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PRETESTING AND THERAPIST-CLIENT SEX
MATCHING EFFECTS IN SOCIAL SKILLS TRAINING

By

Dan M. Mungas

B. A., University of Montana, 1974

A thesis presented in partial fulfillment
of the requirements for the degree of
Master of Arts
University of Montana, 1977

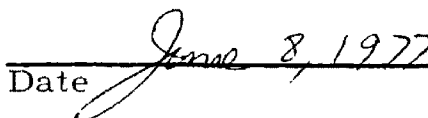
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Pretesting and Therapist-Client Sex Matching Effects
in Social Skills Training (109 pp.)

Director: Herman A. Walters *HW*

This study was conducted in order to determine the effects on the outcome of a group social skills training procedure of pretesting and matching therapists and clients according to sex. Thirty nine subjects completed the study, 21 of whom had responded to advertisements for the treatment program, and 18 of whom were introductory psychology students who received experimental credit for their participation. In order to determine the effects of the social skills training procedure and of pretesting, a Solomon four group design was used. Thus there were four groups of subjects, each representing one of the possible combinations of social skills training vs. waiting list control with pretesting vs. no pretesting. Four therapists, two male and two female, conducted the treatment in small groups in which male and female subjects participated, so that some subjects had same-sex therapists while others had opposite-sex therapists. Outcome was assessed using four scales of the Personality Research Form, the total positive score of the Tennessee Self Concept Scale, the sum of five interpersonal situations of the S - R Inventory of Anxiousness, and subject self-report and objective behavioral measures of anxiety within a behavioral forced interaction task. Therapist-client sex matching effects were assessed for social skills training subjects using the above measures in addition to subject and therapist improvement ratings and subject satisfaction with therapist ratings.

Nearly significant pretesting effects were found for the self-report ratings of anxiety within the behavioral task. These results are consistent with those of previous research, and indicate that previous exposure to behavioral interaction tests has the effect of reducing self-reported anxiety within subsequent interaction tests.

Nearly significant treatment effects were found for the interpersonal situations of the S - R Inventory of Anxiousness, with groups receiving the training procedure reporting less anxiety in those situations than waiting list controls. This finding provides evidence for the generalization of treatment effects to the subjects' natural environments. A nearly significant treatment effect was also found for the overt behavioral measure of anxiety within the behavioral task. Social skills training subjects showed fewer indicators of anxiety within the behavioral task than did waiting list controls.

The only finding concerning the relative efficacy of same-sex as opposed to opposite-sex therapist-client pairings that approached significance was for the interpersonal situations of the S - R Inventory of Anxiousness. Subjects with opposite-sex therapists reported less anxiety than subjects with same-sex therapists.

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CHAPTER I

INTRODUCTION

The purpose of this study was to evaluate the effects of pretesting and therapist-client sex matching on the outcome of a group social skills training program. In addition, an attempt was made to further clarify the effectiveness and appropriateness of this particular training procedure. A clinical form of training was used with subjects who were self-referred for treatment of ineffectiveness and anxiety in interpersonal situations. Outcome was assessed according to varied criteria thus enabling the determination of the effect of the treatment procedure, pretesting, and therapist-client sex matching on various aspects of the subjects' behavior and experiencing.

Social Skills Training

Description and Rationale of Technique

In recent years an increasing amount of attention has been directed toward a response acquisition model for behavior change (Goldsmith & McFall, 1975; Lazarus, 1966; MacDonald, Lindquist, Kramer, McGrath & Rhyne, 1975; McFall & Twentyman, 1973). Within this model, maladaptive interpersonal behaviors are conceptualized as deficits of specific response skills. These behavioral deficits lead to an inability to respond effectively in interpersonal situations and thus the situations become threatening and anxiety provoking. The anxiety

associated with interpersonal ineffectiveness can lead to avoidance of similar situations which prevents learning of appropriate response skills.

Within this model, treatment is focused on the development of effective behavioral skills. Socially ineffective clients are given the opportunity to develop and practice appropriate behavior, usually by role-playing the troublesome situation in a non-threatening setting. Since there are no aversive consequences for the subject's behavior in the role playing situation, the fear he experiences is not reinforced and extinguishes to some extent. This decreases the likelihood that the subject will avoid the problem situation which allows him to receive social reinforcement for appropriate behavior. As a result the problem situation becomes less aversive which increases approach toward it and allows further development of effective interpersonal behavior (cf. Christensen, Arkowitz, & Anderson, 1975; Glasgow & Arkowitz, 1975).

The original impetus for the social skills training approach came from the area of assertion training. Within this framework a number of components of the training process have been empirically developed and tested. While the exact definition of individual components and the combination of components used has varied somewhat from study to study, the training procedure has frequently included the following components: 1) behavioral rehearsal - role playing responses for the problem situations, 2) response feedback - feedback concerning the adequacy of role-played responses, 3) modeling of

appropriate behavior - hearing or viewing an effective response to a particular situation, and 4) coaching - receiving instructions for effective responses. While other components have been studied, these four have received by far the most attention.

Review of the Literature

Lazarus (1966) used the term behavioral rehearsal to describe a technique he used in a study of the relative effectiveness of three modes of treatment in increasing assertive behavior. Behavioral rehearsal was compared with non-directive reflection-interpretation and direct advice in the management of specific problem situations requiring interpersonal assertion. Three groups of 25 clients each were used with each group receiving one of the treatments. After a maximum of four, 30 minute sessions 92% of the behavioral rehearsal clients showed objective evidence of behaving adaptively in the problem situation as compared to 44% of the direct advice and 32% of the non-directive reflection-interpretation clients. Twenty-seven of 31 clients who didn't benefit from the direct advice and non-directive treatments were given the behavioral rehearsal treatment and there was evidence of learning for 22 or 81% of them.

The validity of these results can be questioned on several grounds. Lazarus himself assigned all subjects to groups, served as therapist for all treatments, and judged whether or not learning had occurred and thus there is a possibility of experimental bias in all three aspects of the study. In addition no control groups were included. While this

study had several procedural flaws, it nevertheless introduced the technique of behavioral rehearsal as worthy of consideration for clinical application and for further research.

In a series of experiments led by McFall (McFall & Lillesand, 1971; McFall & Marston, 1970; McFall & Twentyman, 1973) the components of assertion training were researched further. Proceeding according to a "constructive strategy", these studies began with the basic technique of behavioral rehearsal and systematically added and evaluated the components of modeling, feedback, and coaching.

McFall and Marston used a standardized, semi-automated behavioral rehearsal treatment and compared behavioral rehearsal with performance feedback (playback of the tape-recorded response), behavioral rehearsal without feedback, an insight oriented attention placebo treatment, and a waiting list control. Eighteen male and 24 female college students, defined as being unassertive by their performance on a screening test, were randomly divided into four groups. The behavioral rehearsal groups showed significantly greater pretest to posttest improvement on behavioral role playing, autonomic, and self report measures (with the exception of two global self report measures, the Taylor Manifest Anxiety Scale and the Wolpe-Lang Fear Survey Schedule on which there were no significant group differences) than did the control groups. While the greatest improvement was shown by the rehearsal with feedback group, it did not differ significantly from the rehearsal without feedback group. Two weeks after the post-treatment assessment a follow-up phone call was made by a

confederate posing as a telephone magazine salesman. Subjects in the two treatment groups showed resistance significantly earlier in the call than did control subjects. Again there were no differences between the two treatment groups.

Using the same analogue procedure, McFall and Lillesand (1971) compared (a) overt behavioral rehearsal with feedback, modeling, and coaching; (b) covert behavioral rehearsal with modeling and coaching; and (c) a control group in which the subjects were led to believe that the assessment procedure was a form of treatment. Both the modeled responses and coaching were provided via audio tape. Eighteen male and 15 female college students screened for their non-assertiveness were randomly divided into the three groups. The behavioral rehearsal groups showed significantly greater improvement than the control group on the Conflict Resolution Inventory, a self report inventory designed by the authors to assess ability to refuse unreasonable requests, and in performance on a Behavioral Role Playing Assertion test designed to simulate nine real-life assertion situations. There was a tendency for the covert rehearsal group to show the greatest improvement. Three to five days after the post-treatment assessment the subjects were telephoned by a female confederate and asked to volunteer three hours of their time stuffing envelopes for a local cause. While the percentages of the subjects in each group who refused (44% - control, 60% - overt rehearsal, and 70% - covert rehearsal) follow the same direction as the other results, the differences are not significant.

In a series of four experiments McFall and Twentyman (1973) further tested the effectiveness of the various components of assertion training.

The first experiment compared (a) covert rehearsal, modeling, and coaching; (b) covert rehearsal and coaching; (c) covert rehearsal and modeling; (d) covert rehearsal only; (e) modeling and coaching; and (f) an assessment control. Twenty-six male and 46 female unassertive college students were randomly divided into the six groups. The results on both the Conflict Resolution Inventory and the Behavioral Role-playing Assertion Test indicate that rehearsal and coaching each produced significant additive increases in assertive behavior while the modeling component did not contribute to the effectiveness of the treatment. No significant pattern of results was obtained on a one-month telephone follow-up.

The second study was performed in order to replicate the result with regard to modeling and to further investigate the failure to find a transfer of training on the follow-up measure. In this study 37 male and 53 female unassertive college students were randomly divided into nine groups according to a 3 x 3 factorial design. One experimental factor was the type of treatment used. The three levels of this factor were (a) covert rehearsal, modeling, and coaching; (b) covert rehearsal and coaching; and (c) covert rehearsal only. The second experimental factor was the amount of time allowed to elapse between the end of treatment and the first follow-up test, and the three levels were 11, 18, and 25 days. Four follow-up measures were

used: 1) the phone call measure used in the first experiment, 2) the Conflict Resolution Inventory, 3) waiting-room behavioral test of refusal behavior, and 4) an additional phone call measure. The results indicated a significant effect due to treatments on both the Conflict Resolution Inventory and the Behavioral Role-playing Assertion Test. Comparison of the three forms of treatment at the posttest revealed significant effects on both measures due to coaching but not due to modeling. These differences still existed at follow-up for the Conflict Resolution Inventory. None of the other follow-up measures showed significant differences due to treatment or time lag. For the Behavioral Role-playing Assertion Test at posttest the same differences held for three items that had been used in training as for untrained items. Thus, some generalization of treatment effects is indicated.

One aim of the third experiment was to further clarify the findings concerning modeling. It was hypothesized that the lack of a modeling effect was due to the particular models being "too competent, too extreme, or somehow too unrealistic to elicit emulation". In order to test this hypothesis half the subjects in this study heard the old models while the other half heard models who were more tactful, more hesitant, and less extreme. Another objective was to further study the differential effectiveness of overt and covert rehearsal. Thus, one third of the subjects rehearsed overtly, one third rehearsed covertly, and one third rehearsed covertly the first time a situation was presented and overtly thereafter. Feedback was not used. Twenty-

two male and 26 female unassertive college students were randomly divided into seven groups, six treatment groups of six apiece and one assessment control group of 12. The six treatment groups were as follows: (a) old model, overt; (b) old model, covert; (c) old model, overt-covert; (d) new model, overt; (e) new model, covert; and (f) new model, overt-covert. On both the Conflict Resolution Inventory and the Behavioral Role-playing Assertion Test the treatment groups showed significantly more improvement than the control group. However there were no differences due to either type of model or type of rehearsal. A telephone follow-up measure revealed no significant differences between groups in refusal behavior.

The fourth experiment examined the hypothesis that the lack of a modeling effect was due to the tape recorded model lacking realism and credibility. It was suggested that a video-taped model might be more effective as the visual mode of presentation can convey more information, is more intrinsically interesting, and enhances the realism of the modeled behavior. To test this hypothesis 30 male and 24 female unassertive college students were randomly divided into three groups. One group heard a video-taped model, one the audio portion of the video-taped model, and the third group served as an assessment control. For the two treatment groups covert-overt rehearsal, coaching, and modeling were used. The two treatment groups improved significantly more on the Conflict Resolution Inventory than did the control group although there was no difference between the audio model and video model groups. The same pattern held for the

subjects' rating of the helpfulness of the treatment. A follow-up measure was employed in which a confederate telephoned the subjects and made a series of seven increasingly unreasonable requests. The two treatment groups refused significantly earlier than did the control group but were not significantly different from each other. In addition, the confederate rated each subject on assertiveness and there were no differences.

This series of experiments provided a sound empirical basis for the further development of the techniques used in assertion training. These studies were done in a laboratory analogue setting that provided for controlled, standardized presentation of treatments and thus kept experimenter bias to a minimum. Treatment procedures and outcome criteria were defined operationally, treatments were compared to both waiting list and attention placebo controls, treatment follow-up measures were used, subjects were selected according to pre-treatment measures and thus the sample was operationally defined, and subjects were randomly assigned to groups.

In general these studies showed the technique of behavioral rehearsal alone to be significantly more effective than either waiting list or attention placebo controls in increasing assertive behavior. Whether the rehearsal was overt, covert, or a combination of the two did not seem to make a difference. The component of coaching was found to have a significant effect while the component of modeling as defined in these experiments did not increase the effectiveness of the assertion training procedure. The effect of feedback concerning

performance cannot be clearly determined from these studies.

The results of this research concerning maintenance and generalization of behavior change following treatment are ambiguous. Maintenance was found with some measures while it was not with others. Perhaps a great deal of the ambiguity is a result of the inadequacy of some of the follow-up measures. However, given the positive results it seems safe to say that this research did provide partial, but not conclusive, support for the maintenance and generalization of behavior change.

While the analogue treatment procedure used in these studies provided for control of potential sources of bias, it also serves to limit the generalizability of the results. This would seem to be particularly true in the case of negative results, as one would expect a clinical form of a more limited laboratory procedure to be at least as effective as the analogue procedure. The lack of a modeling effect could be due to the limited way in which it was employed, as could the lack of a clear-cut feedback effect.

The effects of the modeling and feedback components received further attention in studies done by Eisler, Hersen, and Miller (1973); Hersen, Eisler, Miller, Johnson, and Pinkston (1973); and Melnick (1973).

Using assertive behavior as a target Eisler, Hersen, and Miller selected 30 unassertive psychiatric in-patients as subjects. Subjects matched on the basis of age, diagnosis, and initial self-reported assertiveness were assigned to one of three treatment

conditions: (a) modeling, (b) practice control, and (c) test-retest control. Five standardized scenes from the Behavioral Assertiveness Test developed by the authors were used for training purposes. For each situation, subjects in the modeling group first saw a videotaped model demonstrate an assertive response and then they role-played the situation with a female confederate. Each scene and each videotaped model were presented four times. Subjects in the practice control group went through the same procedure without the model. Neither group received coaching. Subjects in the test-retest group received only a pre- and a posttest. Subject's pre- and post-videotaped responses to the Behavioral Assertiveness Test were rated according to eight components of assertiveness (Eisler, Miller, & Hersen, 1973). On five of these measures the modeling group performed significantly better than the practice control or the test-retest control. There were no significant differences between the latter two groups. The modeling group showed significant improvement on the following components of assertiveness: duration of reply, number of requests for new behavior, degree of affect, louder speech, and overall assertiveness.

Assertion training for psychiatric inpatients was further studied by Hersen, Eisler, Miller, Johnson and Pinkston. Fifty male patients matched on the basis of age, years of education, initial self reported assertiveness, and diagnosis were assigned to one of five conditions: (a) test-retest, (b) practice control, (c) instructions, (d) modeling, and (e) modeling plus instructions. The Behavioral Assertiveness

Test used in the previous study was used again as the outcome criterion, with the exception that only seven of the eight behavioral measures of performance were used. In addition the Wolpe-Lazarus Assertiveness Questionnaire was administered. Modeling plus instructions was found to be superior or equal to instructions alone or modeling alone on five of the seven behavioral components of the Behavioral Assertion Test. Instructions alone and modeling alone led to the greatest improvement on the remaining two components. No differences were found between the practice control and test retest groups on any of the seven assertiveness measures. No significant treatment differences were found on the Wolpe-Lazarus Assertiveness Questionnaire.

