

A GROUP SOCIAL SKILLS TRAINING PROGRAM WITH PSYCHIATRIC PATIENTS: OUTCOME, DROP-OUT RATE AND PREDICTION

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Summary—The present study investigated the effectiveness of a social skills training program with 131 socially-anxious psychiatric inpatients and outpatients. Ninety-six patients were admitted to the treatment condition: 20 of them dropped out during treatment; 35 patients were randomly assigned to the control group. The social skills training resulted in a decrease in social anxiety and an increase in social skills. Treatment effects were maintained 3 months after treatment. Predictors of treatment outcome immediately after treatment and after a 3-month period of follow-up were investigated. The results are discussed with reference to extending the treatment targets to include a more active expansion of real-life situations and to the implementation of the therapy program in a clinical setting.

INTRODUCTION

Since 1964 there has been a steady increase in studies of social anxiety (Brown and Brown, 1980; Kraaimaat, 1983). Many of these investigations have employed quite different therapy programs (e.g. assertive training, social skills training) and involved different behavior-change procedures (modeling, instructions and behavior rehearsal). Nevertheless, most of the treatments were directed at diminishing social anxiety and/or enlarging the client's repertoire of social responses.

Outcome research of social skills training have predominantly been laboratory analog studies. These investigations have shown that various procedures are effective with student and patient populations. Serber and Nelson (1971) were the first to evidence this. They utilized assertive training with clinical psychiatric patients. Later, outcome research with psychiatric populations was carried out with individual patients (e.g. Goldsmith and McFall, 1975; Bellack, Hersen and Turner, 1976; van Son, 1978; Urey, Laughlin and Kelly, 1979; Kolko, Dorsett and Milan, 1981; Cole, Klarreich and Fryatt, 1982) and with treatment groups (e.g. Gutride, Hunter, Clark, Furia, Goldstein, Carrol and Lower, 1974; Field and Test, 1975; Williams, Turner, Watts, Bellack and Hersen, 1976/77; Finch and Wallace, 1977; van Dam-Baggen and Kraaimaat, 1977, 1984; van Son, 1978; Shepherd, 1978; Linehan, Goldfried and Goldfried, 1979a; Lauterbach, Pelzer and Awiszus, 1979; Monti, Fink, Norman, Curran, Hayes and Caldwell, 1979; Monti, Curran, Corriveau, DeLancey and Hagerman, 1980; Koning, van Run, Liebrand and van der Molen, 1981; Beekers, 1982; van Dam-Baggen, 1984; Holmes, Hansen and St Lawrence, 1984). Moreover, the effect of social skills training appears to be similar whether the clients are seen individually or in groups. This was shown to be the case by Linehan, Walker, Bronheim, Haynes and Yevzeroff (1979b), who found no differences in effectiveness between the conditions.

Almost all experimental studies of group treatments with psychiatric patients (except Lauterbach *et al.*, 1979) have shown significant positive results for assertive or social skills training. However, these outcome studies generally have involved a rather small number of Ss and, almost always, the absence of repeated application of the treatment conditions. There are no data which reflect the effectiveness of this type of treatment in a clinical setting over the long term. The data are open to question, also, because drop-out during treatment is seldom mentioned and never considered in the analysis of the results.

Even though there has been considerable research on therapy procedures for social anxiety and inadequate social behaviors, a comprehensive theory of social behavior appears to be lacking (Skatsche and Skatsche-Depisch, 1979; Brown and Brown, 1980). One result of this is that assessment procedures are largely underdeveloped (Curran and Mariotto, 1980). Despite these deficits we decided to develop a broad-spectrum social skills training program, directed at

decreasing social anxiety and increasing both social skills and self-control. The applied self-management methods included cognitive skills, such as setting realistic self-standards and self-application of problem-solving strategies. The methods were applied in the gradual exposure to anxiety-eliciting social situations and in the practicing of social responses.

Several treatment procedures were conjointly used in the present study, because research has revealed that this produces a larger effect than would result from their separate application (e.g. Eisler, Hersen and Miller, 1973; Hersen, Eisler, Miller, Johnson and Pinkston, 1973; McFall and Twentyman, 1973). Also, while social behavior has appeared to be situation specific (Eisler, Hersen, Miller and Blanchard, 1975; Hersen, Bellack and Turner, 1978; Pitcher and Meikle, 1980), the acquisition of self-control was emphasized in the treatment program.

