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Toward a Task Analysis of Assertive Behavior

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The present study analyzed the components of assertive behavior. Assertiveness problems were conceptualized in terms of a task analysis of the topography of competent responding. One hundred one subjects who spanned the range of assertiveness, measured by McFall's Conflict Resolution Inventory, responded to three sets of situations requiring refusal of an unreasonable request. Content knowledge of an assertive response, delivery of the response under two conditions, heart rate, self-perceived tension, and the incidence of positive and negative self-statements were assessed. Differences on these variables between low-, moderate-, and high-assertive groups were analyzed to determine the nature of the response deficit in nonassertive subjects. Low-assertive subjects differed from moderate- and high-assertive subjects on a role-playing assessment requiring them to deliver an assertive response, but they did not differ from moderate- and high-assertive subjects on their knowledge of a competent response or on hypothetical delivery situations. No significant differences in heart rate were observed between low-, moderate- and high-assertive subjects; however, higher self-perceived tension was found in low- compared to moderate- and high-assertive subjects. A greater number of negative and fewer positive self-statements were reported by low- compared to moderate- and high-assertive subjects. The present behavior task analysis study is recommended as a clinical assessment study preliminary to investigations comparing behavior change interventions.

Response acquisition approaches to assertion training are based on a skill-deficit model. According to this view nonassertive subjects are people with specific limited capabilities in a specific set of social situations. This approach is best characterized by McFall and Twentyman (1973), who wrote that

> The therapeutic objective is to provide patients with direct training in precisely those skills in their response repertoires. Very little attention is given to eliminating existing maladaptive behaviors; instead, it is assumed that as skillful, adaptive responses are acquired, rehearsed, and reinforced, the previous maladaptive responses will be displaced and will disappear. (p. 199)

A basic question has remained unresolved in response acquisition approaches, namely, what is the specific nature of the deficit in nonassertive subjects? Component analyses of assertion training programs (e.g., McFall & Twentyman, 1973) provide one approach to this question. Presumably, if modeling does not add significantly to the treatment effect, then the response deficit could not have involved a lack of exposure to skillful models.

Although the component analysis approach is useful in creating efficient interventions, there are several problems with its potential theoretical contribution toward specifying the nature of the response deficit. A treatment component, if effective, may be totally unrelated to the nature of the problem it treats (Buchwald & Young, 1969). For example, although aspirin ameliorates headaches, headaches are not a result of an aspirin deficiency. Furthermore, treatment components rarely can claim to deal with only one deficit at a time. For example, an effective coaching component may simultaneously result in response shaping, confidence building, and cognitive restructuring.

It may seem in the negative case (e.g., the failure of models to enhance the training ef-

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fect as shown in McFall and Twentyman, 1973) that some insight is gained about what the deficit is not. However, in the negative case, the information gained is provocative at best. For example, why does modeling fail to enhance the treatment program? Is it because nonassertive subjects have seen many models of assertive behavior in their day-to-day experience and that the information provided by the models is redundant? How does the information conveyed by models differ from that provided by coaching? Is it more inductive than deductive? Is it more sketchy? Or is the modeling component poorly designed? What specifically is the response deficit that would make modeling ineffective and coaching effective? Therefore, even in the negative case, a component analysis does not specify the response deficit with precision.

An alternative strategy for specifying the response deficits in nonassertive subjects is suggested by the research of Gagné (1969) in the design of a remedial mathematics program. Suppose that some fourth-grade children in a city were incompetent in long division. Tests of addition, subtraction, multiplication, and the knowledge of remainders colud be given to both children who could and could not do long-division problems. The intervention program would depend on the specific performance discrepancy obtained from this "task analysis" study. Such a study begins by specifying the likely components of a competent response and then testing the extent to which performance on the components discriminates between competent and incompetent populations.

The purpose of the present investigation was to determine what components are necessary in order to perform a competent assertive response. The assertive response was defined to include measurable responses from the cognitive, physiological, and overt response classes. Low-assertive, moderate-assertive, and high-assertive subjects were compared to determine which components of assertive behavior differentiated between groups within the three response classes mentioned above. For the purpose of this study, the definition of assertive behavior has been limited to refusal behavior, that is, refusing an unreasonable request.[1]

The components assessed within the cognitive system included positive and negative self-statements, that is, innerstatements or thoughts that would make it easier or harder to deliver a convincing refusal. When confronted with unreasonable requests, it is possible that assertive people make self-statements that are adaptive in terms of their ability to refuse. The unreasonable request may also elicit self-statements in nonassertive subjects that focus on the fear of being disliked or on having a moral responsibility to help everyone regardless of the situation. Meichenbaum found that test-anxious clients (Meichenbaum, 1972), speech-anxious clients (Meichenbaum, 1971), and phobic clients (Meichenbaum, 1971) produce negative self-statements that are maladaptive in terms of the desired performance. In the present study, the cognitive self-statements as they relate to the assertion situations were assessed by the Assertiveness Self-Statement Test (ASST) devised for this study.