Melnick used college students selected according to a criterion of minimal dating behavior to study the effects of (a) vicarious learning, (b) behavioral rehearsal, (c) response feedback, and (d) direct reinforcement of appropriate social behaviors on increasing appropriate dating behavior. Sixty male subjects were randomly assigned to two control and four treatment conditions. One control group received only a pretest and a posttest while the other received an additional four sessions of a placebo insight therapy from a female therapist. The vicarious learning group viewed four, 40 minute videotapes depicting male and female college students engaging in progressively more intimate interactions. The behavioral rehearsal group viewed a videotape for the first five minutes of each session, role-played with a female confederate under experimenter guidance for five min-

utes, and then interacted with the confederate without supervision for the next thirty minutes. The response feedback group received the same treatment as the behavioral rehearsal group with the exception that they spent the last 15 minutes of each session viewing a videotape of their interaction with the confederate. The final group received the same treatment as the feedback group and in addition received reinforcement once every 90 seconds for appropriate behavior.

The primary measure was a Simulated Dating Task in which the subjects unknowingly waited in a room with a female confederate. Other measures included a Situation Test in which subjects responded to ten videotaped situations and an Adjective Check List measure of self-concept. For the Simulated Dating Task and the Situation Test the subjects in the two feedback groups showed the greatest improvement. The two other groups did not differ significantly from the controls at posttest. The addition of the reinforcement component had no significant effect. There were no group differences on amount of improvement on the Adjective Check List.

The results summarized above, with regard to the effectiveness of the individual components of the social skills training approach, have been somewhat contradictory. The discrepancies of the results could stem from a lack of standardization of the research. Different populations have been sampled, techniques have differed operationally from study to study, different outcome measures have been used, and different target behaviors have been treated. Thus there appears to be

a need for future research to proceed in a more systematic manner. In particular there seems to be a need for development of standardized operational definitions of the components of social skills training as well as the development of standardized outcome measures. Then the individual components can be systematically studied as they relate to different subjects populations and different target behaviors.

However, while the effects of individual components need further clarification, there seems to be a great deal of support for the effectiveness of a combination of several of the components. Thus a combination of behavioral rehearsal, modeling, coaching, and feedback has been clearly shown to have therapeutic value above and beyond that of attention placebo or waiting list control treatments.

The above studies have researched the individual components of social skills training either in individual therapy or in therapy analogue settings. However, the social skills training approach has also been applied to a variety of target behaviors using "packages" of the individual components in both individual and group treatment programs.

Hedquist and Weinhold (1970) compared two methods of behavioral group counseling in the treatment of college students screened as being socially anxious and unassertive. Their treatments were (a) a behavioral rehearsal group in which modeling and coaching were also used, (b) a social learning group in which the group members were engaged in a program of social behavior change aimed at enabling them to behave in such a way as to resolve their complaints, and (c) a placebo discussion group. Ten subjects were assigned to each treatment

group and 20 to the control group. Using as an outcome criterion the subjects' self reported frequency of verbal assertive responses outside the group situation, the authors found that both the treatment groups improved significantly more than the control and that there was no difference between treatment groups. Six weeks after the end of treatment a two week follow-up was conducted in which there were no significant group differences as all groups had returned to about their original baseline level.

While this study was methodologically sophisticated in many ways, the validity of its results is questionable due to the choice of an outcome measure. Self-report criteria can be subject to demand characteristics (Bornstein, Hamilton, Carmody, Ryktarik, & Veraldi, 1976; Kazdin, 1973) and thus there is a possibility that the group differences were a result of differential demand for improvement. In addition, there are other components to assertiveness besides the verbal component. In conjunction with other criteria this measure could have provided useful information, but as the sole measure of treatment effects it leads to results that can't be clearly interpreted.

Galassi, Galassi, and Litz (1974) used a group from of assertion training with unassertive college students. Thirty-two subjects were divided randomly into four groups, each of which contained four males and four females. Two of the groups received eight, 90 minute assertion training sessions. The other two groups were assessment only controls. A package assertion training program was used which included videotaped modeling; behavioral rehearsal; video, peer, and

trainer feedback; biliotherapy; homework assignments; trainer exhortation; and peer group support. Each group was conducted by a male-female co-therapist team. Significant differences between the assertion training groups and the control groups were found on the College Self Expression Scale, a self report measure of assertiveness developed by the authors; a Subjective Units of Disturbance Scale; and percentage of eye contact, length of scene, and assertive content measured in a role-playing situation.

In a series of studies led by Arkowitz, the social skills approach has been applied to the problem of heterosexual interaction response inhibition. Considerable emphasis has been placed upon assessing the factors which correspond with response inhibition and upon developing assessment instruments based on those factors (Arkowitz, Lichtenstein, McGovern, & Hines, 1975; Clark & Arkowitz, 1975; Glasgow & Arkowitz, 1975).

Christenson, Arkowitz, and Anderson (1975) investigated practice dating as a treatment of college dating inhibitions. Thirty male and 30 female volunteer subjects were randomly assigned to a treatment group receiving practice dates plus feedback, a treatment group receiving practice dates only, or a delayed treatment control group. Subjects within the practice dating groups were randomly matched by computer for a series of six practice dates, each with a different person. After each practice date, subjects in the feedback condition completed and exchanged forms calling for primarily positive comments about the partner. On subjective self report, self-monitoring,

and behavioral measures the two practice dating groups showed significantly greater improvement than the control group. There was a tendency for the practice dating only group to be superior to the practice dating plus feedback group, although this difference was significant only for behavioral measures.

McGovern, Arkowitz, and Gilmore (1975) compared three social skills training groups with a waiting list control in the treatment of dating inhibitions. The treatment groups all received a dating manual, contact and discussion with female trainers, and group discussion meetings. In addition, two of the treatment groups also received behavioral rehearsal. One group rehearsed situations in the office while the other rehearsed in natural settings around the campus. Eight subjects were randomly assigned to each of the treatment groups while 10 were randomly assigned to the control group. Each of the treatment groups participated in six 105 minute sessions. Significant differences between the combined treatment groups and the control group were found on the Survey of Heterosexual Interactions, a self report measure developed by Twentyman and McFall (1975); and the Self Rating Form, a 15 item self report measure of skill and anxiety in heterosexual situations. There were no significant differences among treatment groups, thus the addition of behavior rehearsal did not increase the efficacy of the treatment.

In evaluating dating specific treatment approaches with males Bander, Steinke, Allen, and Mosher (1975) compared an eight session reeducative package, the same package plus systematic desensitization

to social anxiety, a single four hour human relations training program, an attention placebo procedure designed to increase personal awareness, and a no-treatment control. The reeducative packages consisted of role-playing, feedback, information counseling, and homework assignments. The human relations training program provided subjects with exposure to a large number of female peers and an opportunity to share feelings and information. Eighty-four male college subjects were randomly divided into the five groups. The two reeducative package groups showed superior improvement on self report and behavioral outcome criteria when compared to the other three groups. The addition of systematic desensitization did not increase the efficacy of the treatment.

Curran (1975) compared a social skills training program, systematic desensitization, an attention placebo, and a waiting list control in treatment of dating anxiety. The social skills training program included behavioral rehearsal, modeling, feedback, and homework assignments. The attention placebo group received relaxation training. Nineteen male and three female college student volunteers with a history of minimal dating were randomly divided into the four groups. With the exception of the waiting list control group each group met for six 75 minute sessions. The social skills and systematic desensitization groups showed significantly greater pre-post improvement on behavioral skill and anxiety measures.

Goldsmith and McFall (1975) developed and evaluated an interpersonal skill training program for psychiatric inpatients. An exten-

sive procedure was carried out in order to identify interpersonal situations that were problematic to the patients and develop them into standardized stimulus material for training. Thirty-six male patients were used to evaluate the training procedure. Subjects were randomly divided into three groups of 12 each: an interpersonal skill training group, an insight oriented pseudo-therapy group, and an assessment only control group. Subjects in the interpersonal skill training group were individually administered three, one hour training sessions which utilized the components of behavioral rehearsal, modeling, coaching, recorded response feedback, and corrective feedback. Training instructions and stimuli were presented via audio tape. The skill training group evidenced improvement superior to both controls on global self rating scales, self report measures of comfort and competence in specific interpersonal situations, behavioral performance measures for role-played situations, and in performance in an interaction in which the subjects were instructed to carry on a conversation with a stranger (a confederate). The magnitude of the group differences was greater for the more objective behavioral measures than for the subjective, global self report measures.

MacDonald, Lindquist, Kramer, McGrath, and Rhyne (1975) used a group social skills training program in treating minimal dating. Forty-eight male college students who classified themselves as being shy and anxious around girls were randomly assigned to four experimental conditions. Each condition contained two groups of six. The four conditions were: (a) behavioral rehearsal, (b) behavioral rehearsal

with homework assignments, (c) attention placebo, and (d) waiting list control. Subjects in the treatment groups attended six weekly two hour sessions led by female therapists. Significant treatment effects were found on the skill score of the Role-Playing Dating Interactions, a role playing test developed by the authors, and the Profile of Mood Scale. No significant treatment effects were found on a modified form of the S-R Inventory of Anxiousness, the Interpersonal Anxiety Test, or the number of reported dates during the previous week. Further analysis showed that three of four treatment groups improved significantly on the skill level measure while none of the control groups showed significant improvement. The same pattern occurred for the Profile of Mood Scale.

Twentyman and McFall (1975) used an analogue, individual treatment package consisting of three sessions of behavioral rehearsal, modeling, and coaching with college males who reported themselves unable to interact with females. Following pretreatment assessment 15 subjects were randomly assigned to a social skills training group while 16 were randomly assigned to an assessment only control group. Subjects receiving social skills training showed greater improvement than controls on physiological and self report measures of anxiety within a role playing test, and on objective skill ratings for the role-playing test. The above differences weren't found for a forced interaction test. There was evidence that treatment subjects changed more on self-report measures of frequency and duration of interactions with females following treatment.

Implications for Further Research

Past research has shown the social skills training approach to be a highly effective means of developing effective interpersonal behaviors. Individual components of the training process have been tested in clinical settings. Thus this particular approach is a good example of knowledge gathered from research being applied in the clinic. However, perhaps due to the relative newness of this approach, there are several limitations in the present body of knowledge concerning it.

For the most part social skills training has been evaluated with college students selected from psychology classes. In some of the studies subjects received "experimental credit" for the participation and in one (Galassi, et.al.) subjects were paid. In addition, specific target behaviors, particularly assertive behavior and dating behavior, have been selected for study. While such specificity enables a relatively unambiguous interpretation of results, it also tends to limit the generalizability of the research. Thus there is a need for further research to be done in more clinical settings where treatment can be focused on target behaviors that are clinically relevant and specific to individual clients.

A further limitation of the present knowledge stems from the outcome measures that have been generally used. For the most part behavioral and self report measures which focus on behavior in specific situations have been used. While these are important outcome criteria, the addition of a broader range of criteria could provide valuable

information. In particular, objective personality measures might be helpful in further clarifying the effects of social skills training on aspects of behavior other than the specific target behavior. In addition to assessing the degree of generalization of the treatment, these measures can also contribute to the overall psychometric sophistication of the research.

The future direction of research on social skills training seems to be one of expanding the present research so that the effects of using the approach in varied, clinical settings can be determined. As further knowledge is gathered, it will be easier to determine under which circumstances this procedure is appropriate and under which circumstances it is inappropriate.

Effects of Pretesting

Significance of Pretesting in Research and Evaluation of Psychotherapy

Traditionally the effects of psychotherapy have been evaluated using research designs which include a pretest followed by a treatment followed by a posttest. This basic strategy has been used both for evaluating the effects of treatment of individuals as well as for determining differences between groups receiving different treatments (Fiske, Hunt, Luborsky, Orne, Parloff, Reiser, & Tuma, 1970). Diagrammatically, where O stands for observation or assessment, X stands for a treatment, and R stands for random assignment to groups, the design for individuals would be

O X O

and for groups would be

R O X O

R O O

(Campbell & Stanley, 1963).

In terms of providing information about the effects of therapy, this strategy has a great deal of value. Having taken a pre-treatment measurement the researcher can then determine not only the absolute level at posttest and whether or not groups differ at posttest, but also the extent to which each group as well as each individual improved as a result of treatment.

However, one problem inherent in this assessment strategy is that the pretest may influence the results at posttest. This can occur for several reasons; it may sensitize the subjects to the treatment, it may give the subjects a clear baseline from which to improve (Kazdin, 1973), and the pretest itself may have therapeutic value. In a design in which all groups receive a pretest there is no way to separate true treatment effects from pretest and pretest x treatment interaction effects. Thus in order to be able to generalize the results at posttest to populations not pretested, it must be justifiable to assume that the pretest has no effects on its own and that it does not interact with the treatment.

A design that enables the researcher to evaluate the effects of pretesting, treatment, and their interaction is the Solomon four-group design (Solomon, 1949; Campbell & Stanley, 1963). In this design all four groups receive a posttest, two groups receive a treatment while

the other two receive no treatment, and one treatment and one control group receive a pretest while the other treatment group and the other control group receive no pretest. This design can be diagrammatically represented as follows

R	O	X	O
R	O		O
R		X	O
R			O

While this design has an advantage in that treatment effects can be isolated it has been limited in application since two groups of subjects are required in addition to the groups ordinarily used in a pre-post design.

Review of the Literature

Lang and Lazovik (1963) in a study of systematic desensitization also examined the effect of pretesting. Seven male and 17 female snake phobic college students were divided into four groups, two that received systematic desensitization and two that didn't. Of the two control groups, one received three assessments timed to coincide with the three assessments of the one treatment group, while the other received two assessments timed to coincide with the assessments of the other treatment group. Using as an outcome measure the number of subjects in each group who actually handled a snake in a Behavioral Avoidance Test the authors found no appreciable effect due to pre-testing. Effects of pretesting were not reported for other outcome measures.

The results from this study are difficult to interpret. The measure used is probably sensitive only to gross effects, particularly given the small n of the study. A maximum of one subject per group handled the snake during the first two tests. In addition, during the Behavioral Avoidance Test an experimenter modeled the approach behavior. Thus there is a modeling effect confounded with the pre-testing effect as the groups that didn't receive the initial assessment also didn't have the approach behavior modeled for them.

In a study of two methods of assessing avoidance behavior Borkovec and Craighead (1971) also tested the effect of repeated administration of testing. Forty-eight female college students were randomly divided into four groups. One group was given one avoidance test twice, one group was given the other avoidance test twice, and the other two groups received each test once, with the order of presentation being counterbalanced. Dependent measures were degree of approach to a non-poisonous snake, the Geer Fear Survey Schedule and pulse rate following the avoidance test. Significant effects due to the repetition of the avoidance test were found for the degree of approach and for the Geer Fear Survey Schedule but not for pulse rate. However, while these results indicate a pretesting effect they must be questioned since no groups were present that received no pretest. Thus the pretest cannot be causally associated with the increase at posttest.

Using a Solomon four-group design Kazdin (1973) studied the effects of pretesting and suggestion on avoidance behavior. Eighty-one

snake phobic subjects were randomly divided into four groups. Two of the groups received suggestion for improvement while the other two received only assessment. One suggestion group and one control group were pretested. Dependent measures included a Behavioral Avoidance Test, a self report Fear Thermometer measuring fear during the avoidance test, and self report attitude and fear measures. No significant effects were found due to pretesting or due to the pretesting x suggestion interaction. Significant effects due to suggestion were found on all measures except one self report fear survey.

Borkovec, Stone, O'Brien, and Kaloupek (1974) found that self-reported anxiety within a forced interaction task was significantly less for the second administration of the task than for the first. This pattern was not found for physiological measures. There was no control group that didn't receive a pretest.

