Thirty-two speech anxious college students participated in a study that examined whether four treatments that have been effective when applied separately would be equally effective when applied in combination. The treatments were (1) systemic desensitization (SD), (2) speech skills training (SST), (3) SST combined with coping skills training (CST) involving relaxation and self-instructional training, and (4) SST, CST, and paradoxical directives. Subjects were pretested and then assigned to one of the four treatment groups or to a control group. At the end of a six-week treatment period, all subjects were posttested. The results showed that treatments for speech anxiety that involved coping skills in combination with speech skills were more effective in reducing speech anxiety than were other treatments. Specifically, adding coping skills training to speech skills training resulted in reduced self-reported speech anxiety, reduced ratings of behavioral anxiety, and reduced reports of general communication anxiety. (FL)
Treatment of Speech Anxiety: A Sequential Dismantling of Speech Skills Training, Coping Skills Training, and Paradox

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From results of a nation-wide survey, Bruskin Associates (1973) reported
that the most frequently experienced fear in American adults was fear of public
speaking. A number of effective ways of dealing with speech anxiety have been
developed. In one of the first studies in this area, Paul (1966) found
systematic desensitization (SD) to effectively reduce speech anxiety. Subse-
sequently, a number of researchers have successfully treated speech anxiety
through systematic desensitization (e.g., Mylar & Clement, 1972; Kirsch, Wolpin,
systematic desensitization of speech anxiety also to produce fear reduction
associated with untreated stimuli. Overall, systematic desensitization has
been found reliably to reduce speech anxiety.

Another behavioral approach, speech skills training (SST), which involves
training people to behave competently and in a nonanxious fashion, has been
found effective relative to untreated or minimally treated controls (Fawcett &
Miller, 1975; Fremouw & Zitter, 1978). Wright (1976) found both SD and SST to
be superior to a control treatment on a self-report measure but equal to the
control on a behavioral measure. Marshall, Stotian, and Andrews (1977) found
the two to be equal on a behavioral measure of speech anxiety, but SST to be
lightly superior to SD on the self-report measure. A group that combined
both SD and SST was superior to both individually on both self-report and be-
havioral measures. None of the treatments generalized to other types of anxiety.

A third treatment for speech anxiety involves training people to actively
cope with their anxiety. Coping skills training (CST) usually involves (a)
cognitive restructuring (Thorpe, Amatu, Blakey, & Burns; 1976) or some other manipulation of beliefs (such as RET) or concepts (such as Kelly's fixed role therapy, Karst & Trexler, 1970), (b) self-instructional training (Meichenbaum, Gilmore, & Fedoravicius, 1971), (c) training in relaxation as an active coping skill (Goldfried, 1971), and/or (d) modified systematic desensitization using coping imagery instead of mastery imagery (Weissberg, 1977). Such cognitive-coping programs have been consistently but not universally effective relative to controls (Karst & Trexler, 1970; Meichenbaum, Gilmore, & Fedoravicius, 1971; Trexler & Karst, 1972). Various coping skills programs have been compared to systematic desensitization. Germer (1975), in 4½ hours of treatment, found that cognitive modification with practice was superior to systematic desensitization, RET, and a no treatment control on self-report, behavioral, and physical measures. On the other hand, Meichenbaum et al. (1971) found a CST approach not to be superior to systematic desensitization. In addition, Weissberg (1977) found that desensitization using coping imagery, cognitive modification, and traditional desensitization were each more effective at alleviating speech anxiety than no treatment but were not differentially effective. CST has also been compared to SST. Fremouw and Zitter (1978) found that both SST and CST significantly reduced speech anxiety on all their measures. SST was found to be slightly superior to CST on behavioral measures while CST showed superiority on self-report measures. Neither treatments differed significantly from controls on generalization measures.

