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RATIONAL EMOTIVE TRAINING
FOR
SHYNESS REDUCTION:
An Unexpected Failure

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RATIONAL EMOTIVE TRAINING FOR SHYNESS REDUCTION: An Unexpected Failure

By

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ABSTRACT

RATIONAL EMOTIVE TRAINING
FOR
SHYNESS REDUCTION:
AN UNEXPECTED FAILURE

By

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The shyness-reducing effects of Rational Emotive Training (RET) and a matched NO-RET control (NRET) were explored in a natural setting. Forty college women separately interacted with same- or opposite- sex confederates before and after RET training. Videotapes of these interactions were rated on pertinent behavioral measures by judges of each sex. Although RET instruction appeared adequate, this RET program unexpectedly failed to reduce shyness. Even more surprising, the NO-RET control group showed substantial shyness decrements. Same-sex interactors decreased shyness more than did their opposite-sex counterparts. Sex of rater was inconsequential. A review of this RET program's characteristics and the selected shyness measures raised questions about some related prior reports of RET's effectiveness. This RET program's brief duration (12-15 hours) may have limited its effectiveness. Anxiety induced by the RET training may have attributed to this unexpected outcome and deserves attention in related research and clinical areas.

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Finally to Julie, for comforting me through some difficult times, sharing smiles with me during the fun and for creating dreams with me for the future, I cherish you.

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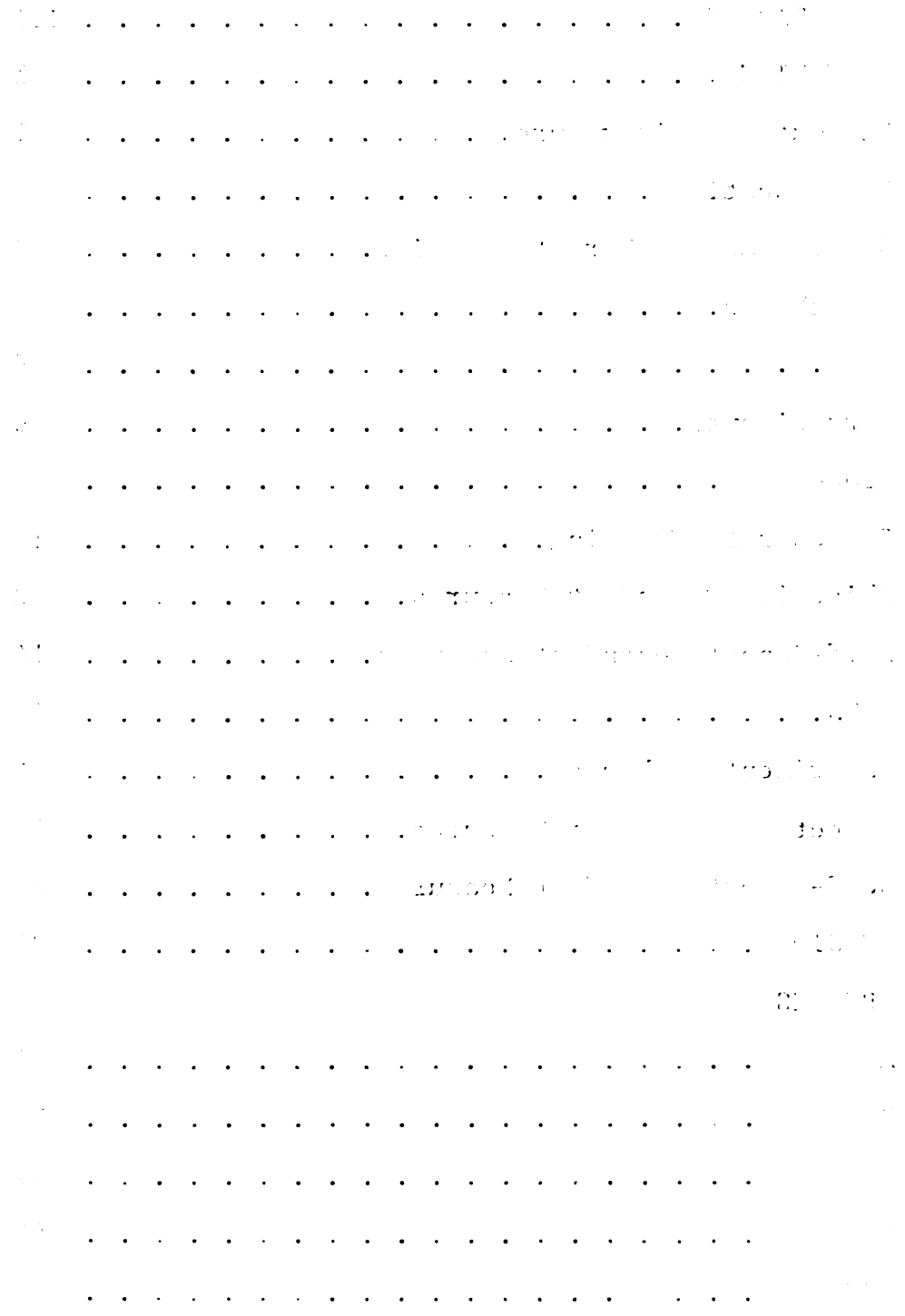

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INTRODUCTION

Rational Emotive Training (RET) is a highly cognitive, theoretically based therapy which asserts that emotional disturbance is not caused by the occurrence of an event, but rather by one's beliefs about, and interpretations of, this event. Albert Ellis (1977) discussed and referenced lengthy support for each of the premises on which RET is founded. These premises involve the inter-relatedness of cognition, emotion, and behavior. The reader is directed to any of Ellis's major works for a more detailed discussion (Ellis, 1962; 1971; 1972). Although Meichenbaum (1977) disputed Ellis's utilization of some studies to support his theory, he conceded that Ellis did provide extensive bibliographical support for the theoretical basis of RET.