In a study summarized earlier, Galassi, Galassi, and Litz (1974) used a Solomon four-group design with assertion training as the treatment being tested. On two measures, Subjective Units of Disturbance and assertive content of a videotaped role-played situation they found a significant pretesting effect for the two control groups. They concluded, "pretesting may constitute a one-session treatment (behavioral rehearsal)" (p. 393).

In another study summarized earlier MacDonald et. al. (1975) found a significant decrement from the pretest to the posttest in the anxiety score of the Role-Played Dating Interactions test. Again there was no control group which received a posttest without a pretest.

Implications for Future Research

As is readily apparent, there is a lack of research dealing with the effects of pretesting in the evaluation of psychotherapy. The results presented above are ambiguous, some show significant pretesting effects while others show no effects. In addition, in the studies that show effects, pretesting effects occur for some measures and not for others.

Given the prevalence of the pretest-treatment-posttest design for the evaluation of psychotherapy, there seems to be a need for further research into the effects of pretesting. In order for generalization of results in between group designs and for estimates of treatment effects in single subject designs to be valid, the effect of pretesting must first be known.

As the effects of pretesting seem to differ according to the situation in which the testing occurs and according to the dependent measure used, further research should attempt to determine effects for specific situations on specific measures. In particular there is a need for research conducted in clinical settings. In this manner a growing body of knowledge can be developed that will aid the clinician and researcher in determining which measures administered under which conditions will be subject to the effects of pretesting.

Effects of Therapist and Client Sex on the Outcome of Psychotherapy

Implications of Therapist-Client Sex for Psychotherapy

The recent feminist movement has produced implications for the

theory and practice of psychotherapy. Barrett, Berg, Eaton, and Pomeroy (1974) have suggested that the traditional practice of psychotherapy with female clients has perpetuated the myth of the inferiority of women and has served to bring women to accept oppressing conditions instead of having encouraged striving for self-satisfying goals.

One aspect of the psychotherapeutic relationship that has received an increasing amount of attention is the sex of the participants. The advisability of male therapists treating female clients has been questioned. In particular Hill (1975) has suggested that female therapists can better understand and empathize with female clients, and Rice and Rice (1973) have suggested that female therapists would be less inclined to view role unhappiness as psychopathological and would feel less threat to their social power as a result of female clients working toward independence and equality. In addition, it has been suggested that women might be better equipped to be therapists as they have been raised to be nurturant, sensitive, and understanding (Carter, 1971).

Review of the Literature

In a study aimed at establishing empirical guidelines for assignment of therapists Howard, Orlinsky, and Hill (1970) considered the sex variable. In the study 118 female patients were treated by 18 male and 9 female staff therapists. After five to six sessions the female clients seeing the female therapists reported more satisfaction with their therapists than did those seeing male therapists.

Smith (1972) studied the influence of client sex on counselors' judgement of, recommendations for, and prediction of academic success for clients. In this study, secondary school counselors were presented with hypothetical case information in which sex was varied. No significant differences in judgements, recommendations, or predictions of success were found as a result of counselor or client sex.

Geer (1972) studied the sex variable as it relates to the outcome of group systematic desensitization. Twenty-two male and 22 female test anxious college students were divided into four groups. Two groups were no treatment controls, one group received systematic desensitization from a female therapist, and one group received systematic desensitization from a male therapist. On the Suinn Test Anxiety Behavior Scale the male therapist was found to be significantly more effective with female clients than was the female therapist while the female therapist was more effective, although not significantly, with male clients than was the male therapist.

Hill (1975) examined the effects of therapist and client sex as they relate to behavior within the counseling session. Twelve male and 12 female counselors each taped their second session with one male and one female client whom they were seeing in ongoing counseling. These tapes were then rated according to counselor and client verbal behavior, counselor and client satisfaction, empathy, depth of self exploration, and counselor and client activity levels. Inexperienced counselors were more empathetic and focused more on feelings with same sex clients than with opposite sex clients. Experienced

therapists were more empathetic and elicited more feeling with the same sex clients and were more active and directive but less empathetic with opposite sex clients. Clients of female counselors reported more satisfaction with the session than did clients of male counselors. No differences in rated empathy were found between male and female counselors.

Scher (1975) looked at the sex variable in relation to the outcome of psychotherapy. Eighteen male and five female counselors employed at a counseling service worked with 20 female and 16 male college students who had voluntarily requested counseling. The first, second, fifth, and final sessions were taped and rated for the facilitative conditions of non-possessive warmth and genuineness. Non-facilitative counselors were excluded from further data analysis. No significant differences due to therapist or client sex or their interaction were found on measures of client reported symptom relief, client reported satisfaction with the therapeutic interaction, counselor reported symptom relief, or counselor reported satisfaction with the therapeutic interaction.

Implications for Further Research

While the sex variable has been the subject of considerable discussion there has been a general lack of research aimed at studying its effect on the outcome of psychotherapy. The pattern of results summarized above shows a considerable amount of variation; from opposite sex matching being more effective (Geer), to no differences

due to sex (Smith, Scher), to same sex matching providing the most satisfying relationship for clients (Howard, et. al.). One explanation for the lack of agreement of results could be that the sex variable does not have a uniform effect across all situations. Thus sex-matching might have a different effect with a treatment like systematic desensitization where relationship is deemphasized than it would have with client centered therapy where relationship is emphasized.

The future direction for research on the effects of therapist-client sex matching seems to be one of empirically testing its effect in specified situations with specific treatments, therapists, and clients rather than one of looking for general, uniform effects. Such a research strategy can contribute to the development of empirical guidelines for the matching of therapists and clients, a process that for the most part has previously been left to chance.

Description and Significance of Present Research

The present research was designed to evaluate the effects of pretesting and therapist-client sex on the outcome of a group social skills training program. Eight small treatment groups consisting of half male and half female subjects received a skills training program aimed at increasing effectiveness and decreasing discomfort in social situations. The training procedure included behavioral rehearsal, modeling, coaching, and response feedback. Four of the treatment groups had male therapists and four had female therapists. In addition to the treatment groups there were two assessment only control groups.

A Solomon four-group design was used to evaluate the effects of treatment and pretesting. Outcome was evaluated by means of an assessment battery that included global and situation specific self report measures, behavioral measures, and objective personality inventories designed to assess global and specific aspects of personality.

In order to maximize the relevance of this research to clinical practice, a clinical form of social skills training was used with subjects who were self-referred for treatment of individually relevant target problems. While individual target problems varied somewhat, all were within the range of problems in interpersonal situations. In addition, demographic data was collected from all subjects and half received pre-treatment assessment. Thus a considerable amount of emphasis was placed on defining the sample studied.

The primary goal of this research was to evaluate the effects of pretesting. The prevalence of pretesting in evaluation of psychotherapy and the lack of empirical data concerning pretesting effects highlight the importance of this objective. In this study, pretesting was examined in conjunction with a specific treatment and specific outcome measures. A clearer knowledge of the effects of pretesting under varied and specific circumstances will enable interpretations of psychotherapy research that are less ambiguous and have greater internal and external validity (Campbell & Stanley, 1963).

Another aim of this study was to further clarify the effectiveness and appropriateness of the social skills approach. This study was not

designed primarily to demonstrate the effectiveness of social skills training over attention placebo and no treatment controls as that has already been clearly demonstrated. Rather, through the inclusion of a broad range of outcome measures an attempt was made to obtain a more sensitive determination of treatment effects; on specific responses as well as general response patterns, and on overt behavior as well as subjective experience. Also, within the context of this particular treatment program, an initial attempt was made at establishing empirical guidelines for matching therapists and clients according to sex.

Hypothesis

1. Effects of Pretesting

Significant main effects due to pretesting were hypothesized for dependent variables associated with a behavioral task. As stated by Galassi, Galassi, and Litz (1974) pretesting involving a behavioral task can be conceptualized as a form of behavioral rehearsal, so at posttest, pretest subjects were expected to have greater task-specific skills and to have been somewhat desensitized to the task by the pretest. Thus it was predicted that the pretested subjects would exhibit more effective behavior at posttest and would feel less anxiety than non-pretested subjects.

Significant pretesting effects were also hypothesized for self report measures. It was predicted that subjects who received the social skills treatment would experience differential demand for

improvement than control subjects. As these measures are relatively simple and transparent with regard to what they measure, pretesting was expected to provide subjects with a clear baseline from which to improve. It was also expected that these measures would sensitize the subjects to aspects of their behavior they would like to change. Hence, treatment subjects were expected to receive more demand for improvement with those pretested having a clear baseline from which to improve; and while demand was expected to be less for controls, it was thought that those pretested would be sensitized to change for certain behaviors.

Non-significant pretesting effects were hypothesized for objective personality measures. While the pretest battery might have had therapeutic value, the magnitude of its therapeutic effects was expected to be slight and limited to the specific parts of the pretest due to the relative briefness of the battery as compared to treatment and due to the absence of specific treatment components. As a result, little generalization to the more enduring aspects of behavior tapped by these measures was hypothesized. In addition, these measures are constructed to be non-obvious, and thus it was predicted that subjects would not receive a clear baseline from them and would not have a clear knowledge as to what manner of responding constitutes improvement.

2. Effects of Treatment

Significant differences between skills and control groups were predicted for all measures with the exception of the global improvement scales taken from the objective personality measures. Past research

has shown the social skills training procedure to effect significant improvement in specific target situations as well as in similar situations not used in training. However, the lack of research using measures that are less directly related to the target situations makes it difficult to predict the extent to which treatment effects will generalize to other aspects of behavior.

3. Effects of the Pretesting x Treatment Interaction

Predictions more sensitive than those of main effects were not made due to the paucity of research dealing with the effects of pretesting. Thus neither a significant or a non-significant interaction between treatment and pretesting was hypothesized.

4. Effects Due to Therapist and Client Sex

The differences in improvement between clients having same-sex as opposed to opposite-sex therapists was expected to be slight. The treatment was administered in groups where clients interacted with others besides the therapists. Each treatment group had both male and female clients, and thus it was expected that the therapists' sex related deficiencies would be partially compensated for by opposite-sex group members. As a result, non-significant differences between opposite-sex and same-sex pairings were hypothesized for all measures except those associated with the behavioral task, and a rating of client satisfaction with the therapist. Since the behavioral task involved conversing with a member of the opposite sex, it was expected that subjects having an opposite-sex therapist would receive more practice than would subjects having same-sex therapists. In

accord with the findings of Howard, Orlinsky, and Hill that clients were more satisfied with same-sex therapists it was hypothesized that this same pattern would occur in this study.

CHAPTER II

METHOD

Subjects

Subjects were recruited through advertisements placed around the University of Montana campus and in the student newspaper. The advertisements offered an opportunity for assistance in becoming more effective and comfortable in interpersonal situations (See Appendix A for test of advertisements). Thirty-four subjects, 15 male and 19 female, responded to the advertisements. An additional 20 subjects, nine male and 11 female, were recruited from an introductory psychology class. These subjects were offered experimental credit for participation in the program.

Each of the 54 subjects were telephoned and the program was described in detail. In addition, they were told that due to limited availability of therapists and facilities some, randomly chosen, would have to wait approximately four weeks for treatment. Each respondent was asked if he would still be willing to participate in the program should he have to wait. In addition the respondents were told that their progress would be evaluated in order to assess the effectiveness of the treatment, and they were asked if they would agree to participate in the assessment portion of the program. All subjects agreed to both of the above requests.

All subjects were asked to fill out a questionnaire asking for demographic data and the extent of their previous experience with psychotherapy and psychological treatment programs. Appendix B shows the questionnaire as well as a summary of the information provided by the sample of subjects.

Of the 54 original respondents, 46 (21 male and 25 female) began the program. The treatment as well as the assessment was completed by 39 subjects, 19 male and 20 female.

Therapists

Four advanced graduate students in clinical psychology, two male and two female, served as therapists. Each therapist was asked to complete the Therapist Personal Data sheet, and a portion of the Therapist Orientation Sheet developed by Paul (1966). In addition, at the end of the treatment program each therapist was asked to complete a questionnaire (a modified portion of the Therapist Orientation Sheet) describing the treatment techniques they used. Appendix C shows these forms and the responses of each of the therapists.

The experimenter met with each of the therapists prior to the beginning of the program and gave them a standardized set of instructions (see Appendix D for therapist manual). In addition, the experimenter met with the therapists periodically throughout the course of the program in order to answer any questions about the program and to monitor the degree of standardization of treatment interventions across therapists.

Treatments

Two treatments were used, Social Skills (SS) and a Waiting List Control (C).

The SS treatment was employed in small groups of three to five subjects each, with an attempt made to equalize the number of male and female participants within each group. The objective of this treatment was to assist the subjects in developing interpersonal skills which they could utilize comfortably and which would lead to effective interpersonal responses.

The procedure for effecting this objective was as follows (See Appendix D for therapist manual). Initially each subject was asked to specify an interpersonal situation that he considered a problem. With the help of the therapist and other group members, the situation was further clarified and an attempt was made to identify ineffective interpersonal responses. The subject then role-played the situation with either the therapist or another group member. Both positive and negative aspects of the subject's response were pointed out and the group discussed what would constitute an effective response. The subject was given as many opportunities as desired to rehearse responding to the situation. Following each rehearsal trial, he was given an opportunity to receive feedback and to discuss his response with the group. In instances where the subject was having difficulty in developing an effective response, either the therapist or another group member was allowed to take his place in the role-playing situation and model an effective response. Direct coaching was also permitted.

The final decision as to the degree to which the subject could respond effectively was left to the subject. He determined when one situation had received sufficient attention.

Each subject in turn went through the same procedure with regard to his individual problem situation. When one situation had been satisfactorily resolved, the subject was asked to specify and practice another target situation. Therapists were instructed to limit the time spent on any one situation to about 10 minutes at one time, although the subject was allowed to return to the same situation in his turn later. The therapists were also instructed to lead the groups so that approximately equal amounts of time were spent focusing on each subject's target problems. Each group met for four weekly 90 minute sessions.

Assessment Instruments

The assessment instruments and procedures were as follows:

1. Tennessee Self Concept Scale

This scale is made up of 100 self-description items, of which 90 measure self esteem and 10 measure self criticism (MMPI L-scale items). It was developed by Fitts (1964). While the 100 items have been divided into 30 scales, in this study only the total positive score, a measure of self concept, was used.

2. Personality Research Form

This test was developed by Jackson (1967). It was constructed with considerable attention to psychometric theory using Henry

Murray's (1938) theory of personality as a starting point. Form A was administered as a pretest and a parallel Form B was administered as a posttest. Both forms contain a total of 300 items divided into fifteen 20 item scales. Four of these scales were used: Achievement, Affiliation, Exhibition, and Social Recognition (See Appendix E for a description of these scales).

3. S-R Inventory of Anxiousness

This scale was developed by Endler, Hunt, and Rosenstein (1962). It was designed to analyze variation in anxiety into subject, situation, and mode of responding components. It consists of 11 situations for which the subject rates how he would respond according to 14 modes of responding. Five of the 11 situations were used, although all 11 were administered. The five used were new date, speech before a large group, competitive contest, counseling bureau for a personal problem, and interview for an important job. These five situations have been found by the authors to load heavily on an interpersonal situation factor. The total score across all five situations was used as a dependent measure.

4. Subjective Units of Disturbance (SUD) Scale

Prior to the initial assessment each subject was assisted in developing a SUD scale. He was told to consider a scale ranging from 0 to 100 on which 0 was associated with complete relaxation and 100 with the most anxious he had ever been. The subject was then asked to concisely write down the situations to which he had assigned the values of 0 and 100. The subject was asked to think of situations

in which the amount of anxiety he experienced corresponded to SUD values of 50, 25, 75, and he was asked to concisely describe these situations also. Finally, he was asked to estimate the SUD value he generally experiences in an everyday, non-threatening situation, and this value was placed on the scale.

The importance of accurate recording of anxiety was stressed to the subjects. They were told that the results they provided would be used to determine if the treatment could be modified to be more effective, and that inaccurate recording might lead to retention of ineffective components of the treatment.