In an earlier study designed to explore our broad-spectrum approach to enhancing the social skills of psychiatric patients, a relatively small number of *S*s (18 persons in both the experimental and control groups) were treated (van Dam-Baggen and Kraaimaat, 1977). In the first part of the current study we replicate the earlier study by investigating the effectiveness of our treatment model in a large sample of psychiatric patients ($n = 131$), who were treated over a period of 8 yr. Replication was deemed necessary, not only because of the small sample but also because the effectiveness of a new treatment program can easily be influenced by the enthusiasm of the therapists. Moreover, an important question for clinical practice is how effective a treatment program is when applied over a long period of time. This circumstance also provided the opportunity for evaluating the influence of patient drop-out on the efficacy of the treatment, a long neglected issue. Another neglected issue was dealt with in the second part of this study where we sought to determine which, if any variables were predictors of our therapy outcome. In behavior therapy there is hardly any research available on this question. Yet, data of this kind might well enable us to more adequately refer patients for specific treatments.

METHOD

Subjects

The *S*s of this study were 131 inpatient and outpatient clients of a psychiatric department, who on self-report inventories and during the intake interview report social anxiety and/or skill problems in social situations as one aspect of their presenting complaint. It follows that *S*s with varied kinds of inadequate social behavior such as avoidance of social situations, social anxiety and deficits or excesses in social responses, were admitted to the social skills training. The nature and intensity of their remaining problem behavior was not a determining factor in their selection. The sample was heterogeneous: diagnoses ranged from serious neurotic to borderline psychotic syndromes. Excluded from the *S* pool were manifestly psychotic patients and those who evidenced brain damage.

Ninety-six *S*s of the original 131 were admitted to the treatment condition. Twenty participants dropped out during treatment for various reasons. Thus, the experimental group consisted of 76 *S*s, 38 men and 38 women, whose mean age was 29.6 yr and who ranged in age from 16 to 50 yr. Thirteen of these experimental *S*s were hospitalized in an open psychiatric ward, while the remaining 63 were outpatients of the same psychiatric department. Twenty-eight persons were married or living together, and 45 of the participants were currently employed. More than 60% of the patients in this group had a junior high school or lower level of education.

Thirty-five of the patients who met the aforementioned *S* criteria were randomly assigned to the control group. This group received no treatment that was directed at their social skills. The control group consisted of 11 men and 24 women, with a mean age of 32.3 yr. They range in age from 15 to 50 yr. Twenty-two of these *S*s were hospitalized in the same open psychiatric ward as the inpatients in the experimental group and 13 were outpatients. Twenty persons were married or living together and 4 were currently employed. Almost 46% of the patients in this group had a junior high school or lower level of education.

The patients in both the experimental and control conditions were seen in several clinical and ambulatory psychiatric facilities, where, for example, they were involved in medication therapy, discussion groups, patient staff meetings and occupational therapy. However, in no case were the activities directed at their social skills.

Conditions

All of the patients in the experimental group received the very same treatment program. They were seen by two therapists in 15 groups of 5–8 participants. One of these behavior therapists in each of these training groups was experienced and the other was a trainee, who generally was of different sex. The social skills training program was comprised of 17 sessions of 1½ hr once a week. This was followed by three sessions once a month.

The social skills training program was composed of three successive overlapping phases:

- Training in basic social skills, such as observing, listening, giving and receiving feedback and in nonverbal components of social behavior such as eye-contact, loudness of speech etc.
- Training in specific social responses such as making and refusing requests, giving and receiving compliments, receiving refusals, initiating and continuing a conversation, giving and receiving criticisms, stating positive self-assertions, standing up for one's rights, inviting, asking for information, ending social intercourses and expressing opinions.
- Training in self-management skills such as self-monitoring, setting concrete and realistic goals and subgoals, setting realistic self-standards and appropriate self-reinforcement. In this phase the participants were taught to practice independently in their daily life, the procedures and skills they had learned in order to maintain and enlarge them. Thus, they were taught problem-solving strategies as a means of handling future problems.

