

THE EFFECT OF SYSTEMATIC DESENSITIZATION ON SPEECH ANXIETY

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ONE of the most vexing problems that has faced the field of speech-communication since its inception has been the problem of anxiety in the oral communication situation. While much is claimed for the basic speech course as an agent for overcoming this problem, scant evidence is available in the literature to support such claims. On the contrary, evidence obtained by the first author at Pennsylvania State University and Michigan State University indicates that students confronted by serious anxiety in oral communication tend to drop out of the basic course. In one term at Michigan State, for example, over half of the students identified as suffering from moderate to severe speech anxiety during the first week of the term had dropped the course by the third week of the term.¹ No course can help if the student is so anxious that he will not take the course. Thus, even if one were to grant the claims of the advocates of the basic course, a serious problem confronting thousands of students (as well as adults) across the country still remains. This paper reports the results of a study which investigated a method of assisting the anxious student to overcome his problem outside of the basic course classroom.

Within the area of psychotherapy

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¹ This data was obtained in the public speaking course (Communication 101) at Michigan State during the Winter Term, 1968.

there has been, in the last few years, a great deal of interest and exploration in the application of learning theory via behavior therapies to human neuroses and anxiety. Reports of brief and complete alleviation of the symptoms, using Knight's criteria,² have been appearing at that time in our society's development when the exigent problems of mental health require that the professional psychological resources be expanded, either by the expansion of training facilities, increasing the proficiency and efficiency of those involved in psychological services, or by the utilization of trained lay personnel.

By far the most productive of these behavioral techniques seems to be systematic desensitization. The results obtained with systematic desensitization have been relatively consistent over an extremely wide range of therapists, clients, and problems,³ usually producing

² Robert P. Knight, "Evaluation of the Results of Psychoanalytic Therapy," *American Journal of Psychiatry*, 98 (1941), 434-446.

³ Peter J. Lang, A. David Lazovik, and David J. Reynolds, "Desensitization, Suggestibility, and Pseudotherapy," *Journal of Abnormal Psychology*, 70 (1965), 395-402; Joseph W. Wolpe, "Isolation of a Conditioning Procedure as the Crucial Psychotherapeutic Factor: A Case Study," *Journal of Nervous and Mental Diseases*, 134 (1962), 316-329; D. F. Clark, "Treatment of a Monosymptomatic Phobia by Systematic Desensitization," *Behavior Research and Therapy*, 1 (1963), 63-68; Richard C. Cowden and Leon I. Ford, "Systematic Desensitization with Phobia Schizophrenics," *American Journal of Psychiatry*, 119 (1962), 241-245; B. Ashem, "The Treatment of a Disaster Phobia by Systematic Desensitization," *Behavior Research and Therapy*, 1 (1963), 81-84; Arnold A. Lazrus, "Group Therapy of Phobic Disorders by Systematic Desensitization," Leonard P. Ullman and Leonard Krasner eds., *Case Studies in Behavioral Modification*

positive results in other areas of the client's life.⁴

The application of systematic desensitization to less debilitating anxieties than phobias has produced alleviation of anxiety among nonpathological clients, notably student populations with academic anxieties.⁵ Despite the encouraging reports from these projects, several fundamental questions have yet to be answered. Of paramount concern to the present study were the questions, Is systematic desensitization an effective means of reducing communication apprehension? and Can speech-communication educators with limited backgrounds in

psychology be successfully employed as trainers in a systematic desensitization program?

Previous Research

Of special significance for this study are those studies focusing on the treatment of anxieties prevalent within the academic environment. Paul found significantly greater reduction in anxiety for desensitized subjects in an elementary speech course when compared to similar groups given insight therapy, placebo treatment, or no treatment.⁶ Paul and Shannon report success in treating interpersonal performance anxiety in groups that equals or excels results with individual treatment.⁷ A two year follow-up revealed a maintenance of improvement, with indications of additional improvement in other areas of behavior over the long-term follow-up period.⁸ Kondas reports reduction of anxiety and stage-fright by group desensitization, as opposed to relaxation procedures alone,⁹ thereby supporting Wolpe's contention that reciprocal inhibition is the main basis of therapeutic effects.¹⁰ The results of these studies suggest that systematic desensitization when administered by trained psychologists is an effective means of overcoming anxiety related to speech-communication. However, none of these studies have employed speech educators to administer the treatment.