5. Behavioral Task

All subjects were required to engage in a behavioral task involving a conversation with a confederate. The subjects were instructed to enter a room with a confederate of the opposite sex, to take a seat facing the confederate, and to engage the confederate in conversation for five minutes. They were informed that the confederate would converse normally with them with the exception that the confederate would not initiate the conversation or new topics. The confederates' instructions coincided with those of the subjects.

Subjects were videotaped during the behavioral task and were rated on a modified form of the Timed Behavior Checklist for Performance Anxiety (Paul, 1966). This instrument lists 20 observable manifestations of anxiety, which are scored for presence or absence, for each of eight consecutive 30 second periods. Thirteen of the 20 items were used. The score for each subject consisted of the total

number of indicators marked present over the eight periods. The tape of each subject was rated by the confederate with whom he had previously conversed during the behavioral task. Raters were informed that random inter-rater reliability checks would be made, and independent ratings were obtained for approximately one out of every four tapes. In order to assess the degree of reliability a Pearson product-moment correlation coefficient was calculated comparing the two independent ratings across the subjects for whom reliability checks were made.

6. Client and Therapist Ratings

At the end of the treatment each subject was asked to rate his improvement on a ten point scale, one indicating no improvement and 10 indicating substantial improvement. The subject was also asked to rate his satisfaction with his therapist on a similar scale.

Confederates

Two male and two female undergraduate psychology students served as confederates. As much as was possible, they were kept uninformed about the experimental manipulations employed and the hypothesis of the study, although they were aware that the study involved a social skills training program. They received training so that they would behave as uniformly as possible in the behavioral task, and they were trained to rate the videotape of the behavioral task. They received academic credit for their participation in the study.

Procedure

The subjects who qualified for treatment were randomly divided into two groups of approximately equal size with the constraint that there be approximately the same number of males in each group and the same number of females in each group. All of the subjects in one group received both pre-treatment and post-treatment assessment, while those in the other group received only post-treatment assessment. Following pre-treatment assessment, both groups were further divided into six equal groups, with an attempt made to make the number of males within each group equal to the number of females. Four of these six groups were randomly chosen to receive the SS treatment, and the other two to receive the C treatment. Each therapist was randomly assigned one SS group from those pretested and one SS group from those not pretested. Figure 1 shows the basic plan of the study as well as a) the number of subjects who originally agreed to participate, b) the number of subjects completing the pretest phase of the program, c) the number within each group beginning the treatment phase, and d) the number within each group completing the final assessment.

For both pre-treatment assessment and post-treatment assessment, subjects were scheduled as randomly as possible. Upon appearing for the assessment session, the subject was met by the experimenter and given instructions for and assistance in constructing the SUD scale if it was his initial assessment. He was then given instructions for the behavioral task and after indicating his present

SUD level the behavioral task was initiated. All subjects had an opposite-sex confederate for the behavioral task, and no subject had the same confederate twice. Confederates were blind as to the treatment received by the subject. Upon completing the behavioral task, the subject was asked by the experimenter to indicate his present SUD level, as well as the highest level he experienced during the task. The paper and pencil portion of the assessment battery was then administered. In addition, each subject was asked to record the highest SUD level experienced in an interpersonal situation for each of five consecutive days following each assessment. The average of the five values was used as a dependent variable. Table 1 shows the dependent variables that were used.

Random selection of the waiting list control subjects was done following the pre-treatment assessment. The control subjects were contacted at this time and were informed that they had been selected as those who would have to wait four weeks. There was no further contact with them until the treatment phase of the study was completed. They were then contacted and scheduled for the post-treatment assessment. They then received the same skills training program that the SS subjects had received.

Figure 1
General Study Design

initial contact & screening	pretest	treatment	posttest
n=54	pretest n=24	SS MT1 n=4	n=3
		SS MT2 n=3	n=3
		SS FT1 n=4	n=4
		SS FT2 n=5	n=2
		C n=8	n=5
	no pretest n=29	SS MT1 n=3	n=3
		SS MT2 n=5	n=5
		SS FT1 n=3	n=3
		SS FT2 n=5	n=5
		C n=9	n=6

Note. The n values denote the number of subjects who completed the initial contact and screening, pretest, and posttest phases of the study, and the number of subjects who began the treatment phase.

Table 1
Dependent Variables

Instrument	Dependent Variables
Tennessee Self Concept Scale	total positive score
Personality Research Form	Achievement Affiliation Exhibition Social Recognition
S-R Inventory of Anxiousness	sum of five interpersonal situations across all modes of responding
SUD Scale	level before behavioral task level after behavioral task highest level during behavioral task average of highest levels for each of five days following assessment
Timed Behavioral Checklist for Performance Anxiety	total number of indicators present summed over eight time intervals and both raters
Global Ratings	subject improvement ratings therapist improvement ratings subject satisfaction with therapist ratings

CHAPTER III

RESULTS

The average SUD rating for five days following assessment was excluded from the data analysis since only 15 of the 39 subjects who completed the post-treatment assessment returned the SUD ratings. Analysis was not done on those 15 ratings due to the possible presence of a selection bias.

All dependent variables were subjected to t-tests comparing subjects recruited from the introductory psychology class with self-referred subjects. Since none of the t values approached significance (p's > .25), no distinction between recruited and self-referred subjects was made in any of the subsequent analysis.

Several of the Timed Behavior Checklist items were not used in the analysis due to inadequate inter-rater reliability. The following seven items were retained and were summed to form the Timed Behavior Checklist scores: extraneous arm and hand movement, hands restrained, hand tremors, no eye contact, moistens lips, swallows, and clears throat. Using these seven items a reliability coefficient of .71 (n = 15, p < .001) was obtained.

Analysis of Pretesting and Treatment Effects

An unequal n 2 x 2 factorial analysis of covariance was performed

on post-test scores in order to test pretesting and treatment effects. Covariates were selected as follows: 1.) All PRF and S-R Inventory of Anxiousness variables that were not used as dependent variables were subjected to a 2 x 2 factorial analysis of variance in order to determine the presence of pre-testing and treatment effects. Only those variables in which no significant pretesting, treatment, or pre-testing by treatment interaction effects were found were retained as possible covariates. A p value of .25 was chosen in order to minimize the probability of selecting a covariate which violated the assumption of it being unaffected by the treatments (cf. Kirk, 1968). 2.) Multiple regression was performed on each dependent variable, using as independent variables the group of variables meeting the criterion established above. For each dependent variable, one of the independent variables was chosen as a possible covariate if it was the best single predictor of the dependent variable and if it accounted for a significant portion of the variance of the dependent variable (p < .05). 3.) In order to test the viability of the assumption for analysis of covariance of equal within group regression coefficients, a multiple regression analysis was done on each dependent variable for which a covariate had been selected. The independent variables were the covariate, the factors (pretesting, treatment, and the pretesting by treatment interaction) and the three covariate by factor interactions. Possible covariates were dropped from further analysis whenever the covariate by factor interactions accounted for a significant portion (p < .15) of the dependent variable variation. In instances where a covariate was

dropped, the next best significant predictor was selected as a possible covariate and was subjected to (3).

None of the possible covariates accounted for a significant portion of the variance of the SUD measures during or after the behavioral task. The only possible covariate that accounted for a significant portion of the variance of the Timed Behavior Checklist yielded a significant covariate by factor interaction ($\underline{F}=10.95$; $\underline{df}=3, 28$; $\underline{p} < .01$). Thus these variables were analyzed by an unequal n 2×2 factorial analysis of variance without including a covariate.

Pretesting effects which approached significance were found for SUD after the behavioral task (SUDAT) ($\underline{F}= 3.88$; $\underline{df}=1, 34$; $\underline{p} < .06$), SUD during the task (SUDDT) ($\underline{F} = 3.55$; $\underline{df}=1, 34$; $\underline{p} < .07$) and SUD before the task (SUDBT) ($\underline{F} = 2.62$; $\underline{df}=1, 32$; $\underline{p} < .12$). Figures 2, 3, and 4, which are graphs of the group means for SUDBT, SUDDT, and SUDAT respectively, indicate that pretested groups reported less anxiety associated with the behavioral task than did those not pretested.

Treatment effects that approached significance were found for the sum of the interpersonal situations of the S-R Inventory of Anxiousness (INPRSIT) ($\underline{F} = 3.66$; $\underline{df} = 1, 34$; $\underline{p} < .07$) and the Timed Behavior Checklist (TBCL) ($\underline{F} = 3.26$; $\underline{df} = 1, 37$; $\underline{p} < .08$). Figures 5 and 6 show that for INPRSIT and TBCL respectively, groups that were treated reported less anxiety than those not treated and also displayed fewer overt signs of anxiety during the behavioral task.

A pretesting by treatment interaction that approached significance was found for the PRF scale Exhibition ($\underline{F} = 2.83$; $\underline{df} = 1, 34$; $\underline{p} < .10$).

Figure 2
Graph of Means of the Groups of the Pretesting
by Treatment Design for SUDBT

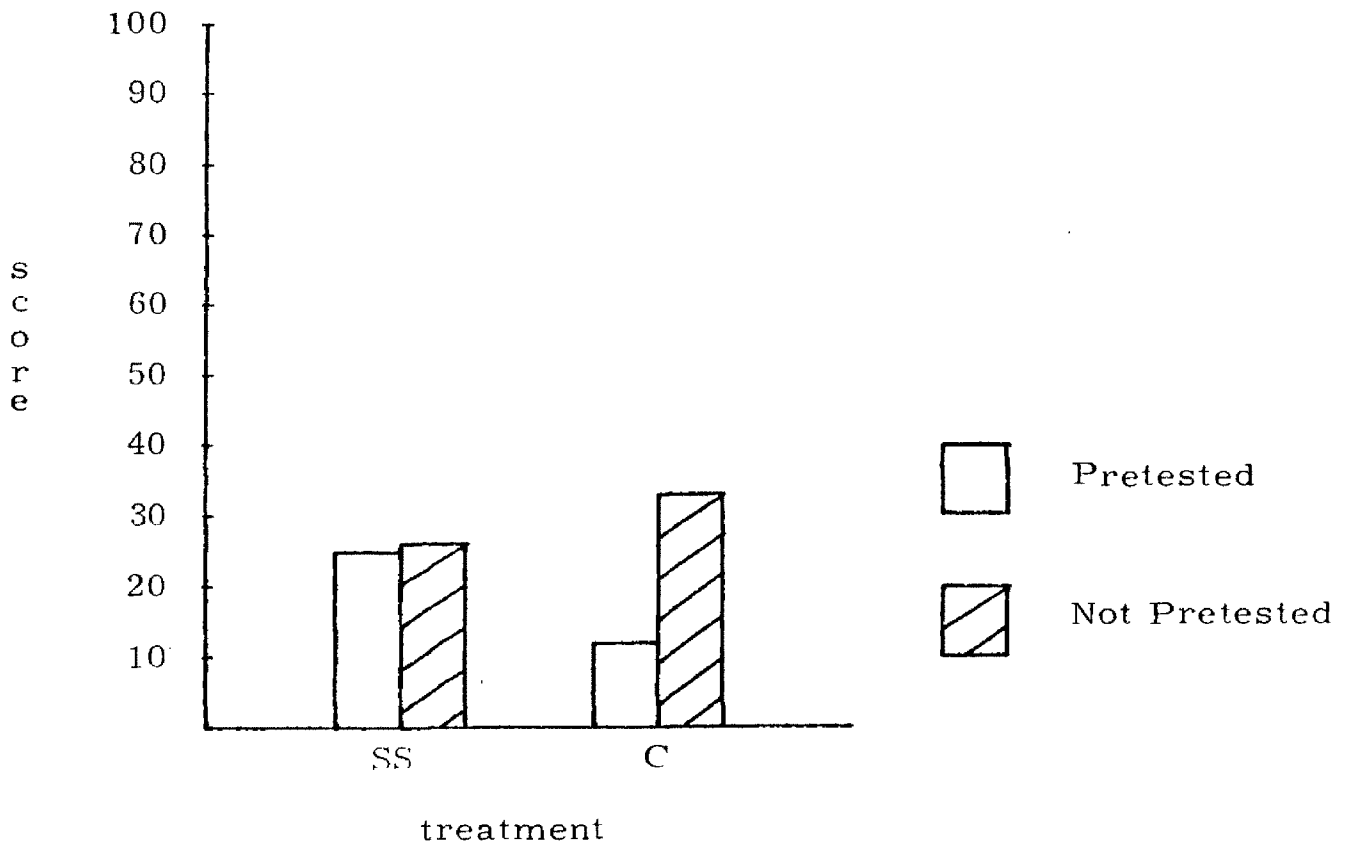


Figure 3

Graph of Means of the Groups of the Pretesting
by Treatment Design for SUDDT

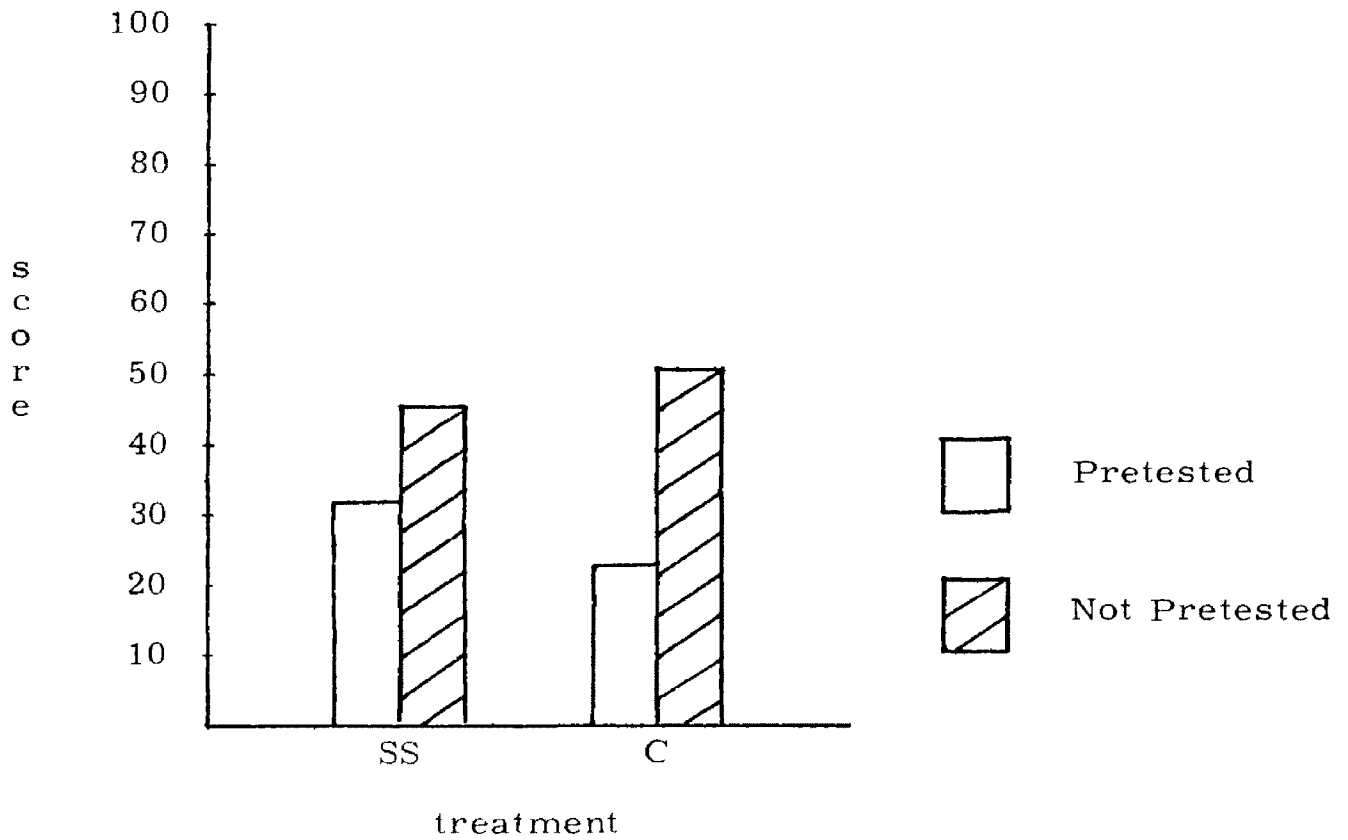


Figure 4
Graph of Means of the Groups of the Pretesting
by Treatment Design for SUDAT