A fourth treatment approach has a long and varied history. Dunlap (1932) introduced negative practice as a therapeutic intervention to induce control of problematic speech behaviors. Negative practice consisted of prescribing the symptomatic behaviors in order to induce reduction of the behaviors. Dunlap
adduced no systematic empirical evidence on the technique's effectiveness beyond describing case studies. In fact, almost all of the empirical support for this technique has been in the form of case studies, and none since Dunlap have addressed speech anxiety. (Gentry, 1973, 1978; Greenberg, 1973; Stekel, 1920; Sheras & Jackson, Note 1). A number of explanations of the effectiveness of symptom prescription have been proposed by behaviorally-oriented therapists (e.g., Raskin & Klein, 1976). These explanations have invoked concepts such as stimulus satiation, massed practice, response fatigue, extinction, and stimulus control. Newton (1968) proposed a more cognitive-behavioral explanation involving direction of attention and symptom scheduling. Some have argued that performing problematic behavior intentionally helps "decatastrophise" the outcomes. Cognitive and behavioral theorists have not been alone at investigating the effects of these paradoxical directives. Frankl (1975) has long advocated use of "paradoxical intention" and even Ellis (1980) suggested its use. Hypnotists and communication-systems theorists have also advocated the use of paradoxical directives. (Haley, 1973, 1978; Watzlawick, Beavin, & Jackson, 1967). Strong and Claiborn (in press) have proposed an improvement management explanation of paradoxical interventions. S. Brehm (1977) has recommended a "reactance theory" interpretation of paradoxical directives. One school of family therapy has even built an entire theory of change around the ideas of paradox (Selivini-Pallazoli et al., 1978). For all the theorizing and practical application of the use of paradoxical directives, there have been surprisingly few experiments that have incorporated paradoxical directives into treatment regimes (cf. Solyom, Garza-Perez, Ledwidge, & Solyom, 1972). Were it not for numerous case studies there would be little evidence that the technique merits continued attention by therapists.
Altogether, the ubiquitous nature of speech anxiety has spawned several useful treatment techniques. Although each of these techniques is effective to some extent when it is applied by itself, the question remains whether the techniques would be equally or more effective when applied in tandem (Fremouw & Zitter, 1978). Some experiments have suggested that combination groups are more effective than their components (e.g., Glbower, Fremouw, & McCroskey, 1978; Sherman, Mulac, & McCann, 1974).

This research sequentially dismantled a cognitive-behavioral treatment program that consisted of SST (Fremouw & Zitter, 1978), CST (Neichenbaum, Note 2), and paradoxical directives to practice anxious behaviors (Dunlap, 1932; Ellis, 1980; Frankl, 1978; Haley, 1978; Watzlawick et al., 1977). Each group was compared to a systematic desensitization (SD, control) group (O'Leary & Borkovec, 1978), a waiting list control group (WLC), and a classroom control group (CC). This allowed us to determine whether (a) SST alone was effective as suggested by Fremouw and Zitter (1978), (b) CST added anything to SST, and (c) paradoxical directives added anything to an already integrated cognitive-behavioral treatment regime.

Method

Screening and Selection of Participants

Over 180 students in introductory speech classes at a large urban university completed a speech anxiety questionnaire, the Personal Report of Confidence as a Speaker (PRCS; Paul, 1966), and a social anxiety questionnaire, the Personal Report of Communication Apprehension (PRCA; McCroskey, 1970). Students who scored in the upper third on the PRCS were telephoned and offered treatment for
speech anxiety. Of the 60 students who were asked, 27 (7 males) volunteered for 8 hours of treatment and 2 hours of pre- and posttesting, and 5 (1 male) consented to be posttested at the conclusion of the experiment.

**Procedure**

During the first week of the semester, two therapists visited all Effective Speech classes at Virginia Commonwealth University. They explained that they were investigating the relative effectiveness of a number of speech anxiety treatment programs and that treatment would be available for those desiring it. Over 180 students completed the PRCS and the PRCA during class. Students who qualified (upper third of those completing forms) were contacted by phone, offered treatment, and scheduled for pretesting during the third week of the semester. Treatment took place during the fourth through seventh weeks of the semester, and posttesting occurred during the eighth week.