In our treatment model the following self-management procedures were applied (Kanfer, 1975): (a) self-monitoring of performed and avoided social behavior; (b) self-application of successive approximation in social situations; (c) self-evaluation of the practiced behavior by means of self-determined standards which were set beforehand; (d) self-reinforcement; and (e) learning to employ a problem-solving strategy by integrating approaches (a)–(d).

The self-management procedures were gradually trained and were supported by bibliotherapy and practiced in the daily-life situation. The problem-solving strategy was applied successively to nonsocial activities, to social skills which were practiced in the training and finally to assertive skills which were not (yet) practiced in the training.

Each training session started with a discussion of the homework assignments supplemented by written feedback by the therapists. Then, a large part of the session was spent on rehearsing particular skills. After that, the new homework assignments were given and the session was evaluated. The specific procedures utilized have been discussed by van Dam-Baggen and Kraaimaat (1979).

In the experimental group assessments were made before treatment (pretest), during the week of the 17th session (posttest) and 3 months later during the week of the 20th session (follow-up test). The control group received no treatment directed at social skills. Assessments were made at the beginning (pretest) and the end (posttest) of a 17-week period.

Questionnaires and rating scales

(1) *Social Anxiety Schedule (SAS; Willems, Tuender-de Haan and Defares, 1973)*. Social anxiety was operationally defined by this 24-item scale which has reference to social situations in which one could be conspicuous, as well as to assessment situations, new and unexpected situations and to sociable and informal intercourse situations. The respondents judge the applicability of the items by means of a 5-point Likert scale. The higher the Total score (maximum 96), the higher is the reported social anxiety.

(2) *Assertiveness Schedule (AS; Wolpe and Lazarus, 1966)*. This questionnaire is composed of 30 assertions, mostly referring to practicing social skills. The schedule, which is derived from a previous version, requires the respondent to judge the applicability of the assertions by means of a 5-point Likert scale. The higher the Total score (maximum 120), the more the reported social skills are being performed.

(3) *The Fear Survey Schedule—III (FSS-III; Wolpe and Lang, 1964)*. This schedule, which consists of 76 items and a 5-point Likert scale (maximum 380), is usually used as a measure of

general anxiety. A factor analysis of the responses of 700 Dutch phobic patients to this test (Arrindell and Zwaan, 1982) yielded five scales of which one reflected social anxiety (Factor 1, 13 items). For the purpose of this study general anxiety was defined as the Total Score of the FSS-III minus the score of Factor 1 (maximum score 315).

(4) *The Internal-External Locus of Control Scale (I-E; Rotter, 1966)*. Rotter developed this scale as a means of measuring generalized expectations of reinforcement. The reinforcements appear as a result of a person's own behavior or as a result of external factors (Klandermans and Visser, 1983). The Dutch version of this scale consists of 40 items (Andriessen, 1972). The higher the score (maximum 33), the higher is the external control.

(5) *Six simple 5-point rating scales concerning involvement, competence and satisfaction*. The patients rated their active participation in the treatment, their understanding of what adequate social behavior is, their capability in practicing problem-solving strategies, their satisfaction with the number of the treatment sessions, their satisfaction with self-practicing the new behavior and their satisfaction with their current social intercourse.

Questionnaires (1)–(3) were completed by all *Ss*. The experimental *Ss* were given these questionnaires at the prescribed pre, post and follow-up periods and control *Ss* at the appropriate pre and post periods. Questionnaire (4) was added to the experiment at a later stage; 44 experimental *Ss* and 20 control *Ss* completed this scale during the same assessment periods when they responded to questionnaires (1)–(3). The rating scales were only completed in the posttest assessment by the *Ss* of the experimental group. With respect to the follow-up period, the attrition rate was very low. In the experimental group 71 (of 76) *Ss* provided questionnaire data at the 3-month follow-up.

Statistics

The differences between the pretest and posttest scores of the *Ss* groups were tested by ANOVAs [repeated measures, unequal group size (Winer, 1971)]. The differences between the pretest, posttest and follow-up scores within the experimental group were tested by one-way ANOVAs [repeated measures (Winer, 1971)] and Newman-Keuls tests (Winer, 1971).

