

Neuro-Linguistic Programming Treatment for Anxiety: Magic or Myth?

Martin Krugman, Irving Kirsch, and Cynthia Wickless
University of Connecticut

Len Milling
University of Oklahoma Health Sciences Center

Heidi Golicz and Anna Toth
University of Connecticut

The neuro-linguistic programming (NLP) treatment for anxiety, claimed to be a single-session cure for unpleasant feelings, was compared with self-control desensitization of equal duration and a waiting-list control group in treating public speaking anxiety. Fifty-five speech-anxious undergraduates underwent pretreatment and posttreatment assessments of anxiety during 4-min speeches. The results indicate that neither treatment was more effective in reducing anxiety than merely waiting for 1 hr. These data suggest that Bandler and Grinder's (1979) claim for a single-session cure of anxiety may be unwarranted.

Every decade, new methods of psychotherapy or behavior change are embraced with enthusiasm by many mental health practitioners. During the last 10 years, neuro-linguistic programming (NLP), a system of interpersonal communication and behavioral change interventions developed by Bandler, Grinder, and their colleagues, has generated such enthusiasm among many psychotherapists (Bandler & Grinder, 1975, 1979; Grinder & Bandler, 1976; Lankton, 1979). Despite claims that "NLP is an explicit and powerful model of human experience and communication . . . that allows [the practitioner] to make many deep and lasting changes quickly and easily" (Bandler & Grinder, 1979, pp. i-ii), little scientific evidence exists to validate its psychotherapeutic effectiveness. Unlike many therapeutic approaches, however, NLP provides clearly specified treatment instructions and makes explicit predictions as to the effects of these techniques. Consequently, it is pos-

sible to put the claims made for this therapy approach to an empirical test. The current study attempts to examine the utility of neuro-linguistic programming by comparing the effects of its method of treatment for anxiety with those of an abbreviated version of self-control desensitization (Goldfried, 1971) and a waiting-list control group.

According to Bandler and Grinder (1979), NLP can be employed "to cure phobias and other unpleasant feeling responses in less than an hour" (p. ii), and an annotated transcript of a single-session treatment for phobias is detailed. If this claim is justified, then the NLP one-session treatment would be more powerful than any known intervention for anxiety yet empirically tested. The present study tested the validity of Bandler and Grinder's claim. Public speaking anxiety was selected as the targeted problem because it is very prevalent in the population, is frequently a presenting problem for which treatment is sought, and can interfere with academic and professional advancement. Paul (1966) cogently argued that the debilitating effects of speech anxiety are not qualitatively different from those of other anxiety disorders, and the results of studies of performance anxiety in college students (e.g., Kirsch & Henry, 1977) have been found to be generalizable to clinically phobic individuals

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Requests for reprints should be sent to Irving Kirsch, Department of Psychology, University of Connecticut, Storrs, Connecticut 06268.

(Kirsch, Tennen, Wickless, Saccone, & Cody, 1983).

Unlike NLP, it has not been claimed that Goldfried's (1971) self-control variation of systematic desensitization can be effective in less than an hour. However, because this procedure has been reported to be as effective as standard systematic desensitization in multiple-session treatment of speech anxiety (Zemore, 1975), it was employed as a credible treatment to be compared with the NLP intervention. If the assertion made by Bandler and Grinder (1979) is accurate, then the NLP treatment would be expected to be significantly more effective in reducing public speaking anxiety than either self-control desensitization or a waiting-list control condition after a single session of treatment.

Method

Subjects and Therapists

Subjects were 28 male and 27 female undergraduate students enrolled in an introductory psychology course at the University of Connecticut who responded to an advertisement for a program to alleviate anxiety in public speaking situations. To obtain a highly motivated and highly speech-anxious sample, standard subject pool procedures were abandoned. No mention was made of the experimental nature of the program or of the availability of experimental credit until after subjects agreed to participate. Thus, we assumed that the subjects in our sample were sufficiently disturbed by their performance anxiety to volunteer for treatment without additional incentive.

Two graduate students in clinical psychology and one graduate student in counseling psychology served as therapists. Therapists were trained by a clinical psychologist who had been taught the NLP treatment for phobias in a workshop led by Richard Bandler, one of the originators of the technique (Bandler & Grinder, 1979). Therapists received 4 months of training and practice in NLP and self-control desensitization treatments. In order to ensure that the respective treatment manuals were followed, therapists were observed in multiple role-played therapy sessions prior to the initiation of the experiment.