During the fourteenth week of the semester, all participants were followed-up, debriefed, and given preliminary findings.

**Pretesting and Assignment to Groups**

Participants met with two testers and in groups of three to eight students. The purpose of the research was explained to the participants, and they gave their consent to participate. After being given 10 minutes to plan it, each participant delivered a two-minute test speech to their small group. Each speech was videotaped and later rated independently by two trained behavioral raters on the Timed Behavioral Checklist (TBCL; Paul, 1966), a 20-item rating form listing specific anxious behaviors. Immediately before the speech, each volunteer completed the Affect Adjective Checklist (AACL; Zuckerman, 1960) to rate his or her anxiety. Immediately after the speech, each participant rated his or her subjective state using the Anxiety Scale (AS), a modification of
Karst and Trexler's (1970) Fear Thermometer. After all test speeches had been completed, all participants completed the Social Anxiety Scale (SAS; Watson & Friend, 1969), a 58-item true-false scale that measured the degree of interpersonal anxiety experienced in social and evaluative situations. Volunteers were assigned to groups in a random fashion given the stipulation that at least one male was in each group.

**Therapists and Behavioral Raters**

Therapists were second year graduate students in Counseling Psychology who had been trained by experienced therapists. The therapists followed a treatment manual for each group. The manuals were developed by Fremouw (SST), (Note 3), Meichenbaum (CST), (Note 2), and Paul (SD) (1966). Behavioral raters were two pré-masters graduate students who received 4 1/2 hours of structured training and rehearsal. (Training manuals are available on request.)

**Treatment Groups**

Systematic Desensitization (SD; n = 5). This training followed a modified version of Paul's (1966) treatment manual. In the first part of the first of four 2-hour sessions, the therapists introduced themselves and conducted an exercise to help group members feel at ease and know each other. Participants then imagined and discussed their reactions during the test speech situation. A rationale was developed from that discussion that conceptualized speech anxiety as due to faulty learning. The case of "Little Albert" was discussed. Two procedures were introduced to help the students "unlearn" anxiety -- relaxation and counterconditioning. Participants were trained in deep muscle relaxation and assigned the homework of practicing nightly throughout their therapy. Therapists then guided the development of a group hierarchy that involved public speaking. In the second session, the rationale and homework were discussed, and participants practiced deep muscle relaxation for ten minutes.
Therapists and group members then elaborated on the hierarchy scenes. SD proper was conducted for 30 minutes. During sessions three and four, the homework and rationale were reviewed, and students worked systematically through the hierarchy while experiencing deep muscle relaxation.

**Speech Skills Training (SST; n = 5).** This training used a modified manual designed by Fremouw (Note 3). The early part of the first session was identical to the systematic desensitization group except for the rationale. Anxiety was conceptualized as arising from lack of confidence in one's speaking skills. Treatment goals were developed stressing that the therapists would help the volunteers learn better speech skills and therefore become less speech anxious. Therapists modeled poor speaking skills and then gave a short didactic presentation about effective voice control. Students practiced good voice control in dyads and were assigned to practice these skills during the time between sessions. In the second session, therapists reviewed the rationale and discussed the homework. The session concentrated on speech organization, voice control, posture, and eye contact. Homework consisted of practicing all the skills discussed to date. In session three, the therapists again reviewed the rationale and discussed the homework. The session stressed the effective use of gestures. Therapists conducted guided practice at a variety of speaking situations. For homework, students practiced gestures in everyday speaking situations. The fourth session reviewed all that had been covered and had the students prepare and give a five-minute speech which was critiqued by group members and by the therapists.