RET outcome literature.

RET outcome studies have relied heavily on self-report measures as the dependent variables. In this light, RET has been reported as effective in treating interpersonal anxiety (Jacobs, 1971; DiLoretto, 1971), emotional distress in the elderly (Keller, Crooke & Brookings, 1975), speech anxiety (Meichenbaum, 1971), public speaking anxiety (Trexler & Karst, 1972; Jarman, 1973), test anxiety (Thompson, 1974; Holroyd, 1976), fear of negative rejection (Yu & Schill, 1976), and fear of negative evaluation (Friedman, 1970).

RET outcome studies have also used physiological measures as dependent variables but with limited success. Wein, Nelson, and Odom (1975) failed to demonstrate significant heart rate changes when treating anxiety with RET. However, Maes and Heiman (1972) did record lower GSR levels on subjects when treating anxiety with RET.

One of the best RET outcome studies was done by Lipsky, Kassinove, and Miller (1980) in response to the criticism that the efficacy of RET simply cannot be legitimately assessed using a non-clinical population. This study used adult outpatients of a community mental health center and found that RET alone, and also when combined with rational role reversal and rational emotive imagery, produced significantly more improvement in emotional adjustment than either the relaxation training or a no contact control group.

A major criticism of the above studies is that the dependent measures used were mostly self-report, paper-and-pencil questionnaires. Therefore, no direct measure of behavioral change was present. Those studies that referred to actual behavior as the dependent variable employed either self-report statements of the emotions during these behaviors, or behaviors that were structured and staged specifically for experimental purposes (i.e., public speaking). None of these studies addressed the effectiveness of RET on specific behavior in its natural setting from a wholly objective viewpoint. The present study was designed to accomplish this task.

RET Education

In regard to RET as an educational program, Jacobs (1971), Costello and Dougherty (1977), and Ritchie (1978) succeeded in developing effective RET training programs with undergraduates, high school students, and fifth-graders respectively. In a newsletter, Edwards (1977) claimed to have efficiently taught RET, but did not report factual data. Nevertheless, the pertinent literature (Maultsby, 1974; Maultsby, Costello & Carpenter, 1974) suggests that classroom training of RET has been successful and efficient.

The length of these successful RET training programs has ranged from five to fifteen weeks with semi-weekly meetings. Shorter programs were rarely found in the literature but D'Angelo (1978) successfully taught RET to undergraduates in three one-hour taped presentations. He supplemented this training with homework readings and exercises. The present RET intervention program was modeled after D'Angelo's

Other RET treatments such as bibliotherapy (Jarman, 1972) and rational proselytizing (Bard, 1973) that seemed to have been effectively used in RET training programs were also incorporated into the present study. Knauss (1977) developed a manual for RET education that contained a number of effective training procedures.

Shyness as the target behavior

Shyness has been defined by Pilkonis (1977b) as a "tendency to avoid social interactions and to fail to

participate appropriately in social situations." Shyness is an extremely widespread clinical problem. Zimbardo (1977) reported that over 40% of those questioned said that they were presently shy. Eighty percent reported that they were shy at some point in their lives. It was also reported that opposite-sex interactions were more stressful than same-sex interactions for shy people. Shyness has been most popularly conceptualized as a deficit in social skills. Numerous social skills training programs have been developed that appear moderately successful (Argyle, Trower & Bryant, 1974; Lazarus, 1978).

Pilkonis (1977b) found that shy and not-shy individuals did not differ in the length of their orations once they began talking. This suggested that "a willingness to employ social skills may be an issue" involved in shyness. Crozier (1979a) continued along these lines and suggested that a person's evaluation of his own competence determined shyness, rather than the actual level of social competence.

This notion had been earlier supported by Clark and Arkowitz (1975) who studied the Social Anxiety and Distress Scale (Watson & Friend, 1969) and found that most individuals underestimated their social competence when compared to observers' ratings of them on the same scale. This supported Crozier's (1979b) view that shyness is not so much a deficit of social skills as it is a "self-censoring" of social activity.

The study of behavior of shy individuals had generally failed to discriminate between shy and not-shy people (Borkevec, Stone, O'Brien & Kaloupek, 1974) before the well-designed work of Pilkonis (1977a, 1977b). He found that shy people initiated, structured, and spoke less when conversing with another person. He also found that shy people had less eye contact and allowed more silences to build up within their conversations than did not-shy people. Shyness was found to have a larger effect on behavior when the individual was involved in an ambiguous interaction (casual conversation) as opposed to a structured interaction (giving a speech). Finally, Zimbardo (1977) found that opposite-sex interactions involved more participant anxiety than did same-sex interactions.

Shyness was selected as the focus of this study because of its prevalence in the population and its high observability and measurability. Also, with shyness considered to be a cognitive self-censoring of social skills as opposed to an actual deficit, RET is quite appropriate in addressing this issue. Finally, the present study used an ambiguous interaction in an attempt to maximize treatment effects and to better simulate real world conditions.