Migler and Wolpe have reported success in utilizing automated procedures for desensitizing speech-anxiety,¹¹ as has Lang.¹² These results raise questions about the role and relevance of the pro-

(New York: Holt, Rinehart & Winston, 1965); Norah Moore, "Behavior Therapy in Bronchial Asthma: A Controlled Study," *Journal of Psychosomatic Research*, 9 (1965), 257-276; M. Kushner, "Desensitization of a Post-Traumatic Phobia," in Ullman and Krasner; and Arnold A. Lazrus, "The Treatment of a Sexually Inadequate Man," in Ullman and Krasner.

⁴ Jack D. Hain, R. H. G. Butcher, and Ian Stevenson, "Systematic Desensitization Therapy: An Analysis of Twenty-Seven Patients," *British Journal of Psychiatry*, 112 (1966), 295-307; Martin Katahn, Stuart Strenger and Nancy Cherry, "Group Counseling and Behavioral Therapy with Test-Anxious College Students," *Journal of Consulting Psychology*, 30 (1966), 544-549; Land, "Desensitization . . ."; D. R. Neuman, *Professional and Subprofessional Counselors Using Group Desensitization and Insight Procedures to Reduce Examination Anxiety*, unpublished doctoral diss., Michigan State University, 1968; Gordon L. Paul, *Insight vs. Desensitization in Psychotherapy: An Experiment in Anxiety Reduction* (Stanford: Stanford University Press, 1966); Gordon L. Paul, "Two-Year Follow-up of Systematic Desensitization in Therapy Groups," *Journal of Abnormal Psychology*, 73 (1968), 119-130.

⁵ Gordon L. Paul, "Insight . . ." 28; O. Kondas, "Reduction of Examination Anxiety and 'Stage-Fright' by Group Desensitization and Relaxation," *Behavior Research and Therapy*, 5 (1967), 275-281; Gordon L. Paul and Donald T. Shannon, "Treatment of Anxiety Through Systematic Desensitization in Therapy Groups," *Journal of Abnormal Psychology*, 71 (1966), 124-135; B. Migler and Joseph W. Wolpe, "Automated Self-Desensitization: A Case Report," *Behavior Research and Therapy*, 5 (1964), 133-135; P. J. Lang, "Fear Reduction and Fear Behavior: Problems in Treating a Construct," *Third Conference on Research in Psychotherapy* (Chicago: June, 1966); J. R. Emery and J. D. Krumboltz, "Standard vs. Individualized Hierarchies in Desensitization to Reduce Test Anxiety," *Journal of Counseling Psychology*, 14 (1967), 204-209; M. Katahn; and Neuman.

⁶ Paul, "Insight . . ."

⁷ Paul and Shannon.

⁸ Paul, "Two-Year . . ."

⁹ Kondas.

¹⁰ Joseph W. Wolpe, "Reciprocal Inhibition as the Main Basis of Psychotherapeutic Effects," *A.M.A. Archives of Neurological Psychiatry*, 72 (1954), 205-226.

¹¹ Migler and Wolpe.

¹² Lang, "Fear . . ."

professional psychologist in this setting as do studies reported by Kahn and Baker¹³ and Davison.¹⁴

The use of sub-professional personnel (non-psychologists) in extending psychological services has been advocated.¹⁵ Most indications, at this point, provide evidence that sub-professionals when properly trained, can be at least as effective as professional personnel. Neuman found no significant differences in improvement scores between treatment groups using professional and those using sub-professional counselors.¹⁶ Neuman, like Paul¹⁷ mentions the relatively short time needed in training the counselors. The effectiveness of the sub-professionals, in general, lends further support to the advocacy of the use of non-professional personnel. Carkhuff contends that:

A review of (lay training and treatment) programs indicates a) that lay persons can be trained to function at minimally facilitative levels of conditions related to constructive client change in relatively short periods of time, and b) that lay counselors can effect significant constructive change in clients. An inference that we might draw is that whatever allows one

individual to help another is not the sole and exclusive province of professional helpers.¹⁸

If a target behavior (speech anxiety) can be delineated, the effectiveness of the technique of systematic desensitization, using trained non-professionals, can be empirically assessed. The present study attempted such an assessment.