In the prediction part of the study a multiple-regression analysis was used [optimal subset selection (Boyce, Farhi and Weischedel, 1974)]. Residual gain scores (Kerlinger, 1975) were used as a measure of individual changes in the self-report of social anxiety, social skills, general anxiety and internal-external control (dependent variables). The residual gain scores were calculated for each *S* by subtracting the predicted scores of posttest and follow-up from the observed scores. The predicted posttest and follow-up scores were based, respectively, on the pre and posttreatment scores. Independent variables were introduced into the equation on the basis of their simple correlation with the dependent variable. This was done in order to find the optimal subset of predictors. The demographic variables, intelligence, the sequence number of the treatment group, the six global rating scales and the pretest and posttest scores on the questionnaires were used as independent variables.

EVALUATION

With respect to the demographic characteristics, sex, age, educational level (in terms of a 5-point Likert scale), hospitalization, employment, marital status (χ^2 - and *t*-tests), intelligence [Groninger Intelligentie Test (GIT), short version (Luteijn and van der Ploeg, 1983)] and the pretest scores of the self-report inventories SAS, AS, FSS-III Anxiety and I-E (*t*-tests), the groups differed significantly only in terms of the number of people who were hospitalized (χ^2 : $P = 0.001$) and the number who were employed (χ^2 : $P = 0.001$). More people were hospitalized in the control group than in the experimental group and fewer people in this group were employed. As was expected both variables were significantly contaminated ($r = -0.50$, $n = 111$). Importantly, the experimental and control group did not differ in (social) anxiety, social skills and internal-external control prior to the onset of the experiment.

Results

Table 1 shows the mean questionnaire scores and standard deviations of the experimental and control group before and after treatment and at the 3-month follow-up period.

Table 1. Mean questionnaire scores and standard deviations at pretest, posttest and follow-up for the experimental and control group

Variable	Experimental group		Control group	
	\bar{X}	SD	\bar{X}	SD
SAS				
Pre	72.30	14.14	66.71	17.21
Post	60.63	19.73	64.57	18.35
Follow-up	57.49	21.94		
AS				
Pre	44.57	16.09	49.83	23.09
Post	59.41	18.45	52.94	21.90
Follow-up	61.29	19.63		
FSS Anxiety				
Pre	134.53	35.63	147.91	46.84
Post	126.20	39.95	136.41	42.96
Follow-up	122.94	38.23		
I-E				
Pre	19.16 ^a	5.53	19.90 ^b	5.98
Post	15.59 ^a	6.52	18.05 ^b	6.89
Follow-up	14.78	6.01		

^a*n* = 44; ^b*n* = 20.

Table 2 summarizes the ANOVAs on the results of the pretests and posttests of the experimental and control group.

Significant main effects were found for all the self-report inventories. With respect to these measures, then, both the experimental and control groups improved between pre and posttest. However, only on the SAS and the AS was a significant interaction effect found for measurements and groups. This means that the experimental group improved more in terms of social anxiety and social skills between the pre and posttest than did the control group. Moreover, the ANOVAs and the Newman-Keuls tests made it evident that the experimental group improved significantly between both the pre and posttest and the pretest and follow-up periods on all questionnaires ($P < 0.01$). This improvement was apparently maintained since no significant differences were found between the posttest and follow-up periods.

Although no analysis of dropouts is found in the literature on social skills training, it cannot be denied that the drop-out rate of a treatment is a necessary supplement to the evaluation of therapy outcome. In the current study, 20 out of 96 participants (21%) dropped out during treatment. There was an average of 1.3 dropouts per treatment group and the range was 0–3. *t*-Test and χ^2 -tests were used to explore the differences between experimental *S*s and those who dropped out. The groups did not differ on the pretests of the SAS, the AS, the FSS-III Anxiety and the I-E or in terms of the demographic characteristics sex, age, educational level, marital status and employment. The two groups did differ, however, with respect to intelligence and hospitalization ($P < 0.01$). The dropouts were less intelligent than those in the experimental group (mean IQ dropouts = 94.1, SD = 13.4; mean IQ experimental *S*s = 107.2, SD = 15.7) and more frequently hospitalized (dropouts 50% hospitalized and experimental *S*s 17%).