This study employed only women participants in order to control for possible sex role effects on the interaction. Stereotypically, men learn to take a more aggressive role in a social interaction, while women learn to take a more passive role. In order to maximize results, and because of

participant availability, women were exclusively selected for this study.

This study employed independent raters for the scoring of the dependent variables. Raters were chosen from the undergraduate pool, just as the participants of the study had been, only with no further selection criteria. Acquiring more objective data about the participants' shy behavior was another reason for using such raters.

Hypotheses

This study was designed to assess RET's effectiveness as a treatment for shy behavior in college females. The hypotheses were:

1. Persons trained in RET will show a greater decrease in shy behavior than will a comparable no-treatment control group.

2. Persons who participated in same-sex interactions will show greater decrease in shy behavior than will those who participated in opposite-sex interactions.

METHOD

Participants

All participants were selected from a subject pool of 246 female undergraduates attending Michigan State University during 1982's Summer and Fall terms, on the basis of their responses on the Stanford Shyness Survey (Pilkonis, 1976). Pilkonis (1977a) reported that this measure possessed a high degree of validity by successfully differentiating

between shy and not-shy people in terms of awkward behavior, fear of negative evaluation and internal discomfort. Women who reported themselves to be moderately to extremely shy, more or much more shy than their peers, and shy in 50% or more of their social interactions, met the selection criteria. Several other related measures were administered at the same time, but were not part of the selection process.

Approximately one week after the administration of these measures, those who fit the selection criteria were recruited over the telephone for actual participation in this study (84 of the 92 people who fit the criteria were contacted before 40 people agreed to participate in exchange for extra credit toward their course grade). They were informed that this project was intended to test the effectiveness of a program designed to offer an opportunity for self-growth in the area of coping with life's everyday stresses, but were not told that shyness was the focal issue.

They ranged in age from 18 to 32 years with a mean of 20.9 years. Due to the fact that the study was conducted in part during the Summer term, these women represented a somewhat broader sample than the usual college population. They included full and part-time students, married and single, parents and non-parents.

Procedure

Women were randomly assigned to a RET training group or a NO-RET control group, and also to interactions with confederates of the same-sex or opposite-sex. Participants

interacted with two different confederates in the pre and post-training phases and independent ratings of these interactions comprised this study's dependent measures.

Four RET training sessions were conducted one week apart and at the same time of day to control for time related extraneous variables. The opportunity to interact occurred at only the first and fourth sessions. Participants waited alone in the waiting room for the second and third sessions.

After their initial interaction, NO-RET control group participants were told that an equipment failure necessitated a delay in the program and were requested to return three weeks later. Upon returning, their final interaction occurred and the time lapse between interactions was thus held constant for both training groups.

The RET training sessions were as follows:

Session #1 Pre-training interaction and lesson tape. The woman entered the waiting room in which a confederate was already present and filling out the consent forms as if to also be a participant. The experimenter immediately entered and introduced himself to the subject. The subject was given two consent forms (experimental and permission to videotape) and asked to read them carefully and complete each. It was explained that the videotape would be unobtrusive and served to assist the evaluation of the training program's effectiveness. As such, the participant was unaware of when she was being taped. Upon receiving the signed consent forms, the experimenter excused himself

explaining that he needed to check that the equipment was properly prepared for the training.

At this point, the scene was videotaped to record all participant-confederate interaction. The camera was positioned to record over the confederate's shoulder to obtain the best measure of participant eye contact. All confederates had been trained to use specific guidelines for initiating and responding in these interactions (see Appendix A). The videotaped interaction was limited to three minutes after which the experimenter re-entered the room and addressed the confederate stating that another experimenter was to be along shortly to assist him. The participant was then escorted to the adjoining training room.

Once there, she listened to the first training tape called "Theory and Practice of Rational Emotive Psychotherapy" (Ellis, 1978a). This tape was a basic introduction to RET principles and techniques. Ellis discussed the use of cognitive self-statements and their effect on experienced emotions. He cited numerous examples and evaluated the rationality of the self-statements involved, stressing the connection between irrational self-statements and adverse emotional consequences. He offered strategies for disputing and changing these self-statements to facilitate a more positive effective outcome. The participant was instructed to take notes and to ask questions of the experimenter at any time during the presentation. At the conclusion of the training, she was given a homework

assignment to complete before the next training session (see Appendix B).

Homework assignments included selected readings on RET, practical exercises on applying this theory, and personal goal-setting and strategizing to facilitate a desired behavior change. The previous session's homework was discussed at each session to clarify confusion, to correct errors made on exercises related to RET theory, and to help process their experiences with practical application of the material. The feedback given on the homework was supportive and encouraging. The selected readings averaged 15 pages and together with the exercises required approximately two hours of work per week. Participants reported the homework to be easy to read and to understand and not burdensome.

Session #2 Lesson tape. The participant entered the waiting room and was met there by the experimenter. She was immediately escorted to the training room and listened to the second training tape called "Conquering the Dire Need for Love" (Ellis, 1978b). This tape discussed how to reduce one's slavery to love and fears of rejection in the attempt to have a more pleasurable relationship with yourself and others. Ellis humorously but realistically focused on common behavior in serious relationships and discussed topics like jealousy and possessiveness in terms of cognitive self-statements and resultant emotional consequences. He explored typical phenomena like "I will love only you",

"If you leave me, I will die" and "I'll never measure up to your past partner" in terms of how these were based on irrational beliefs which only served to defeat oneself in a relationship. Again, the participant was instructed to take notes and to ask questions. As the conclusion of this training, the participant was given another homework assignment to be completed by the next training session.

