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Response-Acquisition and Cognitive Self-Statement Modification Approaches to Dating-Skills Training

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Three training programs for girl-shy males were designed using an empirically derived domain of problem situations from shy males and response alternatives from a "competent" population. The effectiveness of a response-acquisition treatment was compared with a cognitive self-statement modification treatment, a combination of these two treatments, and a waiting-list control group (no treatment). Two enhanced-treatment groups were used to control for the longer time of the combined-treatment group. Sixty-one college men replying to the program announcement were randomly assigned to one of the six groups. Assessment included in vivo measures made by women phoned by the subjects, questionnaire measures, and ratings of role-play performance in taped, laboratory, problem situations. A 6-month follow-up assessment was also included. The results indicated that subjects trained in cognitive self-statement modification showed significantly better performance in role-play situations for which they were not trained ($p < .05$), made significantly more phone calls, and made a significantly better impression on the women than subjects in other groups. These effects were generally maintained at follow-up, and the cognitive self-statement groups' performance on the role-play measures improved from posttreatment to follow-up.

Relating to girls in a satisfying manner is one of the major needs of adolescent boys. Many males are confused, bewildered, and discouraged about dating. In a pilot study (Shmurak, Note 1) it was reported that 54% of the social situations with which undergraduate men had difficulty concerned dating. This concern among college men is apparently even greater than among college women, for only 42% of the problem situations reported by undergraduate women concerned dating.

This research was based on a master's thesis by the first author and a dissertation by the third author, submitted in partial fulfillment of the requirements for the master's and doctoral degrees, respectively, at Indiana University.

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Only recently have psychologists begun to turn their attention to the problem of developing systematic programs to teach dating skills (Curran, 1975; Curran & Gilbert, 1975; MacDonald, Lindquist, Kramer, McGrath, & Rhyne, 1975; Morgan, 1970; Twentyman & McFall, 1975). Previous studies using a response-acquisition, or skills-training, model have postulated, without empirical evidence, which specific skills subjects with dating problems should master. In contrast, the present experiment used the competence approach of Goldfried and D'Zurilla (1969). Problem dating situations were obtained first-hand from individuals who provided play-by-play descriptions of situations they found difficult to handle. Next, the responses of individuals who handled these situations competently were studied. A training program was then designed to teach subjects these competent responses to the particular problem situations. Thus, the competence model attempts to teach *empirically validated* behaviors (see Goldsmith & McFall, 1975).

Prior research has tended to limit assessment to various self-report measures, to the rating of audiotaped responses to prob-

lem dating situations presented on tape, or to the ratings of laboratory role-played interactions between subjects and female confederates. Although the latter are preferable to self-reports for assessment of actual behavior change, they are taken in the laboratory and require that the subject imagine he is in the process of, or interested in, getting to know the female confederate. The relationship between a subject's performance on these measures and his degree of success in real-life dating relationships is, at best, unknown. In contrast, the present study employed an assessment procedure designed to tap subjects' actual in vivo behavior. Also, few studies have included a long-term follow-up of subjects. The present investigation included a 6-month follow-up assessment.

Dating training programs based on the response-acquisition model have shown only very limited transfer to extralaboratory situations. On the other hand, there is some evidence that teaching subjects to modify their self-statements in a positive, coping manner significantly improves the generalization, maintenance, and innovative self-application of training (Thoreson & Mahoney, 1974). Cognitive self-statement modification treatments have been shown to produce transfer of training with schizophrenics (Meichenbaum & Cameron, 1973), test- and speech-anxious individuals (Meichenbaum, 1972; Meichenbaum, Gilmore, & Fedoravicius, 1971), and multiple phobics (Meichenbaum & Cameron, Note 2). However, none of these populations were assessed on behaviors they had to learn to perform; the responses were already in their repertoires. It seemed possible, therefore, that the best transfer to extra laboratory situations and long-lasting follow-up results would be obtained in dating-skills training by a combination of response-acquisition and cognitive self-statement modification approaches.

Method

Subjects

Subjects were 61 undergraduate and graduate male students at Indiana University recruited by distributing an announcement of the dating-skills development program to the mailboxes of every male student living in a university residence hall. Subjects were randomly assigned to one of six (three treatment and three control) groups. Treatment consisted of either response-acquisition training, cognitive self-statement modification training, or combined response-acquisition/cognitive-modification training. In addition to a waiting-list control group, two enhanced-treatment groups (enhanced response acquisition and enhanced cognitive self-statement modification) were used to control for the longer training time of the combined-treatment group.

Program Development

Problem situations were selected from those obtained by Shmurak (Note 1), who interviewed 100 undergraduate psychology students to obtain "play-by-play" accounts of problem social situations. In addition, certain situations from Goldsmith and McFall (1975) were rewritten to be more appropriate for a college population. A limited number of situations based on the work of Watkins (1972) were also selected for inclusion.