**SST + Coping Skills Training (SST+CST; n = 5).** This training used a modified manual designed by Meichenbaum (Note 2) and combined that with the modification of Fremouw's (Note 3) manual. The first part of the first session was identical to the first session in the SST group, except for the rationale.
Speech Anxiety

anxiety was conceptualized as due to three components — lack of confidence due to poor speech skills, inability to relax, and anxiety producing thoughts. After the rationale, students were taught to relax and were assigned the homework of practicing relaxation nightly. Students then recalled the negative self-statements that they had mentioned as they discussed their practice speeches. The therapists modeled negative self-statements during a demonstration speech, then conducted a discussion of the irrational nature of negative thoughts. They assigned the students to observe and record in a "daily log" at least three negative self-statements per day during the upcoming week. During the second session, students reviewed and discussed their homework and the rationale for the cause and treatment of their anxiety. They heard a conceptualization of anxiety as a stage process during which self-statements could be planned to control anxiety (Meichenbaum & Turk, 1976), then they planned individual coping statements and practiced using them. For homework, students added the use of coping self-statements to their practice in relaxation and to keeping their daily log of reactions to anxiety-provoking situations. In the third session, the rationale and homework were again discussed, and the therapists concentrated on training in speech skills — giving a slightly abbreviated version of the SST sessions one and two. Homework that was added to the relaxation and self-statement tasks previously assigned involved practicing good voice skills. During session four, the therapists finished the SST and spent one hour reviewing all that had been covered. Finally, each group member gave a brief verbal presentation that was critiqued.

(SST + CST + Paradox n = 6). This training paralleled the SST + CST for the first three sessions. During the last session, instead of the one hour review, "catastrophizing" was discussed. The group members were told that
catastrophic fantasies were not unusual while giving speeches, and therapists adduced evidence from previous sessions that group members indeed have such fantasies. The therapists instructed the group members to imagine themselves experiencing their worst fears. Therapists then demonstrated giving a speech in which "everything went wrong." Therapists "thought aloud" their catastrophic fantasies. Each group member then acted out his or her worst fantasy to the group. Although the exercise originally was not intended to be humorous, the group members responded to the activity with humor and enthusiasm. Finally, the therapists closed with the idea that even the most catastrophic occurrences could be dealt with through the coping techniques they had learned.

Waiting List Control (WLC; n = 6). These people agreed to complete the PRCS and the PRCA during class during the first and fifteenth weeks of the semester. Although they qualified for treatment, they had no treatment for speech anxiety other than that which was provided all participants through their normal classroom instruction.

Posttreatment and Follow-up Testing

Following treatment, all four treatment groups and the WLC group were scheduled for posttesting in groups of three to eight students. The posttreatment testing was identical to the pretreatment testing except that at the conclusion of the session the participants also completed the PRCS and the PRCA. In the sixth week following posttesting, all participants (including the CC group members) completed the PRCS and the PRCA.

Results

Preliminary Analyses

Means and standard deviations for each group on each dependent variable for pretreatment, posttreatment, and follow-up are given in Table 1. The PRCS, AS,
and AAACL are self-report measures; the TBCL is a behavioral rating; and the PRCA and the SAS are generalization measures.

A one way analysis of variance (ANOVA) was conducted on each of the six dependent variables to check for random distribution of participants. The overall ANOVA revealed significant differences among groups on two premeasures, the TBCL, $F(4, 22) = 3.25$, $p < .05$, and the AS, $F(4, 22) = 3.10$, $p < .05$. In order to isolate these differences, each group was compared to each other group for both measures. On the TBCL, four of ten comparisons were significant. The participants in the SST group were rated as more anxious than participants in the SD group ($p < .01$) or in the SST + CST group ($p < .05$). The SD participants were less anxious than participants in either the WLC group ($p < .05$) or the SST + CST + Paradox group ($p < .05$). On the AS, four of ten comparisons were significant. Participants in the SST group reported significantly more anxiety than those in the SD group ($p < .05$) or in the WLC group ($p < .01$). Those in the SST + CST + Paradox group were more anxious than participants in the SD group ($p < .05$) or the WLC group ($p < .01$). In order to compensate for the unequal distribution of participants across cells, analyses of covariance (ANCOVA's) were performed using the pretreatment TBCL scores as the covariate.