Session #3 Lesson tape. Each woman was again met by the experimenter in the waiting room and immediately escorted into the training room. Here, the subject viewed a demonstration film of Albert Ellis engaged in RET with a client. At the conclusion of the film, homework assignments were again given.

Session #4 Post-training interaction, administration of self-report dependent measures, experimental checks and debriefing. The participant entered the waiting room in which a confederate was already present and reading some obviously irrelevant material (i.e., newspaper). The experimenter acknowledged her arrival and excused himself, explaining that he needed to check that the training room was prepared.

At this point, the scene was videotaped to again record all participant-confederate interaction. The confederate was also trained for this interaction using specific guidelines (see Appendix A).

The interaction was again limited to three minutes following which the experimenter re-entered the waiting

room and escorted the participant to the training room. Here she filled out the various paper-and-pencil measures as well as expectancy and manipulation checks for experimental purposes. Finally, each participant was then totally debriefed and all questions were answered.

Confederate training

Confederates were trained according to the guidelines in Appendix A. Training consisted of numerous practice interactions amongst themselves and with pilot subjects. Feedback was immediately given through verbal critique and videotaped feedback. In this way, problems were identified and solved to minimize inconsistency within the actual subject interactions.

Objective dependent measures

The dependent variables based on overt behavior were ratings of the videotaped interactions. Ten raters (5 men and 5 women) were trained according to Wilson's Rater Training Model (1982) and were uninformed as to which treatment group the participants had been assigned. All raters rated all interactions.

Sex of the rater was an independent variable included in the analysis at this study. It was not included as an experimental hypothesis, but rather as an additional control to clarify the results. This variable was expected to have little effect on the results of this study.

The dependent measures were defined as follows:

1. Breaking of the initial silence. This was a

simple yes-no rating of whether or not the participant was the first to speak in the interaction.

2. Eye contact. This measured the frequency of eye contact that the participant gave the confederate. This was defined as a steady look directly at the confederate; face and/or eye area but not a mere glance.

3. Continuous Conversation. This was defined as the number of times the subject continued the conversation with the confederate. This was defined as responses to the confederate's statements that were not merely answers to the confederate's questions or utterances such as "uh-huh", "right", "I see" or head nods.

4. Breaking of the silence. This measured the number of times the subject broke the silence <u>within</u> the interaction.

5. Self-disclosure. This measured the number of times the participant responded with, or initiated conversation with a self-disclosing statement.

In addition to these objective indices, two impressionistic dependent ratings were scored from these videotaped interactions. These were defined as body posture (whether or not the subject's body posture was indicative of a shy person) and overall shyness (whether the subject was judged to be an overall shy person or not). Posture indicative of a shy person was defined as a defensive position with arms or legs crossed, head down, shift in body away from the confederate or movement of chair away

from confederate. All of these measures were used in the training that preceded the actual rating of the interactions, and criteria for these measures had been extensively discussed and defined by the raters. Practice interactions were utilized and results of these pilot ratings were examined and used as training and feedback for the raters.

Self-report dependent measures

The following self-report measures were used for initial assessment of subject eligibility and a pre and post-treatment dependent measure.

1. Stanford Shyness Survey (Zimbardo, 1977). This survey included items designed to measure one's subjective awareness of one's own shy behavior in terms of prevalency, reactions, consequences and situations were shyness is exhibited. The selection criteria included a "yes-no" rating of whether one is shy and considers it an important part of one's life, a seven-point rating of the degree of one's shyness, a seven-point rating of the consistency of one's behavior across situations, and a five-point rating of the level of one's shyness as compared to one's peers. Maroldo, Eisenreich, and Hull (1979) reported the reliability of this measure as .78 (.82 for females and .73 for males).

2. Self-Consciousness Scale (Fenigstein, Scheier & Buss, 1975). This measure contained three subscales that assessed private and public self-consciousness and social

anxiety. A score for overall self-consciousness was obtained by summing these first two subscales. Several studies (Fenigstein, et al., 1975) have shown that high self-consciousness significantly effects social behavior, in terms of altering one's presentation in an interaction.

3. Fear of Negative Evaluation (Watson & Friend, 1969). This measure consisted of 30 true/false questions designed to assess the degree to which one fears the negative evaluation of others in social situations. This measure has been validated in terms of its correlation with social approval ($\underline{r}$ = .77). It was believed that people who fear other's negative evaluation will strive for other's approval in order to avoid the feared outcome. Watson and Friend (1969) found this to be true and reported a test-retest reliability (with a one-month interval) of the scale as .78.

4. Social Desirability Scale (Crowne & Marlowe, 1964). This measure consists of 33 true/false questions designed to assess the degree to which one strives to be socially desirable and accepted. This measure has been validated as a measure of defensiveness due to a need for approval. Crowne and Marlowe (1964) found that client defensiveness as rated by therapists correlated significantly with scores on this scale ($\underline{r}$ = .67), as did the defensiveness scales of the MMPI (K-scale $\underline{r}$ = .40, L-scale $\underline{r}$ = .54). Its reliability (both test-retest at a one-month interval and internal consistency) was reported as .88.

In summary, a 2 x 2 x 2 factorial design was employed with training (RET vs. no-training control group NRET), sex of confederate (male vs. female), and raters' sex (male vs. female) being the three independent variables. Overt behavioral ratings comprised the dependent variables.