Hypotheses

- I. Speech anxious students receiving systematic desensitization for speech anxiety will indicate a greater reduction in speech anxiety than will speech anxious students not receiving systematic desensitization as measured by self reports.
- II. There will be no significant difference in improvement scores for treatment groups between professional and sub-professional trainers.

Procedures

Subject Selection. Subjects were twenty-four voluntary undergraduate students, twelve males and twelve females, from the basic public speaking course at Michigan State University. The first class day of the term all students in the basic public speaking course were instructed to fill out the Paul version of the PRCS.¹⁹ While the students were participating in their first class session, the PRCS's were hand scored in an adjoining room. Those students marking sixteen or more of a possible thirty responses indicating speech anxiety were called out of the class during the last five minutes. They were told that they had scored within the range indicating that speech anxiety was of concern to them, given the rationale for the systematic desensitization treatment and asked to volunteer for the proj-

¹³ Michael Kahan and Bruce Baker "Desensitization with Minimal Therapist Contact," *Journal of Abnormal Psychology*, 73 (1968), 198-200.

¹⁴ Gerald Davison, "Systematic Desensitization as a Counter-Conditioning Process," *Journal of Abnormal Psychology*, 73 (1968), 91-99.

¹⁵ Robert R. Carkhuff and Charles B. Truaz, "Lay Mental Health Counseling: The Effects of Lay Group Counseling," *Journal of Consulting Psychology*, 29 (1965), 426-431; Margaret J. Rioch, "Changing Concepts in the Training of Therapists," *Journal of Consulting Psychology*, 30 (1965), 290-292; F. Kaufer, "Implications of Conditioning Techniques for Interview Therapy," *Journal of Counseling Psychology*, 13 (1966), 171-177; Ernest G. Poser, "The Effects of Therapists Training on Group Therapeutic Outcome," *Journal of Consulting Psychology*, 30 (1966), 283-289; Donald H. Ford and Hugh B. Urban, "Psychotherapy," *Annual Review of Psychology*, (Palo Alto: Annual Reviews, 1967), 333-372; N. Schlossberg, "Sub-professionals: to be or not to be," *Counselor Education and Supervision*, 6 (1967), 108-113; R. R. Carkhuff, "Differential Functioning of Lay and Professional Helpers," *Journal of Counseling Psychology*, 15 (1968), 117-126; and Neuman.

¹⁶ Neuman.

¹⁷ Paul, "Insight . . ."

¹⁸ Carkhuff.

¹⁹ Paul, "Insight . . ."

ect. The volunteer subjects signed a sheet indicating their desire for treatment and the time available for treatment. Selection was based on a random assignment for those subjects with similar specified times available for treatment in groups of five. Those subjects not given treatment were placed in a delayed treatment control group and informed that they would receive treatment at a later date. Treatment was started at the beginning of the second week of classes.

Selection of Trainers. With the exception of the third author, a graduate student in the counseling department of the College of Education experienced in systematic desensitization procedures, trainers were from the Speech Department (two graduate students). Each trainer was provided short, intensive training prior to assignment to a group. The training consisted of selected readings on systematic desensitization, a video-taped presentation of a desensitization session, an aural-taped presentation of the deep muscular relaxation exercises, and a group meeting during which the rationale for the treatment and the procedures to be used were provided and discussed. Assignment to groups was dependent on the trainer's schedule, each trainer taking one group. In addition the actual treatment sessions were continually monitored, by the authors, through a one way mirror, to provide each trainer with a critique of each session, providing feedback on his performance and insuring that proper treatment procedures were followed.

A Vega cordless microphone-transmitter was used to transmit feedback directly to the trainer while the treatment group was in session, the trainer having an inconspicuous earphone connected to the Vega receiver in the treatment room. Immediate oral feedback was found to be unnecessary after the first three sessions. All groups were assigned to train-

ers on the contingency that no speech trainer would treat a subject enrolled in any class he taught.