Treatment Conditions

Neuro-linguistic programming. The format for this treatment was taken from a transcript of the treatment for phobias presented in *Frogs into Princes* (Bandler & Grinder, 1979, pp. 109-125). Subjects were instructed to reexperience a situation in which they had behaved in a highly competent manner. These competency feelings were "anchored" (kinesthetically associated) with a touch on the shoulder. Next, subjects were instructed to create an image of their adult selves watching a "movie" of a distressing childhood experience associated with their

fear of speaking in public. Subjects were told to view the movie of the public speaking experience while the therapist elicited competency feelings through the kinesthetic anchor to reduce anxiety. Finally, subjects were instructed to integrate their adult and childhood images.

Self-control desensitization. This intervention was a condensed version of the self-control desensitization procedure described by Goldfried (1971). First, subjects received 20 min of progressive relaxation training. They were then instructed to imagine themselves giving a speech and to signal the therapist as soon as they experienced any tension or anxiety. When anxiety was signaled, they were instructed to "relax away" the anxiety while maintaining the image of speaking in public. This treatment was designed to last as long as the NLP intervention.

Waiting-list controls. Subjects in the waiting-list control group received the same pretreatment and posttreatment assessments administered to the treatment groups. Between assessments, control subjects waited in a waiting room for the same amount of time that treated subjects spent in therapy. Following posttreatment assessment, these subjects received the same treatment that had been provided to subjects in the self-control desensitization group. This was offered to fulfill the promise of treatment upon which their participation was initially secured and was not part of the experimental study. Therefore, no further assessments of speech anxiety were made.

Assessment Procedures

Pretreatment and posttreatment assessments of public speaking anxiety were conducted by trained research assistants who were naive to group assignment. To eliminate the influence of modeling effects, subjects were tested individually. As part of the assessment procedure, subjects were required to deliver a 4-min speech on an assigned topic. Prior to beginning their speeches, subjects were asked to predict their particular level of anxiety on a questionnaire composed of 12 items drawn from Gilkinson's (1942) Personal Report of Confidence as a Speaker. During the speeches, behavioral ratings of performance anxiety were made by three trained observers using Paul's (1966) Behavioral Checklist as modified by Kirsch, Wolpin, and Knutson (1975). In addition, the observers provided a global rating of subjects' speech anxiety on a 10-point scale. These observers and an additional experimenter constituted an audience for each subject's speech. Immediately after speaking, subjects indicated the level of anxiety they had experienced by completing a condensed version of Gilkinson's (1942) Personal Report of Confidence as a Speaker.

Following pretreatment assessment, subjects were randomly assigned to treatment conditions and therapists, blocked by sex of subject. Following treatment, the assessment procedures previously described were readministered. Although the same pool of speech topics was used for pretreatment and posttreatment assessments, no subject spoke on the same topic twice.

Results

Interrater reliabilities on behavioral ratings of performance anxiety, as determined by the

Table 1

*Mean Pretreatment and Posttreatment Assessment Scores and Within-Treatment Correlated *t* Values*

Variable	Pretreatment		Posttreatment		<i>t</i>	<i>df</i>	<i>p</i> <
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Fear expectancy							
NLP	38.28	6.21	32.89	6.94	3.15	17	.006
Cog-beh	41.74	7.49	32.63	10.13	4.87	18	.001
Control	39.27	4.92	36.13	6.17	2.91	14	.011
Fear survey							
NLP	39.37	7.12	28.16	7.90	7.11	18	.001
Cog-beh	39.68	10.00	27.26	6.67	7.13	18	.001
Control	38.00	9.86	27.06	8.00	5.47	16	.001
Behavioral Checklist							
NLP	25.48	3.96	23.13	4.67	2.87	18	.010
Cog-beh	27.63	6.87	22.89	5.78	3.56	18	.002
Control	23.54	4.51	20.98	4.88	2.83	16	.012
Global rating							
NLP	6.72	1.18	6.06	1.06	3.48	17	.003
Cog-beh	7.09	1.51	5.93	1.66	4.67	18	.001
Control	6.62	1.19	5.61	1.54	3.90	16	.001

Note. NLP = neuro-linguistic programming group; Cog-beh = cognitive-behavioral therapy group; Control = waiting-list control group.

analysis of variance (ANOVA) method recommended by Winer (1971), were .83 for both pretreatment and posttreatment assessment periods. In addition, the interrater reliabilities on pretreatment and posttreatment global ratings of speech anxiety were .83 and .91, respectively. Presented in Table 1 are pretreatment and posttreatment mean scores on measures of expected and actual public speaking anxiety for each of the three treatment conditions. Comparison of mean pretreatment Behavioral Checklist scores with those reported in previous studies (Kirsch et al., 1975; Kirsch & Henry, 1977, 1979) indicates comparable levels of speech anxiety.