Posttreatment Analyses

ANCOVA’s on each dependent variable showed that overall there were no differences among groups at the end of treatment; however, there were several differences when individual planned comparisons between pairs of groups were performed. On one self-report measure, the PRCS, the SD participants were less anxious at the end of treatment than the participants in the WLC group ($p < .05$).
On another self-report measure, the AS, the SST + CST participants were less anxious than the SST participants (p < .05). On the behavioral measure, the TBCL, the SST + CST participants were rated as less anxious than the WLC participants (p < .05). On the generalization measure, the PRCA, the SST + CST participants were less anxious than the WLC participants (p < .05). There were no differences on either the AACL or the SAS.

Follow-up Analyses

At the follow-up, which occurred six weeks after treatment ended, only two measures were taken. On the self-report measure, the PRCS, there was a significant main effect for all groups, F (5, 25) = 3.39, p < .05. Planned comparisons between pairs of groups showed that the SST + CST participants reported less anxiety than the SS participants (p < .05), the WLC participants (p < .05), and the CC participants (p < .01). In addition, the SST + CST + Paradox participants reported less anxiety on the PCRS than the WLC participants (p < .01) and the CC participants (p < .05). On the generalization measure, the PRCA, there was a significant effect for treatments, F (5, 25) = 2.59, p < .05. Planned comparisons showed that both combination groups were less anxious than either the WLC (for both p < .05) or the CC (for both p < .01). These results on the follow-up measures are shown graphically in Figure 1, which gives the pretreatment to follow-up percent change for each measure.

Discussion

In this experiment, treatments for speech anxiety involving coping skills in combination with speech skills were more effective in reducing speech.
anxiety and other communication anxiety than treatments not involving training in coping skills. Furthermore, the differences that existed at the conclusion of treatment were not only maintained but were found to have increased on six week follow-up tests. These differences were clear, despite the small number of participants in each experimental condition. Of the 13 planned comparisons that were significant, 12 involved coping skills training.

We hypothesized that systematic desensitization would be less effective than the combination groups based on previous research (e.g., Germer, 1975; Meichenbaum, 1972; Weissberg, 1977). This hypothesis was not confirmed. Although they were in the predicted direction, the effects of systematic desensitization were not statistically different from those of the combination groups. Systematic desensitization was superior to the waiting list control group only on the PRCS at the posttreatment, and this superiority was not maintained at the follow-up. The systematic desensitization program used in this experiment was modeled after a program introduced by Paul (1966) and can best be described as traditional desensitization. Paul originally designed the treatment to extend over five hours, but for this research the package was altered in order to be comparable with other groups. Of all the groups, this treatment proved the most difficult to induce regular attendance, requiring repeated telephoning and exhortation and a substantial amount of "make up" therapy.

Participants who received speech skills training alone did not have less self-reported anxiety or behaviorally rated anxiety at posttreatment or follow-up than either waiting list or classroom control participants. This finding is contrary to that of Fremouw and Zitter (1978) who found that speech skills training, using a similar training regime to the one employed in this experiment,
produced more anxiety reduction than was experienced in a waiting list control group. In both the present study and the Fremouw and Zitter (1978) study, the treated groups as well as the control groups attended speech class during the time in which the research was being conducted. However, a number of differences exist in the two experiments. Fremouw and Zitter used only five hours of treatment, whereas the present experiment used eight hours. As compared with participants in the present experiment, Fremouw and Zitter's participants had higher social anxiety initially (there were selected as being high in social anxiety, the PRCA) even though there was no difference in speech anxiety (PRCS) initially. Furthermore, Fremouw and Zitter had more than twice as many subjects per group as this experiment. In the present research and that of Fremouw and Zitter, the percent changes from pretreatment to posttreatment and from pretreatment to follow-up were comparable on the PRCA but were somewhat larger for Fremouw and Zitter's participants on the PRCS.