RESULTS

Manipulation Checks

The manipulation check (see Appendix C) indicated that the RET program was effective in teaching RET principles and skills. This measure was a five-point scale designed to assess how well the training met its objectives. A score of five signified maximal success at meeting the program's objectives.

Results indicated that the RET material was easy to understand and clearly presented (mean = 4.7, SD = 0.47), and that participants viewed this training as readily usable outside of the experimental setting (mean = 4.6, SD = 0.60). They reported feeling more in control of their thoughts and feelings at post-training (mean = 4.2, SD = 0.52) and also more aware of how cognitions affect their emotions (mean = 4.6, SD = 0.54).

The second part of this measure consisted of three exam-like questions, none of which were omitted by any of the participants. The first question probed the participant's basic knowledge of RET theory. The second question required her to apply this theory to her own targeted behavior used

in the training. The third question involved applying the theory to two other behaviors not previously discussed, but spontaneously generated from her personal knowledge. Examples of third question responses are as follows:

A - I didn't do well on my physics test today.

B - I should be able to answer all the questions on the test because I studied.

C - I feel stupid that I couldn't get all the questions right.

A - I lost my temper with my son.

B - I should always be in control of myself.

C - I feel upset and angry over being a lousy mother and a poor role model.

Full competency was defined as answering all three questions accurately and applying the theory correctly to the specific behaviors. Marginal competency was defined as answering the theory-knowledge question accurately but displaying confusion and inaccuracy on the application questions.

Seventeen of the 20 RET-trained women showed at least marginal competency on this measure and 13 displayed full competency. (The RET program used in this study was, therefore, determined to be sufficiently effective.) The difficulty experienced by those marginally competent involved correctly identifying the specific irrational belief that functioned in the situation, and confusing the

consequences of the belief with the desired rational belief substitution.

A separate analysis of the data was performed excluding the three women who failed to competently master the RET training, and three randomly selected NRET women. Results were totally consistent with those reported below. This demonstrated that the results were not effected by the failure of these women to acquire RET "competence."

Objective dependent measures

An overall analysis of variance (ANOVA) was performed on the difference scores of the five behavioral dependent measures. The 2 x 2 x 2 (treatment X confederates' sex X raters' sex) factorial design was simplified by the finding that the raters' sex had no effect on the results of the study.

Table 1 shows the ANOVA results reporting the significant F-ratios. The results indicated significant main effects of treatment and confederates' sex with few marginally significant interaction effects on two of the behavioral measures (CC and SD). These interaction effects on the continuing conversation and self-disclosure variables are minimal since the variance accounted for by these interactions was comparatively small. Eye contact (EC) showed no significant effects.

Table 1

Summary of Independent Univariate ANOVAS: F-Ratios

	Specific Behavioral Measures					Impressionistic Ratings	
	IS	EC	BS	CC	SD	BP	SHY
Treatment (T)	30.87***	2.17	11.08***	44.75***	23.20***	2.72	0.33
Confederate's Sex (C)	0.19	1.70	19.21***	70.32***	47.84***	21.32**	21.10**
Rater's Sex (R)	0.01	0.92	0.08	0.57	1.80	0.11	0.27
T x C	2.25	0.52	2.41	3.90*	4.30*	12.57***	23.42***
T x R	0.01	0.85	2.08	0.89	3.97*	0.17	0.33
R x C	0.01	0.23	2.59	0.36	0.30	0.55	0.24
T x R x C	0.19	0.73	0.79	0.00	1.10	0.03	0.17

IS = breaking initial silence, EC = eye contact, BS = breaking silence, CC = continuing conversation, SD = self-disclosure, BP = body posture, SHY = overall shyness

*** $p < .001$ using a two-tailed test

** $p < .01$ using a two-tailed test

* $p < .05$ using a two-tailed test

Table 2 shows a summary of the overall means of the dependent measures giving pre-, post-treatment and difference scores for each treatment group. The signs (plus or minus) of the impressionistic difference scores were reversed on this and all other tables to simplify analysis and interpretation. The RET group unexpectedly shifted towards increased shyness on all behavioral measures, except eye contact (EC). Contrary to the hypothesis that RET training would better decrease shy behavior, the NRET group showed the greater reduction in shy behavior on all five behavioral and both impressionistic measures.

Table 3 shows the treatment cell means of the difference scores of the dependent measures for each confederate sex. Again, the NRET group consistently showed greater shyness reduction than the RET group on the behavioral measures. The female confederate group showed greater shyness reduction than did the male confederate group, as predicted, except for the measure of initial silence (IS). Thus, strongest decrements in shy behavior occurred in the NRET, female confederate group.

Table 4 shows the correlation between pre and post-training behavioral and impressionistic measures. The low correlations lend support to the independence of these variables as separate, measurable constructs of shyness. This is full agreement with previous research (Pilkonis, 1977a; 1977b).