Table 2. ANOVAs between groups and measurements

Variable	A (groups)	Error between	B (measurements)	A × B	Error within
SAS					
MSe	32.56	487.09	2286.45	1087.80	115.60
<i>F</i>	0.07		19.78**	9.41**	
AS					
MSe	17.32	594.59	3863.37	2648.02	133.50
<i>F</i>	0.03		28.94**	12.34**	
FSS-Anxiety					
MSe	5987.35	2966.37	4171.85	188.76	315.94
<i>F</i>	2.02		13.20**	0.60	
I-E					
MSe	70.40	58.11	201.83	20.30	18.08
<i>F</i>	1.21		11.17**	1.12	

* $P < 0.05$; ** $P < 0.01$.

PREDICTION

In this part of the study we explored which variables best predict the outcome of the social skills training program immediately after treatment and 3 months later.

Pretreatment predictors of change during treatment

The demographic characteristics, intelligence, the sequence number of the treatment groups and the pretest scores on the self-report inventories were used as independent variables to predict outcome immediately after treatment.

Posttreatment outcome in social skills (AS) was predicted by hospitalization and the pretest scores of the SAS (Table 3). In other words, hospitalization and high social anxiety prior to therapy served to impede improvement in social skills during treatment. However, these variables explained only 8% of the variance. Posttreatment outcome in terms of social anxiety (SAS), general anxiety (FSS-III Anxiety) and internal-external control (I-E) were not predicted by any of the variables in the equation.

Table 3. Multiple-regression analysis of the AS (pretest at posttest)

Predictor	Coeff.	<i>t</i>	<i>r</i>	<i>R</i> _{corr}	<i>F</i>	Const.
Hospitalization	-6.95	-1.47	-0.19			
SAS, pretest	-0.30	-2.35*	-0.28	0.28	3.19**	22.95

P* < 0.05; *P* < 0.01.

Posttreatment predictors of change during follow-up

The demographic characteristics, intelligence, the sequence number of the treatment groups, the six global ratings of involvement, competence and satisfaction and the posttest scores of the self-report inventories, were used to predict outcome 3 months after treatment.

Outcome in internal-external control (I-E) 3 months after treatment was predicted by hospitalization and employment, and the posttest scores of the FSS-III Anxiety (Table 4). That is to say that hospitalization, lack of employment and high general anxiety at posttest act against an increase in internal locus of control. These three variables explained 28% of the variance. Note that 12 out of 13 original clinical patients in the experimental group were hospitalized at the time of follow-up. Follow-up treatment outcomes in social anxiety (SAS), social skills (AS) and general anxiety (FSS-III Anxiety) were not predicted by any of the variables in the equation.

Table 4. Multiple-regression analysis of the I-E scale (posttest at follow-up)

Predictor	Coeff.	<i>t</i>	<i>r</i>	<i>R</i> _{corr}	<i>F</i>	Const.
Hospitalization	-5.24	-2.86**	-0.16			
Employment	-3.65	-2.91**	-0.22			
FSS-Anxiety, posttest	0.04	3.17**	0.36	0.53	4.71**	-2.10

***P* < 0.01.

DISCUSSION

Generally speaking the social skills training program has been shown to be relatively effective with psychiatric patients. In comparison with a control group, the treatment resulted in a greater decrease in social anxiety and a larger increase in social skills. Moreover, the treatment effects were maintained 3 months after treatment.

It should be noted that the experimental as well as the control group showed a decrease in general and social anxiety and an increase in social skills and internal control. Therefore, these changes cannot be exclusively attributed to the social skills training. They also may be due to the fact that both groups participated in several other clinical and ambulatory psychiatric facilities. However, the larger effects in the experimental group have to be attributed to the social skills training, since the control group did not receive social skills training.