Competent responses to each of these problem dating situations were elicited from "socially competent" students and were shown to five judges, who selected most and least effective responses and also provided their rationale for these selections. Effective responses were used in construction of material based on the response-acquisition model.

Coping self-statements were obtained by asking 68 undergraduate students to write down their immediate thoughts and feelings in response to each problem situation. These statements were used to construct instructional material based on the cognitive self-statement model.

A cassette training tape describing 11 problem situations was then constructed and prerecorded for each of the three experimental treatments. The two enhanced-treatment control groups received an additional two situations. Response-acquisition training thus consisted of coaching, a model response, and recoaching for each situation. Training in cognitive self-statement modification, on the other hand, included a model of effective self-statement coping and reinforcement following each problem situation. The combined-treatment tape included major elements of both of the former types of training.

Procedure

The experimenters were seven undergraduate psychology majors, each of whom served as randomly assigned counselors for subjects in each of the six groups. These students were in charge of individually administering the taped training programs.

Subjects first attended a 90-minute session with other men in their respective treatment group for the purpose of role induction (Goldstein, Heller, & Sechrest, 1966). An audiotape presented an introduction to dating problems and gave an example of a typical session for that treatment. During the remaining three or four 60-minute

training sessions, each subject met individually with his counselor. The assessment procedures were given in the order described below.

Dating Behavior Assessment Test (DBAT). The DBAT is an original instrument consisting of the 11 problem situations on the training tapes plus 13 additional nontraining situations enacted and prerecorded on audiotape. After a description of the situation, given by a male voice, a female voice supplied a leading statement, and subjects were asked to role-play a response. These situations varied in difficulty and clearly described key points of interaction.

Responses were tape-recorded, transcribed, and rated from 0 to 2 according to specific adequacy criteria for each situation derived from judges' rationales for competency. All raters were blind to subject assignment, as well as to whether responses were recorded prior to or after treatment. Thus a total score for all 24 situations, as well as subtotal scores for training and nontraining situations, were obtained. The DBAT was administered both prior to and after treatment and at the 6-month follow-up.

Phone-call assessment measures. Subjects were randomly given names and phone numbers of two women and asked to call and "practice" getting to know a woman. Females were subjects from undergraduate psychology classes who were unaware of the training program and participated in an "experiment on telephone conversations." A later questionnaire asked the women to rate each subject who called on the skillfulness of his tactics and to indicate which one she would most like to meet. Measures of the caller's behavior, the woman's impression of the phone conversation, and her rating of the caller's personality on a semantic differential were also taken. The phone-call assessment was conducted both in the week following the final training session and during the 6-month follow-up.

Follow-up questionnaire. Approximately 6 months after the end of the program, 45 of the 53 men still at the university agreed to participate in the follow-up assessment. In addition to the previously described DBAT and phone-call assessment, subjects were asked to report the monthly frequency of several kinds of formal and informal interactions with women, to rate changes in their feelings of global and situational competence with women, and to report the degree of enjoyment they felt with women and how well they got to know the women they had met.

Results

Reliability of DBAT Tape Raters

Interrater reliabilities for the DBAT scores ranged from .75 to .92, with a mean of .83.

Pretreatment Measures

A single-classification analysis of variance indicated that the six groups were not initially different on pretreatment self-reports of dating frequency, $F(5, 55) = .96$, $p > .05$; DBAT training-situations scores, $F(5, 55) = .98$, $p > .05$; DBAT nontraining-situations scores, $F(5, 55) = .52$, $p > .05$; or DBAT total scores, $F(5, 55) = .62$, $p > .05$.

Analyses of Treatment Effects

Posttreatment scores on the DBAT and the number of phone calls were analyzed by two-way multivariate analyses of variance with two levels of cognitive self-statement modification (present or absent) and two levels of response acquisition (present or absent). Significant effects were found for response acquisition, $F(3, 44) = 20.72$, $p < .01$; cognitive self-statement modification, $F(3, 44) = 2.93$, $p < .05$; and the response-acquisition/cognitive-modification interaction, $F(3, 44) = 6.05$, $p < .01$.

DBAT training-situations score. A univariate F test revealed significant effects for response acquisition, $F(1, 46) = 58.59$, $p < .01$; cognitive self-statement modification, $F(1, 46) = 6.79$, $p < .02$; and their interaction, $F(1, 46) = 12.94$, $p < .01$. A Newman-Keuls test carried out on the four cell means indicated that all three treatment groups had significantly higher scores than the waiting-list group. The performances of the response-acquisition and combined-treatment groups, although not significantly different from each other, were significantly better than that of the cognitive self-statement groups (see Table 1).