Table 2

Summary of Overall Means of Dependent Measures

	Specific Behavioral Measures					Impressionistic Ratings[a]	
	IS	EC	BS	CC	SD	BP	SHY
Pre-Training							
NRET	0.50	7.48	2.02	3.12	0.54	2.93	2.77
RET	0.50	6.99	2.06	3.16	1.11	2.77	2.65
Post-Training							
NRET	0.69	8.13	2.34	3.98	0.91	2.66	2.53
RET	0.32	7.20	1.79	2.60	0.81	2.69	2.48
Difference (pre-post)							
NRET	-0.19	-0.65	-0.32	-0.86	-0.37	-0.27	-0.24
RET	0.18	-0.21	0.27	0.56	0.30	-0.08	-0.17

[a]Maximum Score = 5 = Most Shy

Table 3

Treatment Cell Means of the Difference Scores of Dependent Measures

	Specific Behavioral Measures					Impressionistic Ratings[a]	
	IS	EC	BS	CC	SD	BP	SHY
Female Confederate							
NRET	-.08	-.73	-.86	-1.96	-.70	.22	.33
RET	.15	.51	.02	- .12	-.32	-.01	-.19
TOTAL	.04	-.11	-.42	-1.04	-.51	.11	.07
Male Confederate							
NRET	-.19	-.56	.21	.24	-.03	-.77	-.82
RET	.21	.08	.53	1.24	.92	-.14	-.16
TOTAL	01	-.24	.37	.74	.45	-.46	-.49

[a]Maximum Score = 5 = Most Shy

Table 4

Correlation Matrix of Pre- and Post-Training Behavioral Measures

		Post-Training Measures						
		IS	EC	BS	CC	SD	BP	SHY
Pre-Training Measures	IS	31***	11	-01	09	00	-11	-18
	EC	07	39***	24	25	08	-14	-21
	BS	06	16	38***	22	00	-18	-14
	CC	19	32	28	42***	-08	-29	-34
	SD	06	24	15	05	35***	-13	-15
	BP	-17	-26	-14	-28	-04	30***	32
	SHY	-16	-19	-11	-22	00	24	31***

* $p < .05$ using two-tailed test

** $p < .01$ using two-tailed test

*** $p < .001$ using two-tailed test

Concerning individual behavioral variables, eye contact (EC) and continuing conversation (CC) showed the greatest magnitude of change, and discriminated best between the treatment groups. This might be attributable to the relatively greater frequencies of those behaviors during the interactions, and consequently, their greater apparent sensitivity to post-training differences. These results showed that videotapes were sensitive enough to accurately measure eye contact, and that raters can be trained to discriminate between casual responses and continued conversation in an interaction.

Interrater reliability for the five behavioral variables (pre- and post-) had an average Cronbach's (1951) alpha of 0.9 with ranges from 0.84 to 0.99. The two impressionistic variables had an average alpha of 0.92 ranging from 0.89 to 0.96. No rater was found to be erratic and, therefore, all were used in this analysis. These results suggested that rater training had been effective, and that such subtle behavior as defined by these variables was indeed accurately measured.

Both impressionistic ratings, body posture and overall shyness indicated a general reduction in shyness (see Table 2), with NRET yielding the greater shyness decrement. This was contrary to our hypothesized greater shyness reduction in the RET group but consistant with the behavioral ratings.

The ANOVA of these difference scores (see Table 1) showed a significant main effect for the type of interaction and a significant interaction effect for treatment by confederate's sex. Once again, sex of rater had little effect.

Table 3 shows the treatment cell means of the difference scores of these impressionistic ratings, within the interaction. Here the male confederate group showed a greater reduction in shyness than did the female confederate group. This reduction was stronger in the NRET group. Therefore, the NRET, female confederate group yielded the greater shyness decrements when using impressionistic ratings.

Self-report dependent measures

Table 5 shows the pre-, post- and difference scores of the self-report measures. Except on the Private Self-Consciousness and Fear of Negative Evaluation Scales, all scores declined, indicating decrements in behavior highly associated with shyness. However, none of these differences were statistically significant. Neither treatment group showed changes in shyness that were consistently unidirectional.

ANOVA of these difference scores showed that only two of five items on the Stanford Shyness Survey had significant treatment effects and these were found only in the NRET group ("How obvious is your shyness to others" and "How much of a problem is your shyness to you now"). However, these items' scores rose indicating increased shyness.

Table 5

Summary of Means of Self-Report Measures (N=40)

	Self-Consciousness Scale[a]			Fear Neg Evaluation[b]	Social Desirability[c]	Stanford Shyness Survey[d]				
	Private	Public	Soc Anxiety			HSHY	SHYVAR	SHYCOM[e]	SHYOB	SHYPRB
Pre-Training										
NRET	2.25	2.92	2.68	19.12	12.71	4.14	4.86	3.43	3.62	3.67
RET	1.91	2.99	2.92	21.19	15.13	4.39	4.33	3.56	3.83	4.39
Post-Training										
NRET	2.13	2.80	2.69	20.10	11.85	4.42	5.08	3.67	4.25	4.17
RET	2.04	2.67	2.68	19.00	13.53	4.31	5.06	3.81	3.69	4.49
Difference (pre-post)										
NRET	0.12	0.12	-0.01	-0.98	0.86	-0.28	-0.22	-0.24	-0.63**	-0.50*
RET	-0.13	0.32	0.24	2.19	1.60	0.08	-0.73	-0.25	0.14	-0.10

HSHY = "How shy are you?", SHYVAR = "How much does your shyness vary?", SHYCOM = "How shy are you compared to others?", SHYOB = "How obvious is your shyness?", SHYPRB = "How much of a problem is your shyness?"