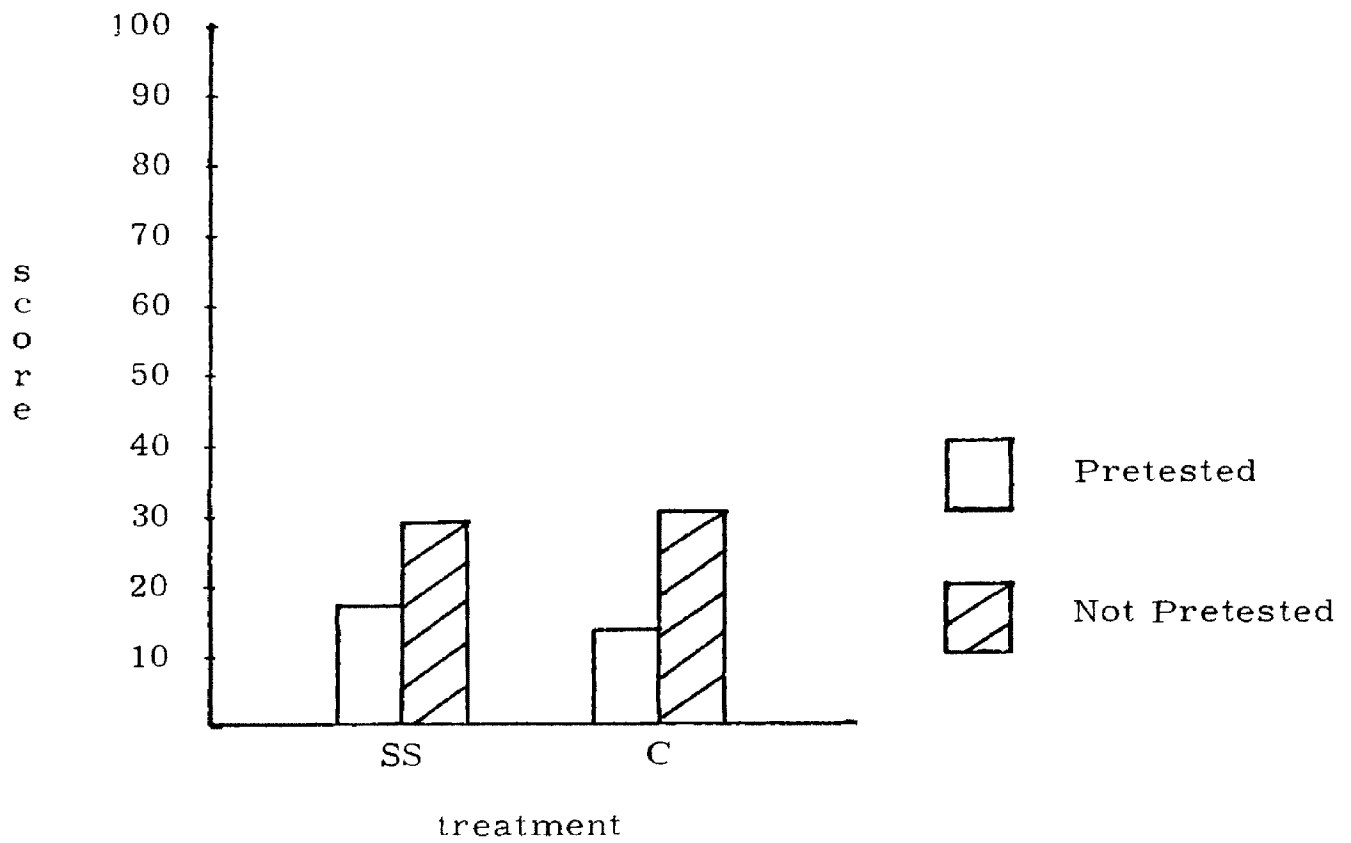


Figure 5
Graph of Means of the Groups of the Pretesting
by Treatment Design for INPRSIT

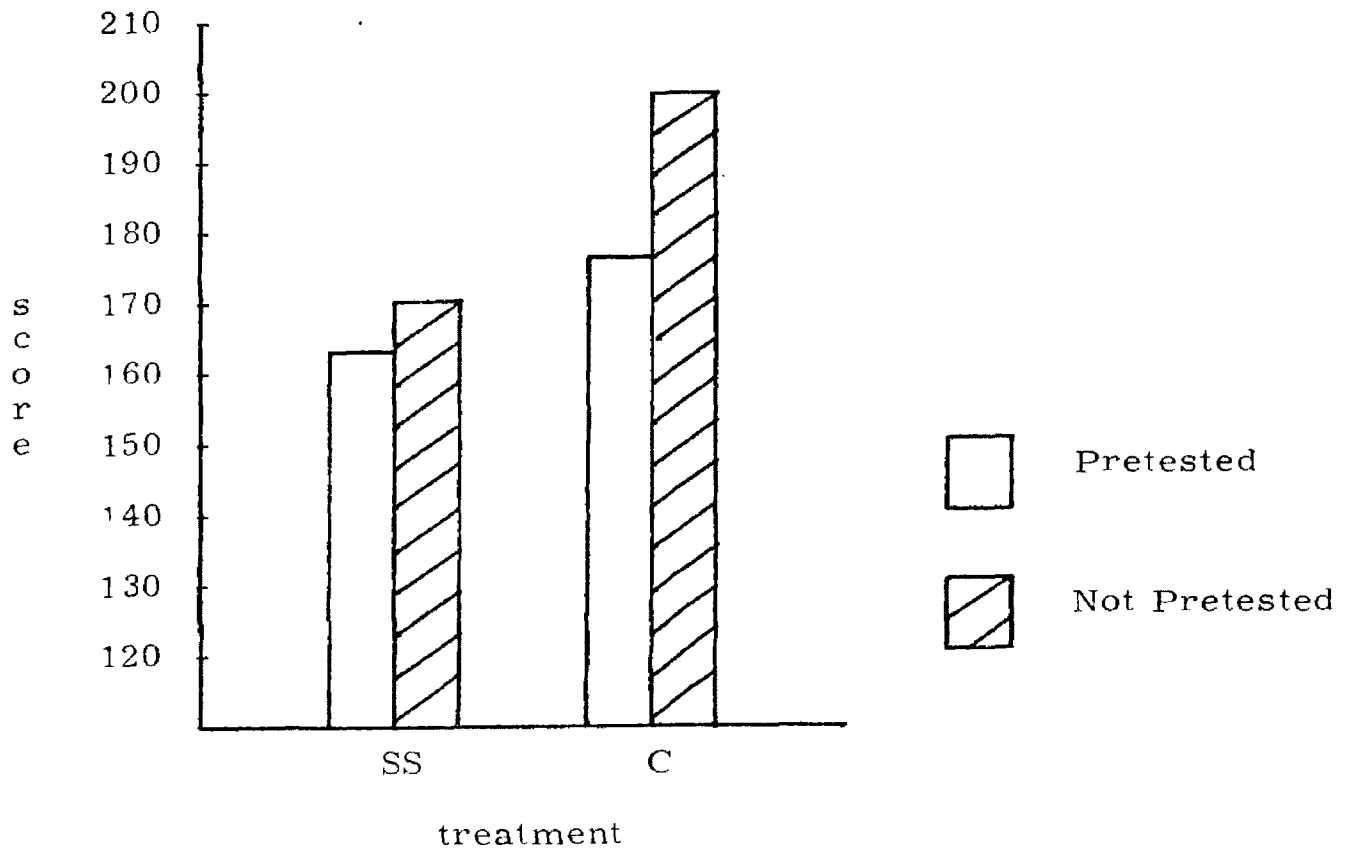


Figure 6
Graph of Means of the Groups of the Pretesting
by Treatment Design for TBCL

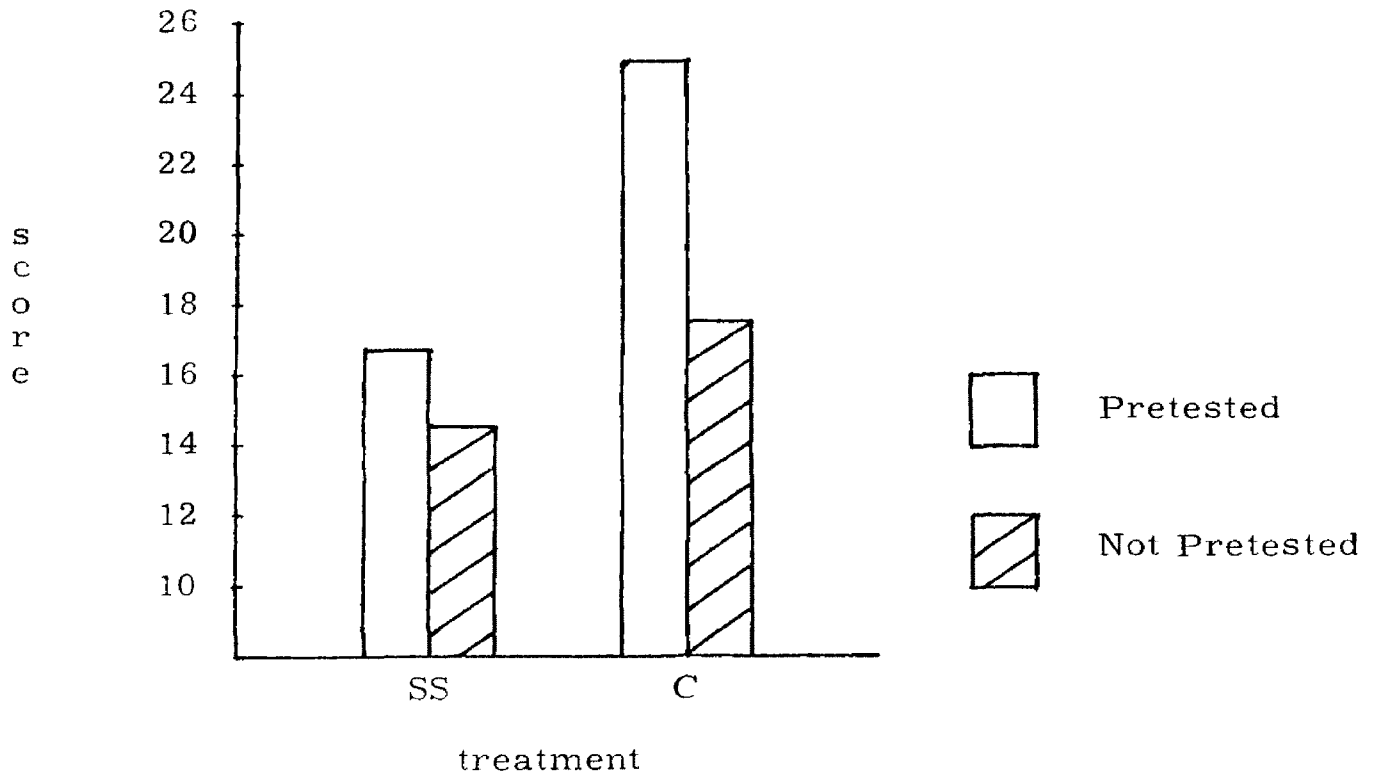


Figure 7 indicates that the mean for the pretested group was less than that of the non-pretested group when both were treated, but was greater when neither were treated.

Descriptive statistics were calculated for the pre-post change scores of the SS and C groups that had been pretested. Table 2 lists mean change, the standard deviation of the change scores, and the range of the change scores for SS subjects who were pretested, as well as the same statistics for pretested C subjects.

Analysis of Therapist and Client Sex Effects

Therapist and Client Sex effects were tested by a 4 x 2 factorial analysis of variance. The levels of the therapist factor were the four therapists while the levels of the sex factor were male clients and female clients. This analysis was performed only on subjects who received treatment. Significant therapist effects were found for Exhibition ($F = 3.29$; $df = 3, 20$; $p < .05$), INPRSIT ($F = 3.49$; $df = 3, 20$; $p < .04$), SUDDT ($F = 5.44$; $df = 3, 19$; $p < .01$), and the therapist improvement rating (THIMPR) ($F = 5.88$; $df = 3, 19$; $p < .01$). In addition, a therapist effect that approached significance was found for SUDAT ($F = 3.018$; $df = 3, 19$; $p < .06$). Table 3 lists the means for each of the four therapists across both client sex levels for each of the above dependent variable. Comparisons across sex, of male versus female, therapists were not performed as generalization to all male or female therapists on the basis of a sample of two would be inadvisable. Non-significant client sex differences were found

Figure 7
Graph of Means of the Groups of the Pretesting
by Treatment Design for Exhibition

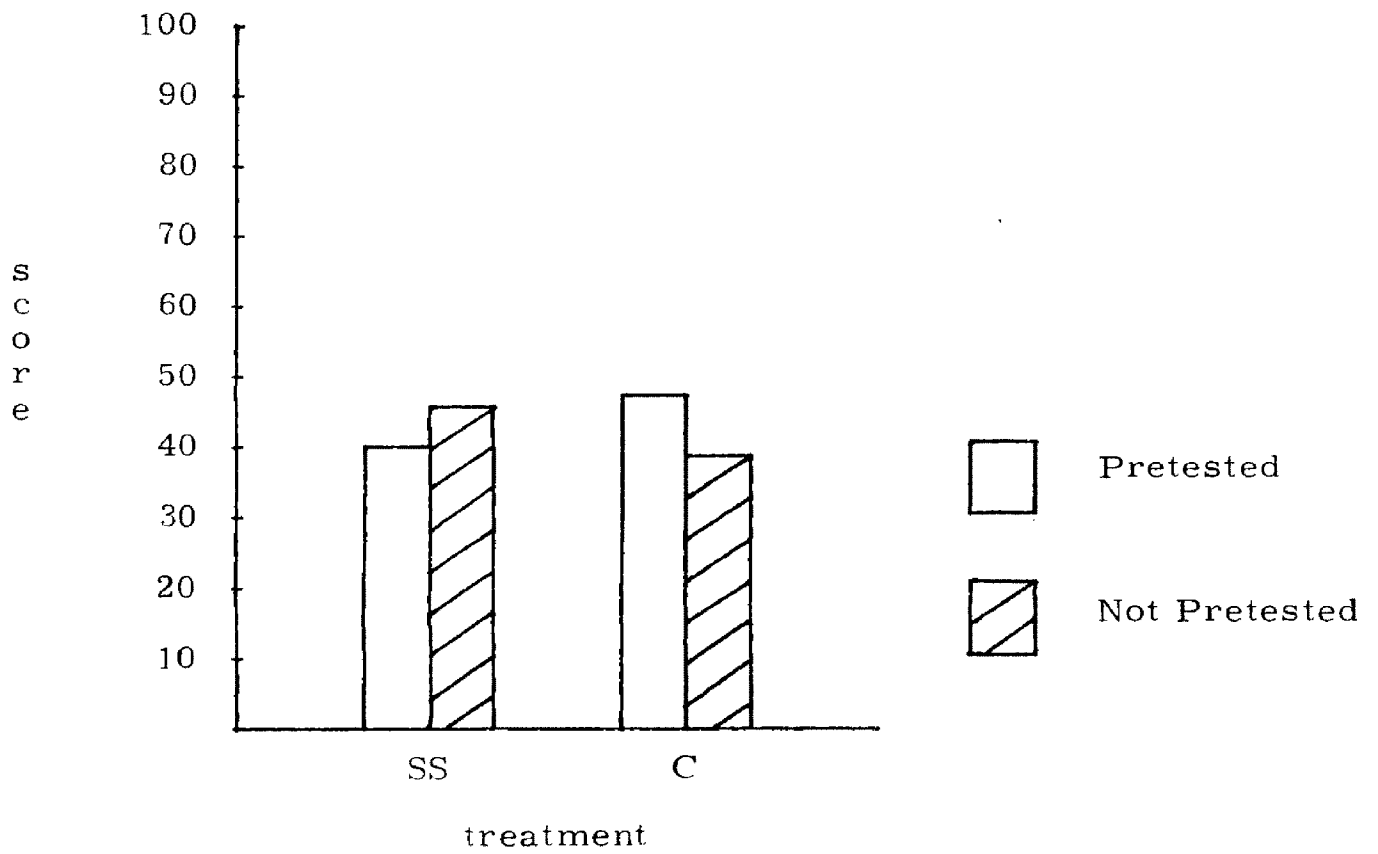


Table 2

Descriptive Statistics for Change Scores of Social Skills Training
and Control Groups that Were Pretested

variable	treatment	<u>n</u>	mean	s. d.	range
Achievement	SS	10	5.70	12.8	-12 - 25
	C	4	-6.50	5.0	-12 - 0
Affiliation	SS	10	.40	8.3	-12 - 14
	C	4	-2.00	7.4	-11 - 4
Exhibition	SS	10	3.60	6.0	-5 - 12
	C	4	-.75	7.6	-9 - 8
Social Recog.	SS	10	.90	6.6	-8 - 10
	C	4	.50	10.8	-12 - 14
INPRSIT	SS	12	-16.17	31.8	-84 - 49
	C	4	-4.75	27.2	-35 - 22
TSCS	SS	11	2.18	5.6	-3 - 15
	C	4	4.75	7.0	-1 - 15
TBCL	SS	11	.55	3.8	-7 - 6
	C	4	1.75	1.7	0 - 4
SUDBT	SS	13	-11.08	29.7	-60 - 65
	C	4	-27.50	31.8	-60 - 15
SUDDT	SS	9	-21.00	26.4	-60 - 25
	C	3	-28.33	24.7	-45 - 0
SUDAT	SS	9	-21.56	18.0	-50 - 0
	C	3	-40.00	36.1	-70 - 0