DBAT nontraining-situations score. Table 1 also summarizes group means for the nontraining situations. In a univariate F test, a significant effect was found only for cognitive self-statement modification, $F(1, 46) = 4.85$, $p < .05$.

DBAT total score. A significant response-acquisition effect, $F(1, 46) = 23.69$, $p < .01$, and a significant cognitive self-statement effect, $F(1, 46) = 7.49$, $p < .01$, were found in the analysis of the DBAT total scores.

Number of phone calls. A univariate F test revealed a significant Response Acquisition × Cognitive Self-Statement interaction effect on the number of phone calls, $F(1, 46) = 4.26$, $p < .05$. A Newman-Keuls test carried out on the four cell means

TABLE 1

GROUP MEANS AND STANDARD DEVIATIONS FOR PRETREATMENT, POSTTREATMENT, AND FOLLOW-UP DBAT SCORES AND NUMBER OF PHONE CALLS

Assessment	Response acquisition	Cognitive self-statement	Combined	Enhanced response acquisition	Enhanced cognitive self-statement	Waiting list
DBAT training-situations score						
Pretreatment						
M	6.31	8.08	8.46	8.50	7.80	7.18
SD	2.32	1.89	3.47	1.98	2.86	3.99
Posttreatment						
M	16.69	12.38	16.33	16.17	9.20	6.50
SD	2.75	2.47	3.23	2.93	2.78	3.53
Follow-up						
M	13.44	13.44	14.89	15.17	10.75	7.83
SD	4.42	2.40	3.14	3.13	1.26	2.14
DBAT nontraining-situations score						
Pretreatment						
M	11.69	11.38	11.85	10.00	12.40	10.09
SD	4.19	3.59	3.08	2.53	4.22	4.67
Posttreatment						
M	13.85	14.46	16.11	13.17	14.80	12.17
SD	4.41	3.28	2.54	2.93	2.95	5.55
Follow-up						
M	13.11	15.56	16.11	14.50	12.00	11.33
SD	5.16	4.59	1.27	4.93	4.08	3.56
DBAT total score						
Pretreatment						
M	18.00	19.46	21.08	18.50	20.20	17.27
SD	6.15	4.47	6.44	3.45	6.87	7.50
Posttreatment						
M	30.54	26.85	32.00	29.33	24.00	18.82
SD	6.50	5.05	3.89	5.46	4.47	8.51
Follow-up						
M	26.56	29.00	31.00	29.67	22.75	19.17
SD	8.81	6.48	3.61	6.92	5.18	5.42
Number of phone calls						
Posttreatment						
M	.69	1.15	.54	.33	1.40	.45
SD	.75	.80	.60	.82	.55	.27
Follow-up						
M	.56	.78	.22	.00	1.00	.00
SD	.73	.85	.85	.00	.82	.00

Note. DBAT = Dating Behavior Assessment Test.

revealed that the performances of the response-acquisition, combined-treatment, and waiting-list groups were not significantly different but that the cognitive self-statement group made significantly more phone calls than the other groups (see Table 2). In summary, 77% of the subjects in the cognitive self-statement group made at least one call, compared to 54% in the response-acquisition group, 38% in the combined-treatment group, and 45% in the waiting-list group. Phone calls were made by 27 subjects out of a possible 50.

Phone-call assessment measures. For subjects who made at least one phone call, measures of behavior, tactics, personality,

TABLE 2
NUMBER OF PHONE CALLS MADE BY SUBJECTS AT POSTTREATMENT AND FOLLOW-UP ASSESSMENT

Group	Number of calls		
	0	1	2
Posttreatment			
Response acquisition	6	5	2
Cognitive self-statement	3	6	4
Combined	8	3	2
Enhanced response acquisition	5	1	0
Enhanced cognitive self-statement	0	3	2
Waiting list	6	5	0
Follow-up			
Response acquisition	5	3	1
Cognitive self-statement	3	5	1
Combined	7	2	0
Enhanced response acquisition	6	0	0
Enhanced cognitive self-statement	1	2	1
Waiting list	6	0	0

and impressions made were analyzed with a two-way multivariate analysis of variance. The effect for cognitive self-statement modification came closest to reaching significance, $F(3, 21) = 2.41$, $p < .10$. Univariate F tests performed on each variable showed that this effect was mainly based on the phone-call impression measure, $F(1, 23) = 7.92$, $p < .01$. Examination of the means revealed that subjects who received the cognitive self-statement treatment made a significantly better impression in their phone calls than did subjects who did not receive this treatment.