[a]Maximum Score = 4

[b]Maximum Score = 30

[c]Maximum Score = 33

[d]Maximum Score = 7

[e]Maximum Score = 5

* $p < .05$ using a two-tailed test

** $p < .01$ using a two-tailed test

Correlation matrices (pre- and post-) between these self-report measures are shown in table 6. Cluster analysis showed similar results in both the pre- and post-measures. Public Self-Consciousnesss, Social Anxiety, and Fear of Negative Evaluation clustered strongly together. This is intuitively sensible since all of these measures involved external, social reference points. Also, with the exception of SHYVAR ("How Much Does Your Shyness Vary?"), all items selected from the Stanford Shyness Survey clustered strongly together.

The three subscales of the Self-Consciousness Scale (Private, Public and Social Anxiety) correlated highly with each other, as expected. The Social Desirability Scale surprisingly showed little correlation with any of the other measures. It would seem that a person who deemed it important to be socially desirous would negative evaluation and be very self-conscious. These results suggested that this may not be an accurate assumption.

DISCUSSION

This study addressed the effectiveness of RET on specific behavior within a natural setting. The RET training program utilized in this study did not produce the expected decrease in shyness. This was true by both behavioral impressionistic measures. This outcome was an

Table 6

Correlation Matrices of Pre- and Post-Training Self-Report Measures

		Post-Training Measures Matrix									
		PSC	PBS	SAX	FNE	SDS	HSHY	SHYVAR	SHYCOM	SOB	SPRB
	PSC	80***	48**	41**	-07	-29	50***	46**	53***	38*	49**
	PBS	45**	70***	68***	53***	-15	44**	60***	57***	40*	50**
	SAX	35*	65***	76***	54***	48**	54***	48**	54***	52**	57**
Pre-	FNE	-12	58***	49**	75***	-20	28	20	18	25	04
Training	SDS	-21	-04	-05	05	83***	-02	-07	-15	-19	-21
Measures	HSHY	54***	59***	56***	-04	-24	63***	50***	75***	74***	81***
Matrix	SHYVAR	50***	38*	33*	01	-13	49***	62***	60***	43*	59***
	SHYCOM	49***	37*	54***	17	-37*	67***	19	50***	43*	66***
	SOB	43**	24	35*	11	-16	42***	13	56***	72***	68***
	SPRB	50***	38*	49***	19	-15	63***	24	55***	59***	84***

PSC = Private Self-Consciousness, PBS = Public Self-Consciousness, SAX = Social Anxiety
FNE = Fear of Negative Evaluation, SDS = Social Desirability Scale

* p .05 using two-tailed test

** p .01 using two-tailed test

*** p .001 using two-tailed test

unexpected failure of RET to effectively reduce shy behavior. The results of the Manipulation Check clearly indicated that the RET program was successful in teaching the content and application of RET theory. This was congruent with previous studies (Maultsby, 1974; Maultsby et al., 1974) of the effective training of RET.

Although RET's theory and principles seemed effectively learned, the leap from learning to practice did not occur. The present RET program, although patterned after previously reported effective programs, may have been too brief to have efficiently allowed one to identify the shyness problem, focus on it, apply RET principles to it, and master it in the "real world" setting. This program's brief duration may have only allowed enough time to intensely focus on the problem and to apply the RET principles to it within the sessions. Mastery outside the sessions was not accomplished by this program.

Not only was the RET training unsuccessful at decreasing shy behavior, but the NRET control group actually showed substantial decrements in shy behavior rather than the anticipated neutral effect. It seems doubtful that this reflects a spontaneous amelioration of shy behavior, since the time between measures was so short. It also seems unlikely that a very shy individual would spontaneously decrease shyness upon participation in this study. This shyness decrement may reflect a comfortableness with the

experimental situation due to prior exposure. This "practice effect" of already being familiar with the experimenter, equipment, and the study may have led to less tension during the interaction. This decreased tension may have allowed her to display less shy behavior. Finally, the experimenter had strongly conveyed that these NRET participants were crucially needed to successfully complete the study. Their resulting strong sense of being needed and important may have also decreased tension and allowed for interactions that were less inhibited and shy.

The RET group, on the other hand, may have experienced heightened anxiety. The intense focusing on their shyness may have led to a substantial increase in anxiety in social settings due to an increased awareness of their shy behavior. The RET group's overall increase in Private Self-Consciousness supported the case for increased anxiety. It is possible that the RET participant's anxiety was greater for the post-interaction phase than for the pre-phase, and that this anxiety increment may account for their augmented shyness.

Although programs of this length have been previously reported as successful (D'Angelo, 1978), their dependent measures were not behavioral but rather self-report questionnaires. RET programs evaluated with experimentally staged behavioral measures (i.e., public speaking) have typically been much longer, ranging from five to fifteen

weeks of semi-weekly sessions. Thus, it seems that RET principles can effectively be taught in such a short period of time, but that the mastered application to real life may take considerably longer.

The sex of the confederate had the expected effect on shy behavior. The group that engaged in the same-sex interaction (female confederate) consistently showed greater shyness decrements (except on eye contact-EC) than did the male confederate group. The greater anxiety associated with opposite-sex interactions and its subsequent interference with application of the training skills may account for these results.

Nonsignificant but contrary results were yielded by the two impressionistic ratings, as the male confederate group (opposite-sex interaction) showed greater shyness decrements.

The self-report measures were inconsistently indicative of decreased shyness. Public Self-Consciousness, Social Anxiety and Social Desirability consistently demonstrated a reduction in shyness. This may be due to the fact that these measures directly involve external, social experience as does the manifestation of shyness. In contrast, Private Self-Consciousness, Fear of Negative Evaluation and the Stanford Shyness survey all concerned the more internal, subjective aspects of shyness which are less tangible and, therefore, more difficult to assess.