Pearson product-moment correlations between the four pretreatment and posttreatment indexes of expected and experienced public speaking anxiety are shown in Table 2. These data indicate that expected fear was highly correlated with subsequent reports of experienced fear during pretreatment and posttreatment assessment periods and was highly correlated with global estimates of fear behavior during pretreatment assessment. Global fear ratings were highly correlated with Behavioral Checklist ratings during both assessment periods. Self-reported fear was significantly correlated with global and Be-

havioral Checklist ratings during pretreatment assessment and with Behavioral Checklist ratings during posttreatment assessment. These correlations provide evidence of convergent validity for the measure of public speaking anxiety employed in this study. To assess the comparability of the three treatment groups at pretreatment time, a series of ANOVAs were performed on the pretreatment indexes of public speaking anxiety. These analyses failed to reveal significant differences in pretreatment fear levels.

Table 2

Correlations Between Pretreatment and Posttreatment Indexes of Expected and Experienced Public Speaking Anxiety

Variable	FE	FS	BC	GR
FE	.53***	.62***	.20	.26*
FS	.66***	.60***	.27*	.47***
BC	.17	.33**	.63***	.68***
GR	.04	.11	.60***	.52***

Note. FE = fear expectancy; FS = fear survey; BC = Behavioral Checklist; GR = global rating. Coefficients above diagonal represent pretreatment correlations. Coefficients on the diagonal represent pretreatment-posttreatment correlations. Coefficients below the diagonal represent posttreatment correlations.

* $p < .10$. ** $p < .01$. *** $p < .001$.

Between-Groups Comparisons

To compare the differential effectiveness of the three treatment conditions in reducing public speaking anxiety, a series of analyses of covariance (ANCOVAs) for the posttreatment indexes were performed employing the four posttreatment indexes of expected and experienced public speaking anxiety as dependent measures and employing the corresponding pretreatment scores as covariates. The resulting *F* values for measures of public speaking fear did not attain significance, suggesting that there were no significant differences among the three treatment groups in reducing public speaking anxiety.

Within-Groups Pretreatment to Posttreatment Changes

The between-groups analyses failed to substantiate differential effectiveness among the three conditions. However, these results might have as easily been obtained if all three procedures led to improvement, if all led to deterioration, or if no significant changes occurred in any of the conditions. In order to establish which of these possibilities was suggested by our data, within-groups changes in public speaking anxiety were analyzed by means of correlated *t* tests. As shown in Table 1, all *t* values attained significance beyond the .05 level, indicating significant reductions on all indexes of speaking anxiety for subjects in each of the three conditions, including the waiting-list control group. Although these data indicate a lessening of anxiety in all conditions, the between-groups analyses reveal that this was not due to the effects of the experimental treatments. These pre-post changes are more likely due to the effects of the pretreatment assessment procedure or to habituation to the experimental setting.

Discussion

Overall, the findings of this study indicate that the NLP single-session treatment for phobias was no more effective in reducing public speaking anxiety than a self-control desensitization intervention of equal duration or a waiting-list control condition, as measured by self-report and behavioral ratings.

The fact that subjects in each of the three conditions demonstrated significant decrements in public speaking anxiety indicates the danger of drawing conclusions about treatment effectiveness without appropriate statistical comparisons with changes obtained in control conditions. It is possible, for example, that the perceived rapid effectiveness of NLP that has been reported by Bandler and Grinder (1979) is an artifact of changes that would have been observed without the interventions that they describe.

The results of this study cast doubt on the effectiveness of NLP as a single-session treatment for anxiety. On the other hand, they tell us nothing about the effectiveness of these procedures when administered over a more extended period of time. For example, because self-control desensitization has been found to be effective over multiple treatment sessions (Goldfried & Goldfried, 1977; Jacks, 1973; Spiegler et al., 1976; Zemore, 1975), our failure to find significant differences between self-control desensitization and waiting-list control conditions is probably due to the short duration of treatment. Similarly, because any credible procedure appears to be capable of reducing irrational fears (e.g., Kirsch et al., 1983; Kirsch & Henry, 1977), it is likely that additional sessions of NLP would have resulted in greater improvement than that found in waiting-list or no-treatment control conditions. However, the idea of curing phobias in a single session may be more credible to some therapists than it is to most subjects.

Beyond challenging the therapeutic effectiveness of the single-session phobia treatment, the findings of this research argue strongly for continued study of neuro-linguistic programming and other behavior change interventions that have achieved widespread popularity in the absence of data supporting their utility. The results of this study are consistent with those reported by Mathews, Kirsch, and Mosher (1985), in which the NLP double hypnotic induction was found to be less effective than a traditional standardized induction in enhancing responses to hypnotic suggestion. Taken together, these findings may help to encourage practitioners to develop a healthy skepticism about therapeutic interventions that are seemingly magical but lack

empirical support for their effectiveness. The findings also suggest that greater caution should be exercised in making claims of rapid success without controlled empirical investigation.

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