Within the physiological system, the component measured by the present investigation was heart rate. In treating nonassertive subjects, McFall and Marston (1970) found that behavior rehearsal resulted in a reduction in heart rate measured after McFall's Behavior Rehearsal Assertion Test (BRAT); control groups demonstrated an increase in heart rate. Since a reduction in heart rate appears to be an outcome of McFall's treatment program, it has been used as the physiological measure in the present study. In addition, subjects were asked to rate their self-perception of tension on a 7-point scale after performing assertive responses.

To separate knowledge of the content of a competent response from its delivery, three sets of problematic situations that require an assertive response were administered to the

[1] In a pilot study with 60 undergraduates, a general assertion scale (Galassi, DeLo, Galassi, & Bastein, 1974) was administered with McFall and Lillesand's (1971) CRI. The correlation between the two scales was .72, so it is likely that the inability to refuse an unreasonable request is strongly related to general assertion problems.

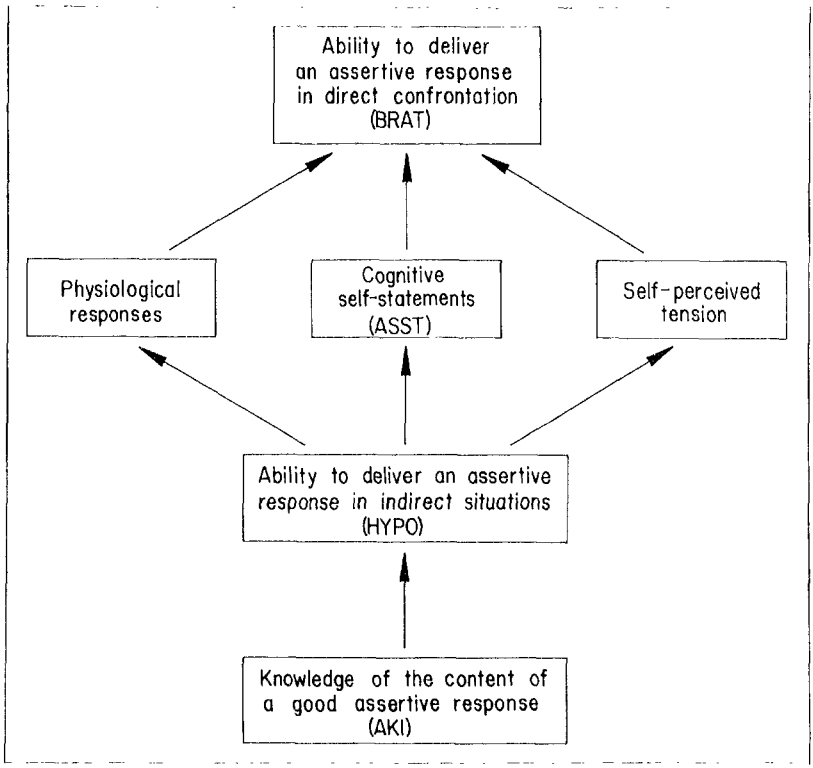

FIGURE 1. Hypothetical task analysis of the assertive response. (Boxes lower on the flowchart represent prerequisite behaviors or mediating process for competent performance.)

subjects. To assess the content knowledge of the response, the Assertiveness Knowledge Inventory (AKI) was devised. This inventory presents unreasonable requests in written form and requires a written refusal response to determine whether the subject knows what an assertive response entails. It was assumed that the written nature of the task would minimize other possible response components (e.g., physiological arousal or negative self-statements) that might occur as the task approached reality. To assess the ability to deliver the response orally under limited circumstances, the Hypothetical Behavioral Role-Playing Assertion Test (HYPO) was devised. These situations were presented on audiotape and an oral response was required, but the subjects were told to imagine that they were only modeling a good assertive response to show a friend how to do it. The task assessed the ability to construct an assertive response and deliver it orally under hypothetical and "safe" circumstances. Again, an attempt was made to make the situation unrealistic to reduce possible responses from other classes that may be elicited by the real situation. Finally, a shortened form of the Behavioral Role-Playing Assertion Test (the Reduced Behavior Rehearsal Assertion Test; RBRAT) was used to assess the content and delivery of the assertive response under circumstances that simulated reality as much as possible. Here subjects were told to imagine that they were being confronted with an unreasonable request and to respond orally as though they were actually talking to the person making the request. This task was designed to determine the subject's ability to construct and deliver an assertive response under circumstances that approximate real life.