Table 3

Means of Male and Female Subjects for Each Therapist for
Variables that Showed Therapist Effects

variable	therapist	mean for male subjects	mean for female subjects
Exhibition	MT1	55.00	61.00
	MT2	40.25	46.00
	FT1	44.33	36.00
	FT2	33.33	42.75
INPRSIT	MT1	140.33	130.33
	MT2	210.00	153.00
	FT1	141.33	173.50
	FT2	178.57	195.25
SUDDT	MT1	38.33	23.33
	MT2	53.33	40.00
	FT1	10.33	21.75
	FT2	75.00	65.00
THIMPR	MT1	5.33	5.00
	MT2	1.25	1.25
	FT1	2.00	2.50
	FT2	1.67	3.60
SUDAT	MT1	18.33	5.00
	MT2	42.33	22.50
	FT1	10.33	21.75
	FT2	62.50	31.00

on all measures.

The only therapist by client sex interaction that approached significance was for INPRSIT ($F=2.67$; $df = 3, 20$; $p < .08$). Figure 8, a graph of means of both male therapists together and both female therapists together for both male and female clients, indicates that male clients who had a female therapist reported less anxiety at posttest than those with a male therapist, while female clients with a male therapist reported less anxiety than those with a female therapist.

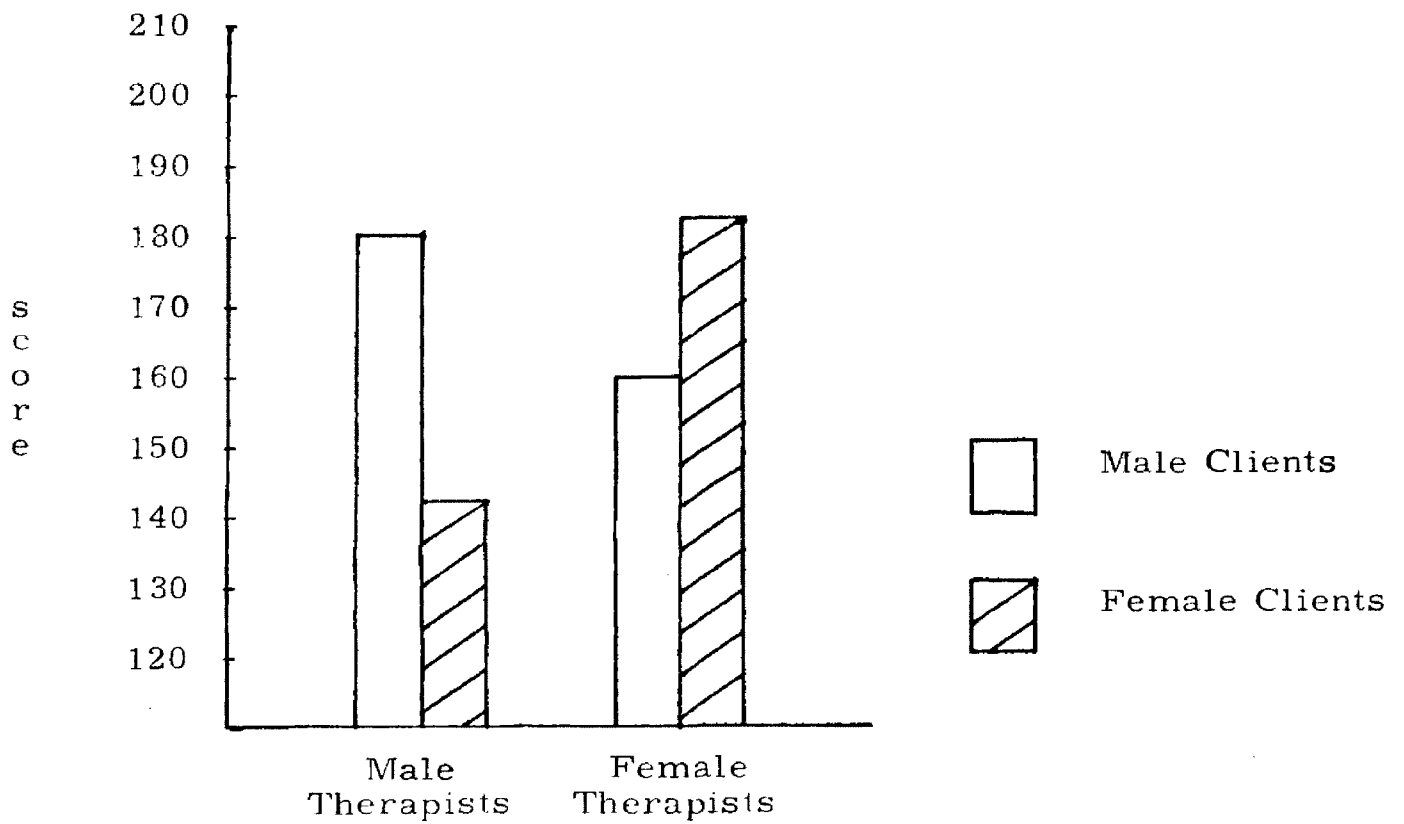
Factor Analysis of Posttest Variables

A principle factor factor analysis (Harman, 1967) using Varimax rotation was performed using the following variables: 1) fourteen of the 15 PRF scales (Infrequency was not included), 2) scores from the 11 situations of the S-R Inventory of Anxiousness, 3) the Tennessee Self Concept Scale total positive score, 4) the Timed Behavior Checklist score, and 5) the three SUD scores associated with the behavioral task.

Thirty-nine subjects, none of whom had more than three missing data points, were used. In the case of missing data points, the group mean from the pretesting by treatment design was substituted for the missing value. Seven common factors were extracted, which accounted for 42.3%, 18.1%, 13.2%, 9.4%, 7.2%, 5.2%, and 4.7% of the common variance, respectively. The following is a list of the variables with high loadings on each of the factors:

- 1.) the five interpersonal situations of the S-R Inventory of

Figure 8
Graph of Means of Male and Female Clients Having
Male and Female Therapists for INPRSIT



Anxiousness; counseling bureau (.80), job interview (.74), competitive contest (.69), new date (.69), and speech (.61); plus final exam (.85), and psychology experiment (.67).

2.) five PRF variables; Play (.85), Exhibition (.80), Dominance (.71), Understanding (.64), and Affiliation (.62).

3.) four PRF variables; Endurance (.74), Order (.73), Achievement (.71), and Impulsivity (-.70); plus TSCS total positive (.63).

4.) the three SUD ratings associated with the behavioral task; SUDDT (.86), SUDBT (.81) and SUDAT (.74).

5.) two S-R Inventory of Anxiousness scales; sail boat (.81) and mountain ledge (.76); plus the PRF scale Harmavoidance (.60).

6.) There were two moderate loadings on this factor, TBCL (.56) and the PRF scale Dominance (-.47).

7.) PRF Scale Social Recognition (.81).

A pretesting by treatment 2 x 2 factorial analysis of variance was performed on the factor scores with the only effect approaching significance being a treatment effect for factor 1 ($F = 3.22$; $df = 1, 35$, $p < .08$).

Intercorrelations of Dependent Variables

Finally, the intercorrelations of the dependent variables were calculated. Table 4 shows the intercorrelations at posttest of the 10 dependent variables used to assess pretesting and treatment effects. These correlations were calculated across all subjects who completed the posttest. Table 5 lists the intercorrelations of the three subject

Table 4
Intercorrelations of Dependent Variables for which
Pretesting and Treatment Effects Were Assessed

	Ach	Aff	Ex	Sr	INPRSIT	TSCS	TBCL	SUDBT	SUDDT	SUDAT
Ach	1.00									
Aff	.30	1.00								
Ex	-.01	.50**	1.00							
Sr	.06	.01	-.08	1.00						
INPRSIT	-.27	-.04	-.18	.20	1.00					
TSCS	.46**	.30	.21	-.22	-.55***	1.00				
TBCL	-.18	-.37*	-.27	-.10	.22	-.17	1.00			
SUDBT	-.16	.11	-.20	.25	.44**	-.24	-.01	1.00		
SUDDT	-.22	.09	-.24	.22	.44**	-.23	-.09	.78***	1.00	
SUDAT	-.13	.03	-.48**	.40**	.48**	-.28	-.08	.61***	.77***	1.00

Note. All correlation coefficients were computed across 36 subjects.

* $p < .05$
 ** $p < .01$
 *** $p < .001$

Table 5
Intercorrelations of Client and Therapist Improvement
and Client Satisfaction with Therapist Ratings

	SIMPR	SSAT	THIMPR
SIMPR	1.00		
SSAT	.31	1.00	
THIMPR	.03	.32	1.00

Note. All correlations are computed across 26 subjects. Two-tailed tests of significance indicated that none of the above correlation coefficients differed significantly from zero.

and therapist global ratings; subject improvement ratings (SIMPR), subject satisfaction with therapist ratings (SSAT), and therapist improvement ratings (THIMPR). These correlations were computed only across SS subjects who completed the posttest. In order to control for mean differences among therapists in making the THIMPR ratings, the THIMPR scores used in the above correlations consisted of standard scores computed within therapist levels. That is, the THIMPR score for a particular subject consisted of the THIMPR raw score minus the mean raw score for all subjects with that same therapist, divided by the standard deviation of those raw scores.

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CHAPTER IV

DISCUSSION

Effects of Pretesting

As was hypothesized, the results show a clear trend for a pretesting effect on the SUD measures associated with the behavioral task. On all three SUD measures, subjects who had been pretested reported less anxiety than those not pretested. This result is consistent with that of Galassi, Galassi, and Litz (1974), who found a pretesting effect with sub-assertive subjects for a similar SUD scale associated with a behavioral role playing task. It is also consistent with the finding of Borkovec and Craighead (1971) that self-reported fear of snakes in a behavioral avoidance test was less for the second presentation of the test than for the first, and with that of Borkovec, Stone, O'Brien, and Kaloupek (1974) who found a decrease of self reported anxiety associated with a forced interaction test for the second presentation of the test. However, these findings are inconsistent with Kazdin's (1973) report of no pretesting effect for self-reported fear of snakes in a behavioral avoidance test. A possible explanation for this discrepancy could be that Kazdin's subjects were less anxious during the behavioral test than were subjects in the other studies. The effectiveness of the demand manipulation in the Kazdin study provides support for this hypothesis. Bernstein (1972) has suggested that demand manipulations are ineffective with high anxious

subjects, and Miller and Bernstein (1972) have shown that demand was ineffective in reducing the self-reported fear of claustrophobics who were in an enclosed chamber. Furthermore, Borkovec, et. al. (1974) found that social anxiety was not subject to demand manipulations. Evidence that the SUD ratings in the present study were not affected by demand characteristics is provided by the lack of a treatment effect or of a treatment by pretesting interaction. One would expect differential demand for improvement among the various combinations of the two factors which would lead to group differences if demand characteristics affected the ratings. Thus, highly anxious subjects have more room for improvement due to pretesting effects.

The hypothesis of a pretesting effect for the TBCL and INPRSIT was not supported. Another finding inconsistent with the hypothesis was the trend for a pretest by treatment interaction for the Exhibition scale of the PRF. This finding is difficult to explain as the direction of the results is contrary to what would be expected; that is, in the case of the pretest facilitating treatment one would expect the pretesting plus treatment group to score higher than the treated but not pretested group and it would be expected that there would be little difference between groups not treated. However, the magnitude of the observed effect makes it impossible to discount the possibility that the differences were the result of random, rather than systematic variation.

The present study along with the Galassi, Galassi and Litz(1974) study provides strong evidence of a pretesting effect for self-reported

anxiety of socially anxious subjects within a behavioral task that involves social interaction. This effect seems to be specific to the anxiety experienced within the behavioral task, as a pretest alone was not sufficient to produce improvement on any of the other measures. The reduction of anxiety at posttest could be the result of a desensitization process. Exposure to feared situations has been shown to have therapeutic value in decreasing anxiety in those situations (Sherman, 1972; Christenson and Arkowitz, 1974; Christenson, Arkowitz & Anderson, 1975). Due to the presence of this pretesting effect it appears inadvisable to use similar measures in within subject designs that involve repeated testing, as any improvement at posttest might represent the effect of the pretest and not the treatment per se. However, the finding in this study of a lack of a pretesting by treatment interaction, which was also found by Galassi, Galassi, and Litz, indicates that such measures can be used effectively in pre-post between groups designs that have a no treatment control group. In such designs the effects of treatment can be evaluated independently of the pretesting effects.

The presence of a pretest by treatment interaction is of more concern as it precludes the possibility of isolating treatment from pretesting effects in both within subject designs and in the traditional pre-post between groups design. Thus further research needs to be done in order to determine if the finding with regard to Exhibition was due to a systematic or random effect. The consequences of a pretest by treatment interaction make it important to have a clear

expectation that no such effect will occur for any measure used in a design for the evaluation of psychotherapy that includes a pretest and a posttest.

The previously mentioned findings that low arousal situations are more subject to demand characteristics than are high arousal situations seem to have implications with regard to the presence of pretesting by treatment interactions. As a measure becomes more objective and the subject experiences less arousal, it is conceivable that his report will be more affected by demand characteristics, and thus a pretest would be more likely to interact with the treatment. In particular, it is likely that demand for improvement would have a stronger effect for measures, like the PRF, which involve self-report of experiences and feelings that occur outside the testing situation, than it would on measures, like the SUD measures, in which the subject reports current feelings and experiences. Further clarification of the effects of demand characteristics on measures of therapeutic outcome needs to be made.

Effects of Treatment

As was hypothesized, the social skills training procedure resulted in decreases in the number of overt signs of anxiety observed during the behavioral task and in self reported anxiety in the five specific interpersonal situations of the S-R Inventory of Anxiousness. Both results were nearly statistically significant. Contrary to the hypothesis, non-significant treatment effects were found for all SUD

measures and the PRF scales Affiliation, Exhibition, and Social Recognition. Non-significant effects were also found for the PRF scale Achievement and for the TSCS.