The Stanford Shyness Survey showed two of five items that were statistically significant in the direction of increasing shy behavior. This was much more consistent with the results of the behavioral dependent measures.

In summary, this study presented several important conclusions and implications for further study.

1. RET was effectively taught within a short and efficient training program. This was true for this study and others which used content, knowledge-based "exams" of RET as a dependent measure. However, it seemed that the mastery of RET principles and application in the "real world" necessitated a program of much longer duration.

2. RET was not found effective in reducing shy behavior when presented in a compact training program. Perhaps such change within natural settings requires a longer, more complex training program.

3. A reduction of shyness may occur as a result of increased familiarity with the situation as indicated by the NRET group in this study. This supported the notion of practicing one's skills in the situation or setting in which one wishes to facilitate change.

4. RET's effectiveness was differentially assessed by self-report and behavioral measures. The present behavioral measures showed increased shyness among RET participants while some of their self-report measures registered decreases. Better controlled research emphasizing this discrepancy is needed to allow for a reassessment

of the literature and to possibly assist in clarifying the relationship between cognitions and behavior.

5. The effectiveness of RET using behavioral dependent measures may be influenced by whether these behavioral measures are experimentally staged or naturalistic. The former may possibly have been affected by demand characteristics wheras the latter was free of such influence. Careful reexamination of the existing literature is suggested.

APPENDICES

APPENDIX A

Confederate Instructions

Both the pre- and post-training interactions were guided by the following guidelines:

- There is a 30 sec. pause initially and between all questions.
- Confederate glances at subject at least once every 10 sec.
- Confederate refrains from asking redundant questions if the subject had already supplied the information sought.
- If asked, the confederates are to say that they too were recruited over the phone to participate in this study.

Pre-Training Interaction Questions:

- Have you done these experiments before? (Do you know anything about the experiment?)
- Are you interested in Psychology?
- By the way, my name is _____, what's yours?
- What year are you in?
- Where are you living on campus?
- Where are you from originally?

Post-Training Interaction Questions:

- Have you been doing this experiment for awhile also?
- Are you a Psychology major?
- What year are you in?
- Oh, my name is_____, what's yours?
- Do you like it here at MSU?
- Are you from Michigan originally?

APPENDIX B

"Homework"Assignments

Rational Emotive Training:

Session #1

- pertinent readings on RET Theory and Principles*
- a work sheet to outline the A-B-C's of specific behaviors
- identification of a personally relevant target behavior with shyness being strongly suggested as a possibility (All RET participants eventually chose shyness as their target behaviors)

Session #2

- pertinent readings on RET Strategies and Practice**
- breakdown of their target behavior outlining the A-B-C's of it, strategies for disputing these irrational beliefs and goal setting for the next session.

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*Ellis, A. "Emotional Disturbance and Its Treatment in a Nutshell." Canadian Counselor, 1971, 5, 168-171.
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Session #3

- pertinent readings on RET Applicability and Practice***
- actual practice on target behavior according to goals specified
- teaching of RET principles to a friend

*** Walen, S.R., DiGiuseppe, R. and Wessler, R.L. A Practitioner's Guide to Rational Emotive Therapy. New York, N.Y., Oxford University Press, 1980, 13-23.

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APPENDIX C

Manipulation Checks

Expectancy Check

Please answer the following according to the scale below by assigning a number anywhere along the continuum.

1	3	5
Not At All	Indifferent	Very Much So

____ I felt that the skills that I learned in this experiment were pertinent to my coping with day-to-day stresses.

____ The skills that I learned in this experiment were valuable to me personally.

____ I feel that these skills will assist me in coping with everyday stresses.

____ I enjoyed this experiment and was satisfied with the presentations given.

____ I received what I expected to from this experiment.

Please add any comments that you may have:

Manipulation Check

Rational Emotive Training

Please answer the following according to the scale below by assigning a number anywhere along the continuum.

1	3	5
Not At All	Indifferent	Very Much So

____ The Rational Emotive Training made me feel more in control of my thoughts and feelings.

____ I found that I could use this training at home on my own.

____ The Rational Emotive Training was easy to understand and clearly presented.

____ I have become more aware of my thought processes and how they affect my feelings, through this training.

Please answer the following briefly and clearly: (Write Small!!!)

1) Please explain Albert Ellis' A-B-C theory.

2) Using your answer to #1, please apply your target behavior to this theory and outline the processes you've witnessed. (Ex: things you've told yourself, substitute sentences and outcomes of both of these).

3) List 2 other behaviors of feelings and briefly fit them into the A-B-C theory noting the beliefs involved and results of these.

Please add any comments that you may have:

APPENDIX D

Subject Pool Self-Report Measures Analysis

1. Fear of Negative Evaluation Scale

N = 212

Mean = 12.18 (Maximum = 30)

SD = 3.85

Reliability = 0.58

2. Social Desirability Scale

N = 246

Mean = 19.49 (Maximum = 33)

SD = 2.87

Reliability = 0.17

3. Self-Consciousnesss Scale

N = 280

Private Self-Consciousness

Mean = 24.48 (Maximum = 40)

SD = 5.74

Reliability = .70

Public Self-Consciousness

Mean = 19.11 (Maximum = 28)

SD = 4.90

Reliability = .79

Social Anxiety Scale

Mean = 11.18 (Maximum = 24)

SD = 4.59

Reliability = .70

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