<th>Assertive Content</th>
<th>Eye Contact</th>
<th>Movement</th>
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#### Control Group

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<th>Assertive Content</th>
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<th>Movement</th>
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### Details of Ratings for Specific Behavioural Components - Post-test

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#### Control Group

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### PERSONAL RELATIONSHIPS INFORMATION SHEET

#### Raw Scores at Pretest and Post-test.

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#### Raw Scores at Post-test.

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- = no information
### Clinical report - Details of content

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<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>Medication reduced or ceased</td>
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<td>✓</td>
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<td>Discharged from hospital</td>
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<tr>
<td>Increased independence from family</td>
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<td>✓</td>
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</tr>
<tr>
<td>Stand up for rights more</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Expresses feelings more</td>
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<td></td>
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<td>More decisive</td>
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<td>Relates to people better</td>
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<tr>
<td>Absence of attacks on self</td>
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<td>Mood fluctuates</td>
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</table>

+ = positive change (clinically desirable)  
0 = no difference (clinically undesirable)
APPENDIX K. v.

TABLE Close Contact Report - details of content

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<th>Subject</th>
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<td>Changed</td>
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<td>Change maintained</td>
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<td>✓ ✓ ✓ ✓ ✓</td>
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<tr>
<td>Happier</td>
<td>✓ ✓</td>
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<tr>
<td>More confident</td>
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<td>✓ ✓ ✓ ✓ ✓</td>
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<tr>
<td>Better decision making</td>
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</tr>
<tr>
<td>More interest in life</td>
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<tr>
<td>Improved posture</td>
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<td></td>
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<td>Less aggressive</td>
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<td></td>
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<td>More independent</td>
<td>✓ ✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓ ✓</td>
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<td>More friends</td>
<td>✓ ✓</td>
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<td>Talks more</td>
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<td>✓ ✓ ✓ ✓ ✓</td>
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</tr>
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<td>Expresses feelings</td>
<td>✓ ✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stands up for rights</td>
<td>✓ ✓</td>
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<td></td>
</tr>
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<td>More hopeful</td>
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<td>Sometimes unassertive with</td>
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</table>

+ = gains in social skills

0 = lack of social skills
REFERENCES


KAESS, W., & ZEAMAN, D. Positive and negative knowledge of results on a Pressey-type punchboard. J. Exp. Psychology, 1960, 60, 12-17.


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