These results seem to follow the general pattern established in previous studies of the effectiveness of social skills training. That is, the strongest treatment effects have been found on the more objective measures of behavior in simulated interpersonal situations with the strength of the treatment effects decreasing as the investigators moved to more subjective and global self report measures (Goldsmith & McFall, 1975). While the results of this study are consistent with the previously established pattern, the magnitude of the results for particular measures does not appear to be as great. This is apparent both in the failure to achieve statistical significance for the TBCL and in the absence of treatment effects on the three self-report measures of anxiety within the behavioral task. Significant treatment effects have been obtained on similar measures in previous research (Curran, 1974; McDonald et. al., 1975; Galassi, Galassi, & Litz, 1975; Twentyman & McFall, 1975).

The relative strength of the present results could be accounted for by two factors. First, the present skills training program was not limited to one specific target problem such as assertion or dating skills. So while subjects probably received more extensive training in terms of the number of problem situations they were exposed to, the intensity of the training for any one problem situation was less than in previous studies. In light of this, it is interesting to note the

nearly significant treatment effect for the sum of the interpersonal situations of the S-R Inventory of Anxiousness, as other investigators have not found differences due to treatment on modified forms of the S-R Inventory of Anxiousness and on similar self-report measures (Bander et. al., 1975; McDonald et. al., 1975; McFall & Marston, 1970; McGovern, Arkowitz, & Gilmore, 1975). Thus there is evidence that the present more general skills training approach led to greater generalization of treatment effects outside of the treatment setting. This effect does not appear to be due to non-specific treatment factors, as the above investigators found no differences between specific treatment groups, attention placebo controls, and no treatment controls.

A second factor that could account for the generally weaker results in this study is that the measures used could have been more stringent measures of the effects of training. The focus of the assessment battery was on social anxiety as opposed to behavioral skills, and previous research (Borkovec, 1972; Lang & Lazovik, 1963; McGlynn, Reynolds, & Linder 1971) has shown that avoidance behavior is more easily altered than self-reported anxiety. In addition, the behavioral task was less structured and thus could have elicited a higher degree of anxiety, making it more resistant to treatment than the role-playing situations used in other studies. Support for this hypothesis is provided by the failure of Twentyman and McFall (1975) to find treatment effects for both self report and objective behavioral measures of anxiety for a forced interaction test, while they found

significant effects for those measures in role playing situations. The lack of structure in conjunction with the fact that the subjects weren't specifically trained for the situation encountered in the behavioral task could account for the lack of treatment effects of the SUD scales.

Past research has clearly shown that the social skills training approach can be used successfully in increasing specific behavioral skills in a variety of specified situations and in reducing anxiety in role playing situations, (e. g. McFall & Twentyman, 1973; Galassi, Galassi & Litz, 1974; Goldsmith & McFall, 1975; McDonald et. al., 1975; McGovern, Arkowitz, & Gilmore, 1975; and Twentyman & McFall, 1975). The results, with regard to generalization of anxiety reduction to real life situations, have been less conclusive with investigators finding such a generalization on some measures but not on others (e. g. Bander, Steinke, Allen & Mosher, 1975; Goldsmith & McFall, 1975; McGovern, Arkowitz & Gilmore, 1975). The present study provides evidence that a brief social skills training procedure focusing on a variety of individually relevant target problems does have anxiety reduction effects that generalize to situations outside of treatment. In addition, a reduction due to treatment of behavioral manifestations of anxiety was shown for a situation that is a close approximation to a real life situation that would elicit social anxiety, i. e. a conversation with a stranger.

A consistent finding of this and other studies (McFall & Marston, 1971; Melnick, 1973) is the lack of a treatment effect on measures such as the PRF scales Achievement, Affiliation, and Exhibition that

reflect cross situational behavioral consistencies, and on measures such as TSCS that reflect global aspects of the person's experience. However, the effect of the social skills training process on these more global aspects of behavior and experience deserves further research. Few of the past studies on social skills training have included such measures. In addition, in the studies in which they have been used the treatment programs have been of relatively short duration, thus it is not unreasonable to expect that the treatment effects would not generalize to more pervasive patterns of responding and experiencing.

Further research in the area of social skills training might continue to evaluate the effectiveness of clinical forms of social skills training procedures. One aspect of the process that needs further clarification is the effects of duration of treatment. In addition, further research needs to be done following the lead of Goldsmith and McFall (1975) in defining the effectiveness of the treatment in differing subject populations. In such a manner, it can be determined which subject characteristics are indicative of the successful application of the social skills approach, and which are contraindicative of its use.

Another direction of future research might be to explore the mechanisms underlying the change produced by social skills training. In this manner, the roles of skill increases and fear reduction can be further clarified, i. e. is fear reduction a consequence of skill increase or vice versa, or do the two components interact in producing behavior change and if so what is the nature of that interaction? Subject characteristics are going to have to be considered in trying to

sort out the mechanisms of change. Recent research has shown that skill deficits and fear of specific situations can play differing roles in producing behavior deficits depending upon subject characteristics (Glasgow & Arkowitz, 1975). As the mechanisms underlying change in specific interpersonal behaviors are clarified, it might be possible to incorporate them into a more general and comprehensive theory of behavior change. Such an empirically based theory would provide a basis for predicting what treatment intervention would be effective in producing a specific behavioral change in subjects with specified characteristics.

Effects of Therapist and Client Sex

The only finding with regard to therapist-client sex differences that approached significance was for the interpersonal situations of the S-R Inventory of Anxiousness on which subjects with opposite sex therapists reported less anxiety at posttest than subjects with same-sex therapists. The hypothesized differences between same-sex and opposite-sex pairing were not found for the measures associated with the behavioral task or for subject's satisfaction with their therapist.

While this research provides preliminary evidence that opposite-sex therapist-client matching is more effective within the context of this treatment approach in reducing anxiety as measured by the interpersonal situations of the S-R Inventory of Anxiousness, further research is necessary in order to provide an empirical basis for therapist-client sex matching. The relatively small number of

subjects upon whom these effects were tested might have precluded the possibility of finding statistically significant differences. Thus while this research was not supportive of same-sex matchings being more therapeutic, any claims that this is or is not the case for this particular treatment would be premature.

Factor Analysis of Posttest Variables

The factor analysis of the posttest variables used in assessing pretesting and treatment effects yielded seven interpretable, orthogonal factors. The interpretations of these factors are as follows.

The following S-R Inventory of Anxiousness situations showed high positive loadings on Factor 1: final exam, counseling bureau, job interview, competitive contest, new date, psychology experiment, and speech. These loadings were similar to those obtained in factor analysis of the S-R Inventory of Anxiousness reported in the original monograph (Endler, Hunt & Rosenstein, 1962). The above authors interpreted these situations as "situations in which an individual's interpersonal status is being threatened", and labeled the factor they defined an interpersonal situational factor. In accord with their definition, Factor 1 seems to be a situational interpersonal anxiety factor. A nearly significant treatment effect was found for the factor scores of this factor, a finding consistent with the pattern of results regarding the effectiveness of treatment.

The PRF scales Play, Exhibition, Dominance, Understanding, and Affiliation had strong positive loadings on Factor 2. These

variables seem to reflect enjoyment derived from social situations, as well as comfort in those situations. As a result, this factor has been labeled an intraversion-extraversion factor.

Strong positive loadings on Factor 3 were found for the PRF variables Endurance, Order, and Achievement as well as for the TSCS. A strong negative loading was obtained for the PRF variable Impulsivity. The ability for intellectual control over impulses seems to be represented by this factor, and it has been labeled a self-control factor.

The three self report anxiety measures associated with the behavioral task show high positive loadings on Factor 4. These measures appear to define it as a behavioral task subjective anxiety factor.

Two S-R Inventory of Anxiousness situations, sail boat and mountain ledge, in addition to the PRF scale Harmavoidance show strong positive loadings on Factor 5. These variables seem to define this factor as involving fear of realistic danger.

Factor 6 presents the greatest difficulty in interpretation. Only two moderate loadings were obtained, a positive loading for the Timed Behavior Checklist, and a negative loading for the PRF scale Dominance. A subject scoring high on this factor would likely be anxious in the behavioral task and would generally be submissive and unassertive. In addition, small positive loadings on the S-R Inventory of Anxiousness situations speech (.32) and job interview (.29) indicate that a high score would report high anxiety in these situations. In summary, a high scorer would probably be unassertive

and submissive, would display overt signs of anxiety in an interpersonal situation, and would experience considerable anxiety in interpersonal situations involving implicit evaluation. As a result, this factor has been tentatively labeled a social effectiveness factor.

The PRF scale Social Recognition is the only variable with a high loading in Factor 7. Thus this factor seems clearly interpretable as a social recognition factor.

Methodological Considerations Regarding the Choice of Outcome Measures

The global subject rating of improvement used in this study could have been more meaningfully worded so that it could have been administered to all subjects and not just those treated. For instance, rather than rating improvement as a result of the program, all subjects might have been asked to rate their interpersonal effectiveness. In this way, this dependent variable could have been used as a measure of pretesting and treatment effects.

Inclusion of a measure of behavioral skill in the behavioral task might have been a meaningful addition to the assessment battery. While such measures used in connection with role-playing situations have consistently shown treatment effects, one study (Twentyman & McFall, 1975) failed to demonstrate treatment effects on a behavioral skill measure used in a forced interaction test. Thus further research might be helpful in either confirming or modifying the above finding, and evaluating in what ways the forced interaction

situation is different than role playing situations.

The loss of the SUD measure for the five days following assessment detracted from the evidence regarding the generalization of treatment effects to the real environment. Assessment of such generalization has been difficult as development of behavioral tests for real life situations has been problematic (see McFall & Twentyman, 1973). As a result, much of the evidence regarding change outside the treatment setting has come from self report measures of behavior and anxiety in specific situations. With such measures, accuracy of self report is a critical consideration. Paul (1966) demonstrated that the S-R Inventory of Anxiousness speech situation predicted anxiety in a public speaking situation ($r = .50$ and $.72$ in two separate samples) and Geer (1965) showed that subjects' responses to specific items on the Fear Survey Schedule corresponded (rho correlation ranging from $.52$ to $.92$) with the degree of fear they displayed in the actual situations. Thus there is evidence that measures such as the S-R Inventory of Anxiousness adequately represent real life situations. Finally, the forced interaction test used in this study seems to be a promising means of assessing generalization of treatment effects to real-life situations (Borkovec, Stone, O'Brien & Stone, 1974). While this test does not take place in the natural environment, there are very few constraints imposed upon the situation that would make it different from conversing with a stranger in any other setting.

The inclusion of the three SUD measures associated with the behavioral task may have resulted in unnecessary duplication. The

high intercorrelations of these measures indicates that they were measuring much the same thing, and thus using only one of the SUD measures probably would not have resulted in a significant loss of information. With the exception of the three SUD measures, all of the measures employed seemed to be providing unique information as evidenced by the small to moderate intercorrelations.

The findings in this investigation, with regard to the effects of pretesting, underscore the need for careful selection of outcome measures. Freedom from pretesting effects is just one of the many components of psychometric adequacy, but is also one that has received little attention to date. In order for outcome measures to provide a meaningful assessment of treatment effects, they should be selected to meet clear, empirically based rationale for such psychometric qualities as reliability, validity, and freedom from confounding effects such as pretesting.

In addition to meeting psychometric requirements, measures of psychotherapeutic outcome should be chosen so as to adequately sample the multi-dimensional domain of behavior and experience within which therapeutic change is being attempted (Kiesler, 1966; Fiske et. al., 1970). The most meaningful criterion of outcome is the change in clients' distressing behavior outside of treatment (Paul, 1967; Luborsky & Strupp, 1962). This can probably be best measured through observation of the behavior in the natural environment, however when that is not feasible, that behavior can be assessed through client self-report and behavioral measures that are carefully constructed to

be a close approximation to the target behavior. Other meaningful outcome criteria might include measures of physiological responses; measures of the clients' experiences, both with regard to the specific problem and to more global patterns; and measures of cross-situational behavior consistencies.

Within the particular context of social skills training, objective and self-report measures of behavior in situations constructed to simulate real-life problem situations have been widely used. A present trend in the area seems to be the construction of measures that discriminate various levels of social effectiveness and social anxiety (Borkovec, et. al., 1974; Arkowitz, Lichtenstein, McGovern & Hines, 1975; Clark & Arkowitz, 1975; Glasgow & Arkowitz, 1975; Goldsmith & McFall, 1975; Twentyman & McFall, 1975). Thus researchers in the area seem to be developing highly sensitive measures of specific behaviors occurring in specific situations.

However, little attention has been paid to measures of cross-situational improvement. While such measures have been shown to be poor predictors of behavior in specific situations (see Goldfried & Kent, 1972; Mischel, 1973), Mischel has suggested that "when the relations between the observed behavior and the attributed trait are relatively direct, the trait serves essentially as a summary term for the behaviors. . .". Measures that sample similar behaviors across varied situations might be beneficial in determining to what extent specific social skills training programs affect interpersonal behavior across situations, as well as other aspects of behavior. The knowledge

of such effects seems to have important implications for clinical practitioners as clients' problem behaviors are frequently not limited to only a few specified situations.

The psychometric sophistication of the PRF seems to make it worthy of further consideration as an outcome measure for psychotherapy in general, and social skills training in particular. One aspect of the PRF that needs further clarification is its susceptibility to pretesting effects. The pretesting by treatment interaction for Ex-hibition seems to warrant further investigation to determine if it was the result of random or of systematic variation.

CHAPTER V

SUMMARY

This study was designed to test the effects of pretesting and of matching therapists and clients according to sex within the context of a group social skills training procedure. In order to obtain estimates of the effects of pretesting, the treatment procedure and of their interaction, a Solomon four-group design was used. That is, two groups of subjects received the Social Skills Training program one of which received a pretest as well as a posttest and one of which received only a posttest. In addition, two groups were waiting list controls; one which was pre-tested and post-tested, and one which received the post-test but not the pretest.

In order to estimate the effects of matching therapists and clients according to sex, four therapists (two male and two female) employed the treatment approach with both male and female clients. The treatment was employed in small groups containing three to five subjects. Each group contained both male and female subjects, and an attempt was made to equalize the number of males and females within each group. Each therapist treated two groups, one pretested group and one that wasn't pretested.

The effects of the experimental manipulations were assessed using an assessment battery designed to tap a multidimensional domain of behavior and experience. The assessment battery included the

following self-report measures: 1.) four scales of the Personality Research Form - Achievement, Affiliation, Exhibition, and Social Recognition; 2.) the total positive score of the Tennessee Self Concept Scale, a self concept measure; and 3.) the sum of five situations of the S-R Inventory of Anxiousness that have been found to load highly on an interpersonal anxiety factor - new date, speech before a large group, competitive contest before spectators, counseling bureau for a personal problem, and interview for an important job. A behavioral forced interaction task was included in the assessment procedure and four dependent measures were taken from it: 1.) a modified form of the Timed Behavior Checklist for Performance Anxiety, an objective measure of behavioral indicators of anxiety; 2.) Subjective Units of Disturbance (SUD) before the behavioral task, a self-rated anxiety measure; 3.) the highest SUD level experienced during the behavioral task; and 4.) SUD after the behavioral task. In addition, all subjects who completed the social skills treatment procedure rated on a likert scale their improvement as a result of the procedure and their satisfaction with their therapist. Each therapist rated the improvement of each of his subjects on a similar scale.

The results obtained were as follows:

1. The effects of pretesting.

Pretesting effects that approached significance were found for SUD before the behavioral task, SUD during the behavioral task, and SUD after the behavioral task (p 's $< .12$, $.07$, and $.06$ respectively). On all three measures self-rated anxiety associated with the behavioral task

was less at posttest for groups that had been pretested than for groups that had not been pretested. Non-significant pretesting effects were found for all other measures.