These specific components of assertive behavior all appear to be relevant to successful performance. The relationship of these components can be conceptualized in a hierarchical task analysis, with performance of the

RBRAT representing the terminal behavioral objective (see Figure 1). The skills measured by tasks assessing knowledge of the content of a good assertive response are prerequisite to performance on the RBRAT. But before the terminal behavior can be performed, the heart rate responses, self-perceived tension, and cognitive self-statements may intervene to affect delivery. The form that these responses take can either be adaptive or maladaptive in terms of the terminal goal behavior. Since this study is exploratory in nature, no specific hypotheses were offered as to the nature of differences on these components of the assertive response.

Method

Subjects

Forty-seven male and 54 female college students participated in the experiment. They ranged from extremely nonassertive to highly assertive as measured by the Conflict Resolution Inventory (CRI) developed by McFall and Lillesand (1971). A number of subjects were recruited on the basis of their own evaluation of their degree of assertiveness through announcements in several undergraduate psychology classes. All subjects were formally tested for level of assertiveness by the CRI. Subjects were assigned to either low-, moderate-, or high-assertive groups on the basis of their CRI scores. Classification was done with a bivariate criterion using both assertion and nonassertion scores on the CRI. Low assertives had to earn an assertion score of 13 or less *and* a nonassertion score of 18 or more; moderate assertives had to earn an assertion score of between 10 and 20 *or* a nonassertion score of between 11 and 17; and high assertives had to earn an assertion score of 21 or more *and* a nonassertion score of 10 or less. There were 32 low assertives, 41 moderate assertives, and 28 high assertives, with approximately equal numbers of males and females in each group.

Procedure

Subjects were introduced to the experiment and told that the purpose was to find out more about how people react in situations requiring assertive behavior in order to develop a training program to help people who have a problem in this area.

While subjects filled out the CRI, their heart rate was recorded to obtain a base rate for later comparisons. They also indicated their level of tension on a 7-point scale to provide a base rate of self-perceived tension. After subjects were administered the CRI and randomly assigned to a counterbalancing order, they were presented with three sets of stimulus situations in which they were confronted with unreasonable requests. The three sets of situations were presented in counterbalanced order for all groups, and heart rate was again recorded before and during the first and last situations on the RBRAT. After responding to all the assertive situations, the ASST was administered to assess the positive and negative self-statements.

Dependent Measures

The subjects' written and tape-recorded responses on the AKI, HYPO, and RBRAT were rated independently by two "blind" judges using a 5-point scale from 1 (unqualified acceptance) to 5 (unqualified refusal; McFall & Twentyman, 1973). Rater intercorrelation on the AKI was .92, and a t test indicated that there was no difference between the two raters, $t(88) = .27$, $p = .79$. Rater intercorrelation on the HYPO was .56, and there was no difference between raters, $t(88) = .27$, $p = .79$. Rater intercorrelation on the RBRAT was .90, and there was no difference between the two raters $t(88) = .39$, $p = .70$. Overall reliability (as measured by interrater correlation) on the three tasks was .79.

Heart Rate

Heart rate was measured using a spatially displaced finger plethysmograph that activated a photoelectric cell. It was placed on the ring finger of the nonwriting hand. A base rate was taken while the subject was filling out the CRI. Recordings were later made before and during the first and sixth RBRAT situations.

Self-perceived Tension

Subjects were asked to rate how nervous they felt on a scale from 1 to 7 (1 = not all nervous and 7 = extremely nervous). This measure was taken during the CRI as a base rate and immediately after the first and sixth RBRAT situations.

Cognitive Self-statements

Immediately after responding to all of the 18 assertive situations, the subject was given the ASST. This is a 34-item questionnaire with 17 positive self-statements that would make it easier to refuse the request and 17 negative self-statements that would make it harder to refuse. Examples of each are as follows:

> *Positive*: I was thinking that it doesn't matter what the person thinks of me; I was thinking that I am perfectly free to say no; I was thinking that this request is an unreasonable one.
>
> *Negative*: I was worried about what the other person would think about me if I refused: I was thinking that it is better to help others than to be self-centered; I was thinking that the other person might be hurt or insulted if I refused.

Subjects were asked to indicate on a scale from 1 to 5 how frequently these self-statements characterized their thoughts during the preceding assertive situations (1 = hardly ever and 5 = very often).

The ASST was consensually validated on an independent sample of 37 college students. Only those

items that obtained a 90% agreement as to whether they were positive or negative in terms of facilitating or interfering with refusal behavior were used.

Subjects were also asked to respond to an item that asked them to indicate which of four sequences best characterized their thought process in terms of the order in which they made positive and negative self-statements. The sequences were as follows: Coping (− +), at first negative and later positive; unshaken doubt (− −), at first negative and later negative; unshaken confidence (+ +), at first positive and later still positive; giving up (+ −), at first positive and later negative. This was intended to assess whether subjects tended to sequence their positive and negative self-statements in different ways at different levels of assertiveness.