Effects of length of treatment. A two-way multivariate analysis of variance comparing treatment (cognitive self-statement or response-acquisition) and length of treatment (regular or enhanced) yielded a significant treatment effect, $F(1, 33) = 10.72$, $p < .01$, but no length of treatment effect and no significant interaction effect. Univariate F tests revealed that the treatment effect occurred on the DBAT training-situations score, $F(1, 33) = 33.27$, $p < .01$, and on the number-of-phone-calls measure, $F(1, 33) = 6.57$, $p < .05$. Examination of the means on these measures revealed that the response-acquisition groups did significantly better than the cognitive self-statement groups on the DBAT training-situations score and that the cognitive groups did significantly better than the response-acquisition groups on the number of phone calls (see Table 1).

Counselor Effects

All posttreatment variables were compared across the subjects of the seven principal counselors. The counselor effect was found to be significant only for the behavior score of the phone-call assessment, $F(6, 40) = 2.40$, $p < .05$. A Newman-Keuls test failed to reveal any differences between behavior-score means at the .05 level. Sex of counselor was not significant for DBAT training- , nontraining- , or total-situations scores, or for number of phone calls.

Analyses of Follow-up Data

DBAT situations. An analysis of variance for all six groups over posttreatment and follow-up DBAT scores yielded a significant group effect for DBAT training situations and total situations, $F(5, 37) = 9.55$, $p < .01$, and $F(5, 37) = 4.42$, $p < .01$, respectively. A Newman-Keuls test revealed the response-acquisition, enhanced response-acquisition, cognitive self-statement, and combined groups to have scored significantly higher than the waiting-list group. These four groups did not significantly differ among themselves. No significant differences between groups were found on DBAT nontraining situations, although the trend was for the cognitive self-statement and combined groups to be slightly higher and for the waiting-list group to be lowest (see Table 1). The lack of a significant trials effect on all DBAT measures indicated no decrement over time in skill level. The cognitive-modification group actually increased slightly over time on all measures.

Number of phone calls. A chi-square test yielded a significant difference between the six groups, $\chi^2(5) = 2.78$, $p < .02$, in a comparison of subjects who made one or two calls. A further breakdown revealed significant differences between the cognitive

self-statement group and the waiting-list and enhanced response-acquisition groups, $\chi^2(2) = 4.71$, $p < .01$ (see Table 2).

Phone call assessment measures. Only tactics proved significant in an analysis of the regular versus the enhanced response-acquisition and cognitive self-statement groups, $F(3, 11) = 5.74$, $p < .05$. More specifically, response-acquisition, cognitive self-statement, and enhanced cognitive self-statement groups, although not different from each other, received significantly higher scores on tactics than combined-treatment subjects.

Follow-up questionnaire. No differences were found between groups on combined measures of dating frequency over the 6 months or on combined measures of feelings of competence in dating situations.

Discussion

The principal finding of this study was that a cognitive self-statement modification treatment can result in significant changes in in vivo dating behavior, as well as in increased transfer of training to laboratory situations for which training was not given.

Although response-acquisition training was the most effective treatment for the training situations and total situations on the role-play assessment, subjects who received some form of cognitive self-statement training showed greater transfer of training to nontraining situations. In addition, subjects in the cognitive self-statement condition were most likely to make the phone calls in a real-life situation, and the impression made by these subjects on the women they called was somewhat superior to that of subjects in other treatment groups. This measure was weakened, however, by the absence of data from the large number of subjects who did not make any calls. Finally, results indicated that only for the cognitive self-statement group did scores on the role-play assessment for training, nontraining, and total situations increase from posttreatment to follow-up. The effect for likelihood of making phone calls was also maintained for the cognitive self-statement groups upon follow-up.

This study, therefore, failed to find strong evidence that a response-acquisition treatment can lead to transfer of training to nontraining laboratory situations and to in vivo behavior, and supports the efficacy of the cognitive self-statement modification approach to therapy. Results suggest that many college students with dating problems may know what to do and only need to get themselves to do it. At least for subjects who already possess the necessary repertoire of dating skills, learning how to cope with negative self-statements appears to be a technique the individual can practice on his own and use in situations different from those practiced only in the program. After leaving counseling, subjects can apply the procedures themselves if the maladaptive response occurs. Thus, the present study adds to the evidence amassed by Meichenbaum and his colleagues that cognitions can be directly modified by subjects and that these modifications can result in significant changes in behavior.

The performance of the combined-treatment group was not significantly different from that of the response-acquisition group on role-played situations for which training was given and was not significantly different from that of the cognitive self-statement group on nontraining situations. This suggests that further study of the situations under which a combined treatment can become more effective than either treatment alone is necessary.

Glass (1974) also analyzed posttreatment data for subjects dichotomized on initial DBAT skill level. Results indicated that low-skill subjects profited most from either cognitive or response-acquisition treatment. Dating-training programs may be maximally effective, then, for subjects lowest in social skill. In conclusion, the results of this study emphasize the great need for reliable assessment techniques within the field of dating-skills training. It is crucial to be able to identify the different needs of individual subjects so that programs can be tailored to specific levels of skills and coping ability.

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