2. The effects of the social skills training procedure.

Groups that received the social skills training program reported nearly significantly less anxiety at posttest as measured by the five interpersonal situations of the S-R Inventory of Anxiousness than did waiting-list control groups ($p < .07$). In addition, a nearly significant treatment effect ($p < .08$) was found for the Timed Behavior Checklist, with the treated groups exhibiting fewer overt indicators of anxiety than controls. Thus, treated subjects reported less anxiety in interpersonal situations and showed fewer signs of anxiety in the behavioral task. Non-significant effects were found on all other measures.

3. The effects of the interaction of pretesting with the social skills treatment.

Only one measure, Exhibition, showed a treatment by pretesting interaction that approached significance ($p < .10$). At posttest the mean score for the group that was pretested was less than that of the non-pretested group when both received the social skills treatment, but the score for the pretested group was higher than that of the non-pretested group for waiting-list control groups.

4. Therapist-Client sex effects.

The only variable for which the therapist by client sex interaction approached significance was for the interpersonal situations of the S-R Inventory of Anxiousness ($p < .08$). Male clients who were treated

by female therapists reported less anxiety in those situations than male clients treated by male therapists, while female clients treated by male therapists reported less anxiety than female clients treated by female therapists.

5. Factor analysis of the posttest variables.

A principle factor factor analysis using Varimax rotation was performed on the above dependent variables, with the exception of the subject and therapist improvement ratings and the subject satisfaction rating, in addition to the remaining variables of the PRF and S-R Inventory of Anxiousness. Seven factors were extracted and were labeled as follows: 1.) situational interpersonal anxiety, 2.) introversion-extraversion, 3.) self-control, 4.) behavioral task subjective anxiety, 5.) fear of realistic danger, 6.) social effectiveness (this label was tentative due to a lack of strong factor loadings), and 7.) social recognition.

The results of this study in conjunction with results from earlier studies strongly indicate that self-rated anxiety within a role-playing or forced interaction situation is reduced by pretesting. This effect does not seem to be of great concern in between groups designs for the evaluation of psychotherapy as pretesting affects the control group to the same extent that it affects the treatment groups. However, pretesting effects preclude the meaningful use of such measures in single-subject designs as there is no way to separate treatment effects from pretesting effects.

The finding of a pretesting by treatment interaction for Exhibition

needs further clarification to see if it was the result of reliable variation or of random variation. Susceptibility to such an effect seriously limits the utility of a measure for evaluating psychotherapy, since treatment effects are confounded with those of pretesting in both single subject designs and in the traditional pre-post between groups design.

The treatment effects in this study were generally smaller in magnitude than those reported in previous studies. However, the extent of the effects seems to be somewhat greater, with some evidence for their generalization to situations outside of the treatment setting. This pattern of results might be explained in that the treatment procedure in this study was not limited to one particular target problem. Thus, while subjects received less intensive training for particular situations they received more extensive training for a variety of situations. Another explanation for the relative magnitude of the treatment effects could be that some of the measures used in this study were more stringent than those used in much of the previous social skills training research.

This study failed to show any clear-cut differences between the various therapist-client sex combinations. Some evidence was found for the greater efficacy of opposite-sex matching within the context of this particular treatment.

Finally, methodological considerations concerning outcome measures were discussed. While previous researchers have developed and utilized highly sensitive measures of the target behaviors they

have focused on, little attention has been paid to other dimensions of outcome. It was suggested that the Personality Research Form might be valuable in providing additional information concerning treatment effects.

APPENDIX A

Text for Treatment Advertisements

INTERPERSONAL EFFECTIVENESS TRAINING

An effective program designed to enable you to respond comfortably and effectively in interpersonal situations.

Interpersonal Effectiveness training is a program aimed at helping you to respond comfortably and effectively in situations that you normally avoid or feel uncomfortable in. For example, do you feel uncomfortable about approaching a professor after class, about taking the initiative in introducing yourself to someone you would like to meet, or are there situations in which you would like to express your feelings but fail to do so because you are nervous or embarrassed?

This program can help you to develop and practice responses for troublesome situations that you will feel comfortable with and that will convey the message you would like to convey.

APPENDIX B

Subject Information Questionnaire

The information you provide below is strictly confidential.

Name: _____ Age: _____

Occupation: _____ Sex: _____

Education: _____ Ethnic Origin: _____

Have you ever been hospitalized for mental illness? _____

If so, for how long? _____ And when? _____

Have any members of your family ever been hospitalized for
mental illness? _____

If so, what relationship is (are) he/she (they) to you? _____

And for how long was (were) he/she (they) hospitalized? _____

Have you ever received psychotherapy or have you ever participated
in a psychological treatment program? _____

If so, for how long? _____ And when? _____

To your knowledge have any members of your family ever received
psychotherapy or has any member ever participated in a
psychological treatment program? _____

If so, what relationship(s)? _____

And for how long? _____

Are you currently taking medication as prescribed by a Physician? _____

If so, what? _____

Summary of Information from the Subject Questionnaire

Age (years):

mean	25.59
standard deviation	8.08
range	18 - 55

Occupation:

student	20
unskilled labor	2
skilled labor	2
clerical	2
housewife	1
administrative	2
teacher	2
professional	3

Ethnic Origin:

Caucasion	30
American Indian	4

Education (years past high school graduation):

mean	2.38
standard deviation	1.52
range	0 - 5

Hospitalization:

Three of the subjects had been hospitalized for psychiatric illness, with the duration of hospitalization ranging from one to three months.

Psychotherapy:

Twelve subjects had previously received psychotherapy, or had participated in a psychological treatment program. Length of therapy for these 12 subjects (in months) was:

mean	15
standard deviation	17.4
range	1 - 60

Hospitalization of family members:

Seven subjects had family members who had been hospitalized for psychiatric illness.

Psychotherapy for family members:

Eleven subjects had family members who had received psychotherapy, or had participated in a psychological treatment program.

Medication:

None of the subjects were taking psychotropic medication at the time of the study.

Note. All of the above information came from the questionnaires of 34 of the original 51 subjects. The questionnaire information for the other 17 subjects was unavailable.

APPENDIX C
Therapist Information Forms

Male Therapist 1

THERAPIST PERSONAL DATA

- A. Indicate in order, the *three* authors who have been most influential in shaping your *present* approach to psychotherapy.
1. Arnold Lazarus
 2. Carl Rogers
 3. Alan Kazdin
- B. Indicate the "school" or "schools" of psychotherapy to which you feel *most* related.
1. Cognitive-behavioral
 2. Humanistic
- C. Indicate the number of years of therapy experience you have gained to this time. 5
- D. Have you obtained personal analysis and/or psychotherapy? NO
 (If yes) :
1. Number of sessions? _____
 2. Type (*i.e.*, individual-group, analysis-client centered, etc.)

Male Therapist 2

THERAPIST PERSONAL DATA

A. Indicate in order, the *three* authors who have been most influential in shaping your *present* approach to psychotherapy.

1. Arnold Lazarus
2. Albert Ellis - Don Meichenbaum
3. Phil Bornstein

B. Indicate the "school" or "schools" of psychotherapy to which you feel *most* related.

1. Cognitive-behavioral
2. Client Centered

C. Indicate the number of years of therapy experience you have gained to this time. 4

D. Have you obtained personal analysis and/or psychotherapy? YES
(If yes):

1. Number of sessions? 4
2. Type (i.e., individual-group, analysis-client centered, etc.)
group

Female Therapist 1

THERAPIST PERSONAL DATA

- A.** Indicate in order, the *three* authors who have been most influential in shaping your *present* approach to psychotherapy.
1. Arnold Lazarus.....
 2. Albert Ellis.....
 3. Alfred Adler.....
- B.** Indicate the "school" or "schools" of psychotherapy to which you feel *most* related.
1. Cognitive.....
 2. Behavioral.....
- C.** Indicate the number of years of therapy experience you have gained to this time.4.5.....
- D.** Have you obtained personal analysis and/or psychotherapy? ...no.....
(If yes):
1. Number of sessions?
 2. Type (*i.e.*, individual-group, analysis-client centered, etc.)
.....

Female Therapist 2

THERAPIST PERSONAL DATA

- A. Indicate in order, the *three* authors who have been most influential in shaping your *present* approach to psychotherapy.
1. Carl Rogers
 2. Albert Ellis
 3. John Watkins
- B. Indicate the "school" or "schools" of psychotherapy to which you feel *most* related.
1. Client Centered
 2. Rational Emotive
- C. Indicate the number of years of therapy experience you have gained to this time. 3
- D. Have you obtained personal analysis and/or psychotherapy? *yes*
- (If yes):
1. Number of sessions? 5
 2. Type (i.e., individual-group, analysis-client centered, etc.)
individual - client centered

Therapist Description of Treatment Sheet

Name _____ Date _____ Group _____

The following items refer to the use of specific techniques in psychotherapy. Please check the degree to which you used each technique; almost always, usually, about half the time, only occasionally, never.

	Almost Always	50/50	Never
25. Reflection and Clarification of Feelings:	24		1
26. Reflection and Clarification of Content:	2	12	
27. Reflection and Clarification of Behavior:	12	4	
28. Questioning of Feelings:	2	4	1
29. Questioning of Content:	2	14	
30. Questioning of Behavior:	12	4	
31. Interpretation of Feelings:		2	1
32. Interpretation of Content:		2	14
33. Interpretation of Behavior:	14	2	
34. Suggestion (not hypnosis):	4	1	2
35. Reassurance:	24	1	
36. Information and Advice Giving:	1	24	
37. Attentive Listening:	12	4	
38. Modeling Techniques (examples):	24	1	
39. Positive Attitude, Confidence:	4	12	
40. Warmth and Understanding:	14	2	
41. Reinforcement (approval-disapproval):	4	1	2
42. Conditioning, Counterconditioning:			1
43. Free Association:			1
44. Auxiliary Techniques (hypnosis, medication):		2	14
45. Other (please specify):			

Note. The ratings for Therapist 3 were unavailable.

APPENDIX D

Therapist Manual: Social Skills Training

The basic purpose of the Social Skills Training groups will be to train participants to respond effectively and comfortably in social situations that generally cause them discomfort. To achieve this purpose subjects will role-play responses for particular situations, receive feedback concerning their role-played responses, discuss their responses with the other group members, see others model effective responses, and receive direct coaching. Each group will meet for four sessions of approximately 90 minutes each.

The general plan for the sessions is as follows. In some instances examples of what might be said are given, however each individual therapist should try to convey the information in his own manner.

Session One

0 - 10' Introduction of group members

"Good evening, I'd like to welcome you all here tonight. I'm looking forward to working with you. Let's spend a little time and get to know each other. I'll tell you a bit about myself first. My name is _____ and I'm a graduate student in clinical psychology. I'm originally from _____ and I've lived in Missoula for _____ years. (Any other background information you consider relevant can be included.) Why don't we go around the room and each of you can introduce yourself." (Give each subject a turn.)

10 - 20' Description of Training and Presentation of Rationale

"I would now like to describe for you the program in which we are going to be participating. We will be meeting here for the next four weeks for approximately 90 minutes per session.

There are certain situations for each of us in which we feel very uncomfortable and have difficulty in responding effectively. Such a situation might be feeling anxious about speaking up in a class and thus not commenting about something you feel strongly about, or perhaps feeling uneasy about introducing yourself to someone you would like to meet.

These kind of situations vary for each of us, there are situations which each of us handles with ease and there are situations which cause us a great deal of difficulty.

In this program each of you will be asked to describe a particular situation that causes you difficulty. Then you will role-play that situation with me or another member of the group. We will all discuss what happened during the role-playing and we will give you both positive and negative feedback concerning your response. In addition, if one of us feels particularly at ease and effective in such a situation he or she might offer some advice or demonstrate a response for that situation.

The goal of this procedure will be for you to learn skills that will be effective in that situation and that you will feel comfortable using. I would like to emphasize the part about you feeling comfortable with the skills as you will be the one who will have to use them in real-life situations. Thus, should something feel awkward to you, don't hesitate to mention it as we can discuss it and work something out that you will feel comfortable with.

The rationale for this procedure is as follows. Many times in social situations where we feel uncomfortable we are afraid we will make mistakes and appear foolish. Since we are afraid we often avoid these situations and thus we gain no experience with them. This procedure is designed to provide you with experience in handling these situations. There are probably situations for each of you in which you became more comfortable simply through experience with them. The kind of experience you will be receiving here will be helpful in several ways. First, you will be learning skills to apply in social situations that will achieve the results you desire. Second, you will be able to practice these skills here in a relatively non-threatening atmosphere. Thus you will gain confidence in your ability to handle these situations and your anxiety will be reduced. And, as we all know, a great deal of anxiety can often seriously hamper your ability to respond effectively in social situations.

Since this is to be a learning experience for each of you, I would like to stress that no one is expected to respond perfectly from the beginning. Further, since all of us have troublesome situations there is no need for anyone here to feel foolish about their difficulty with a particular situation.

Finally, I would like to point out that responding effectively is a skill that you can learn and develop. It can be likened to any other skill such as riding a bicycle or playing the piano. The more you practice it the better you become at it. This program, then, will give you the opportunity to learn and practice these skills.

Are there any questions or comments at this time?"

20 - 30' Specification of Problem Situations

"I would now like each of you to think of a situation that you find particularly difficult. (Allow some time to think about it.) Let's go around the room and share some of these situations." (The therapist can mention a personal situation if he feels comfortable with it.)

30 - 75' Training Procedure

"All right, let's begin. Would anyone like to volunteer to go first?" If there is no volunteer the therapist should ask someone if he would be willing to start. The procedure is as follows:

- 1) Have the subject describe the situation.
 - 2) With the help of the group members clarify the situation so that it can be concisely and concretely stated.
 - 3) Have the subject role-play it with either you or another group member.
 - 4) In conjunction with the group provide feedback as to the subject's response, and allow him to respond to the feedback.
 - 5) Allow any helpful suggestions. If appropriate, either model effective behavior for the situation or let another group member model effective behavior.
 - 6) Repeat the above sequence starting with the role playing until the subject feels he has mastered the situation.
- The amount of time spent on any one subject's target situation probably should not exceed 10 minutes at a time, however the therapist can use his own judgement as to exact limits. Equal amounts of time should be spent on each subject. Subjects should be informed that they can return to situations they feel they haven't yet mastered.

75 - 85' General Discussion

Ask for discussion and comments. It might be appropriate to let the subject know that you are receptive to comments and suggestions.

85 - 90' Closing

Ask the subjects to be thinking of other target situations during the next week.

Sessions Two through Four

- 0 - 10' General Discussion and Comments
Discussion of application of previously learned skills in real life situations might be appropriate.
- 10 - 80' Training Procedure
- 80 - 90' General Discussion and Closing

APPENDIX E

Description of Personality Research Form Scales

Scale	Description of high scorer	Defining trait adjectives
Achievement	Aspires to accomplish difficult tasks; maintains high standards and is willing to work toward distant goals; responds positively to competition; willing to put forth effort to attain excellence.	striving, accomplishing, capable, purposeful, attaining, industrious, achieving, aspiring, enterprising, self-improving, productive, driving, ambitious, resourceful, competitive.
Affiliation	Enjoys being with friends and people in general; accepts people readily; makes efforts to win friendships and maintain associations with people.	neighborly, loyal, warm, amicable, good-natured, friendly, companionable, genial, affable, cooperative, gregarious, hospitable, sociable, affiliative, good-willed.
Exhibition	Wants to be the center of attention; enjoys having an audience; engages in behavior which wins the notice of others; may enjoy being dramatic or witty.	colorful, entertaining, unusual, spellbinding, exhibitionistic, conspicuous, noticeable, expressive, ostentatious, immodest, demonstrative, flashy, dramatic, pretentious, showy.
Social Recognition	Desires to be held in high esteem by acquaintances; concerned about reputation, and what other people think of him; works for the approval and recognition of others.	approval seeking, proper, well-behaved, seeks recognition, courteous, makes good impression, seeks respectability, accommodating, socially proper, seeks admiration, obliging, agreeable, socially sensitive, desirous of credit, behaves appropriately.

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