Although the speech skills training did not affect statistically significant improvement relative to other groups on any individual measure of anxiety, it did result in the highest absolute change on behavioral ratings of anxiety. This finding was expected in view of the specific behavioral nature of the training. On the generalization measure, the PRCA, little improvement was found. Little or no generalization with skills training programs has been a common finding (e.g., Fawcett & Miller, 1975; Fremouw & Zitter, 1978; for a general review of generalization in skills training see Hersen & Eisler, 1976).

Adding coping skills training to the speech skills training resulted in reduced self-reported speech anxiety, reduced ratings of behavioral anxiety, and reduced reports of general communication anxiety relative to controls at
posttreatment. The differences were even larger at the six week follow-up for self-reports of speech and general communication anxiety. (Behavioral ratings were not made at follow-up.) This suggests that training in relaxation and self-instructional skills in combination with speech skills provides a powerful treatment, especially in view of the few participants per cell. This is consistent with previous research (Fremouw & Harmatz, 1975; Fremouw & Zitter, 1978; Meichenbaum et al., 1971). Glass, Gottman, and Shmurak (1978) have found cognitive restructuring effective at promoting generalization. However, generalization was not found using a speech anxious population in five hours of treatment (Fremouw & Zitter, 1978). The present experiment, however, does lend support to the contention that training in cognitive coping produces generalizable skills, especially in an eight hour program that allows considerable freedom to consider the application of coping skills to a variety of situations.

Addition of the paradoxical directive to the already effective combination of speech and coping skills training apparently had little impact, neither aiding or detracting from the program. The paradox that was used in this experiment was presented within a humorous, cooperative context, such as is advocated by Ellis (1980) and by Frankl (1975). Most of the paradoxical treatments that have been reported have involved paradox as a focal interest of therapy (Dunlap, 1932; Haley, 1978; Sellivini-Pallazoli et al., 1978; Watzlawick et al., 1967) and have used paradox as a nonhumorous intervention that is intended to provoke resistance rather than cooperation. Our findings suggest that the use of paradox as a minor part of an already effective cognitive behavioral program might not be effective. Our findings shed little on the traditional resistance-oriented use of paradoxical directives.
In conclusion, programs such as the combination groups that treat speech anxiety by explicitly addressing behavioral, physiological (through relaxation), and cognitive-emotional concerns appear to be effective at reducing speech anxiety. The small number of participants in this research suggests powerful treatments, but, at the same time, calls for caution in applying the findings. Moreover, different results might be obtained using a self-referred rather than solicited population. Nonetheless, these results do have wide applicability due to the large population of college students who take speech classes annually and due to the pervasiveness of mild speech anxiety in the population at large.
Reference Notes


Requests for reprints may be obtained from the first author at the Psychology Department, Virginia Commonwealth University, 800 West Franklin St., Richmond, Virginia 23284. The authors wish to thank the teachers of the Effective Speech classes at Virginia Commonwealth University for their cooperation in promoting this research and in providing class time for testing. This research was the basis for the master's thesis of the third author, supervised by the first author.

Therapists were trained by the first two authors. Consultation was provided by William Fremouw.
References


Table 1
Mean and Standard Deviation of Pretreatment, Posttreatment, and Follow-up Scores on Speech Anxiety Measures

<table>
<thead>
<tr>
<th>Group</th>
<th>Self-Report Measures</th>
<th>Behavioral Measure</th>
<th>Generalization Measures</th>
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<tr>
<td></td>
<td>PRCS</td>
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<tr>
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<tr>
<td>Posttests</td>
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<td>-</td>
<td>-</td>
</tr>
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<td>3.2</td>
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<tr>
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<td>SD (n=5)</td>
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<tr>
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Figure 1

Percent Change
in Score

Dependent Measures

△ = WLC
□ = SD
● = SS
▲ = SSCS
■ = SSCSP

Pretreatment to posttreatment percent change scores for each group on all measures
Pretreatment to follow-up percent change scores for each group on the Personal Report of Confidence as a Speaker and the Personal Report of Communication Apprehension.