The concern that the positive results of an earlier outcome study on social skills training (van Dam-Baggen and Kraaimaat, 1977) might, at least in part, be attributed to such nonspecific factors

as newness of the treatment and the consequent enthusiasm about it by the therapists, was put aside by the present study. This is because 15 training groups were treated over a period of 8 yr and the therapeutic effect cut across the treatment groups.

Neither sex, age, intelligence, educational level nor marital status predicted treatment or posttreatment changes in social anxiety, general anxiety, social skills or internal-external control. This suggests that the social skills training program is suited for a broad spectrum of psychiatric patients. On the other hand, intelligence and hospitalization appeared to be factors that relate to the patient drop-out rate. The finding that intelligence was not associated with or was not predictive of the dependent variables studied, may be partly accounted for by the relatively higher drop-out rate among the patients who were of a lower intellectual level.

The drop-out rate during treatment of 21% cannot be compared with the data of other studies. This is because such data do not appear in the literature. Yet the drop-out rate is a matter of considerable import. As such it would seem advisable to explore this matter with a patient group that is more homogeneous than that utilized in this investigation of the effect of a social skills training program.

The data uncovered in this outcome study highlight the fact that a high level of social anxiety before treatment, and hospitalization, serve to impede improvement in social skills. As such, the current findings are consistent with those of Safran, Alden and Davidson (1980) who found that the pretest anxiety level of nonassertive patients decreased the effectiveness of their treatment. An explanation of the negative contribution of high pretest social anxiety could be that it goes hand in hand with the avoidance of social situations. In that case, practicing the newly learned responses is inhibited and the acquisition and enhancement of these skills is prevented.

Since the drop-out rate is relatively higher among hospitalized patients than among outpatients, the rather small influence of hospitalization on treatment changes may be a rather conservative estimate of its real contribution. The most plausible explanation for the impact of hospitalization would be that clinical psychiatric patients are more anxious than outpatient psychiatric patients. However, comparison of the pretest levels of social anxiety, general anxiety and social skills between the clinical ($n = 13$) and outpatient Ss ($n = 63$) in the experimental group revealed that they did not differ significantly in relation to these variables (t -tests: $P > 0.20$). Therefore the anxiety interpretation can be rejected. Alternatively, it could be that a clinical situation offers too little opportunity for practicing the acquired skills. Although there were a lot of social situations available in the clinical setting (with fellow-patients, staff members and family members in the case of an open ward), hospitalization in a psychiatric clinic, even in an open ward, is rather restrictive. Social interactions are often contaminated by the premise that they should have therapeutic purposes. It is obvious that in such a protected and restricted environment the social behavior repertoire of patients cannot be as comprehensive as it would be in daily life.

The present data also brought to the fore the fact that being hospitalized, being unemployed, and having a high posttest level of general anxiety impede internal control in the period after treatment. The negative influence of hospitalization during the follow-up period can be explained in terms of Rotter's view of internal and external control (1966). Being hospitalized in itself can be seen as relinquishing internal control. In this clinical environment it is rather difficult to alter one's expectations about the consequences of one's behavior. For the acquisition of internal control, the daily-life situation outside the clinic has more potentialities to practice the acquired responses; there is a larger and more varied supply of social situations in which one can act on one's own initiative and responsibility. Similarly, the negative influence of being unemployed and having a high level of general anxiety in the follow-up period can be explained by the restrictions in the available social situations in daily life. These limitations can either be a consequence of the environment itself or can be brought about by the patient in his avoidance of anxiety eliciting situations.

The global ratings of involvement, competence and satisfaction, referring to the period during treatment did not predict changes in the follow-up period. These results may imply that changes after treatment are independent of events during treatment.

Taken together, the findings of this study imply that the targets of the treatment should be extended from deconditioning of anxiety and acquisition of social skills to include a more active expansion of real-life situations. Moreover, the data seem to suggest the need to pay explicit

attention to the implementation of the treatment in the setting (Schmidt and Patterson, 1979; van Dam-Baggen, 1984).

Only a few variables contributed to the prediction of the therapy outcome. This may be due to the fact that other variables than the ones explored in this study may be responsible for the therapy effects. Among these are: influences from the environment (e.g. reinforcing and punishing conditions), problems which may facilitate or inhibit working on social skills and such other process variables as active practicing of homework assignments.

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