Measures. The measures employed were the speech situation of the S-R Inventory of Anxiousness (S-R-I),²⁰ a revision of the Text Anxiety Inventory²¹ in which speech situations were substituted for testing situations (SAI), and the Paul version of the Personal Report of Confidence as a Speaker (PRCS).²²

Treatment. Treatment consisted of seven one-hour sessions, two per week for three and one-half weeks, of systematic desensitization for the three experimental groups composed of a maximum of five subjects per group. The first session was used to explain the rationale and the procedures of systematic desensitization and the playing of an aural tape recording of deep muscular relaxation instructions. The remaining six sessions were devoted to playing the relaxation tape, until all subjects reported being relaxed, and the presentation of the items of the speech anxiety hierarchy. Communication of perceived anxiety by any subject for any item was transmitted to the trainer by the raising of the subject's right index finger, at which time the trainer issued instructions to all subjects to erase the image and concentrate on relaxation. After a brief pause, the trainer again presented the same item. The criterion for successfully overcoming an item was two consecutive presentations (the first for fifteen seconds, the second for thirty seconds) without an anxiety response from any subject. The trainer then presented the next item on the speech-anxiety hierarchy, continuing through the hierarchy until it was completed. The completion of any session

²⁰ Norman S. Endler, J. McV. Hunt, and Alvin J. Rosenstein, "An S-R Inventory of Anxiousness," *Psychological Monographs*, 76 (1962), 17 (Whole n. 536), 1-33.

²¹ Emery and Krumboltz.

²² Paul, "Insight . . ."

TABLE 1
EXPERIMENTAL AND CONTROL GROUP MEANS AND DIFFERENCES

Dependent Variable	Experimental Group	Control Group	Mean Difference	Approximate Significance
S-R I	32.7	41.4	8.7	.02
SAI	82.3	102.0	19.7	<.01
PRCS Pretest- Posttest Change	11.8	3.5	8.3	<.01

was preceded by the trainer presenting the item previous to the last item attained—a measure to insure the subjects were at a low level of anxiety as they left the treatment room. The final item on the hierarchy was presented until the fifteen and thirty second criterion was reached, then presented again for sixty seconds. The successful completion of the hierarchy terminated the treatment sessions.

Data Analysis. The data obtained from the measures were analyzed by analysis of variance and *t*-tests for independent samples. Because of the small samples in the study and the belief that at this point in the research program involving systematic desensitization, Type II error was of greater concern than Type I error, the .10 criterion for statistical significance was established. However, because the reader may wish to apply a more conservative criterion, the obtained probability of significance levels will be reported up to the .01 level.

Results

The first analysis of the data obtained from all measures was a comparison between subjects treated by the counseling psychologist and those treated by the lay trainers (hypothesis II). No significant differences were observed. Therefore, the hypothesis of no difference between trainers (hypothesis II) was not rejected and subsequent analysis of the data combined experimental groups for comparison with the control group.

The subsequent analyses on the three

dependent variable measures produced three clearly significant differences. All differences were in the direction predicted by hypothesis I. The experimental subjects reduced their self-reports of speech anxiety significantly more than the control subjects on all three measures. In absolute terms from the data produced by the PRCS, the experimental subjects reduced anxiety responses by fifty-four percent while the control subjects reduced their anxiety responses by only eighteen percent. The latter shift was non-significant ($t < 1$).

Discussion

The primary purposes of this research were to determine whether systematic desensitization could significantly reduce students' anxiety to speech situations, and whether it could be administered successfully by speech educators with limited psychological backgrounds, but with training in its use. The results reported above indicate systematic desensitization as administered in this study can significantly reduce students' anxiety to speech situations, and that speech educators with training can successfully administer it for these anxieties.

Speech anxiety has been a major concern of speech educators for decades. It is generally recognized that speech courses, while helping some students to overcome this problem, do not provide adequate assistance to students with severe speech anxiety. Systematic desensitization may provide a solution to this problem.