Problematic Situations

The situations were worded similar to the following: You have been standing in the ticket line at the movie theater for about 20 minutes. Just as you are getting close to the box office, three people who you know only slightly from your dorm come up to you and ask if you would let them cut in front of you.

All situations were taken from the CRI. Situations within each task were selected from the CRI to representatively sample refusal items with varying situational contexts, difficulty, and to whom the refusal was directed (to a close friend, friend, or acquaintance). The three tasks were sets of situations that differed in the following ways:

1. *For the AKI,* six situations were presented in written form, and the subjects were required to respond in writing with what they thought was a "model" refusal response. The AKI was designed to assess the subject's content knowledge of a good assertive response. CRI items were 2, 14, 20, 24, 27, and 30.

2. *For the HYPO,* six situations were presented on tape. In responding to the situations orally, the subjects were told to imagine that a friend had given in to an unreasonable request because the friend did not know how to refuse. The subjects were asked to imagine that the friend wanted to know what to say at the time. The subject's response was tape recorded. CRI items were 4, 6, 10, 25, 31, and 35.

3. *For the RBRAT,* six situations were presented on tape in an attempt to create a simulation of a real situation. The subjects were told to imagine in as much detail as possible that they were being confronted by an unreasonable request. They were told to respond naturally as though they were actually talking to the person making the request. CRI items were 12, 16, 22, 29, 32, and 33.

Since all situations for the three inventories were taken from the CRI, it is important to ask whether the three inventories have similar psychometric properties. To answer this question an independent sample of 60 undergraduates took the CRI. Nonassertion scores were computed for the CRI. Also, the total number of items on which the subject said he or she would not refuse, and the total number of items on which the subject expressed discomfort were computed separately for the AKI, HYPO, and RBRAT. A principal components analysis found one large nonassertion factor that accounted for 54.30% of the variance. This factor had a high loading for CRI nonassertion (.85) and high loadings for AKI, HYPO, and RBRAT discomfort scores (.85, .65, and .79, respectively) but lower loadings for refusal scores on the AKI, HYPO, and RBRAT (.27, .50, and .50, respectively). Hence, discomfort scores were used to test whether assertion items of differential discomfort had been assigned to the three inventories. A repeated measures F test resulted in an F ratio of .71, $p > .50$, with refusal means of 2.30, 2.43, and 2.52, respectively, for the AKI, HYPO, and RBRAT. Therefore, it appears that the three inventories do, in fact, have similar psychometric properties.

Results

Data were analyzed for each dependent variable using a 3×6 analysis of variance design with three groups (low, moderate, and high assertiveness) and six orders of administration of the AKI, HYPO, and RBRAT situations. There were no significant Groups $\times$ Order interactions. Results are presented separately for the order and groups main effects.

Order Effects

Significant order main effects were obtained for the knowledge of content (AKI) situations, $F(5, 83) = 2.90$, $p = .019$, and for the RBRAT situation, $F(5, 83) = 3.96$, $p = .003$. Subsequent tests using Tukey's honestly significant difference (HSD) test show that performance on the AKI was best for those subjects who received the AKI last; that is, after the HYPO and BRAT, Tukey's HSD = 3.98, obtained difference(83) = 4.38, $p < .05$. Performance on the RBRAT was best for those subjects who received the RBRAT last (i.e., after responding on both the AKI and the HYPO), Tukey's HSD = 4.93, obtained difference(83) = 6.44, $p < .05$.

Group Differences

The main effects for the assertiveness independent variable were as follows:

Knowledge of content (AKI). No significant differences were obtained between low-, moderate-, and high-assertive groups on the AKI, $F(2, 83) = 2.17$, $p = .19$.

Indirect delivery (HYPO). No significant differences between low-, moderate-, or high-assertive groups were obtained on the HYPO situation, $F(2, 83) = .44$, $p = .65$.

Direct delivery (RBRAT). Groups did differ significantly on the RBRAT, $F(2, 83) = 8.26$, $p = .008$. Using the Tukey HSD, all pairwise comparisons among the means on the RBRAT were made. Only the high- and low-assertive groups differed significantly, Tukey's HSD = 3.99, obtained difference = 5.38, $p < .01$.

Heart rate. Pulse was recorded first as a baseline and then before and during RBRAT Situations 1 and 6. No significant differences were obtained for base pulse, $F(2, 83) = 1.34$, $p = .27$, RBRAT 1 before pulse, $F(2, 83) = .28$, $p = .76$, RBRAT 1 during pulse, $F(2, 83) = .55$, $p = .58$, RBRAT 6 before pulse, $F(2, 83) = .42$, $p = .66$, or RBRAT 6 during pulse, $F(2, 83) = .65$, $p = .53$.

To investigate the trials effect, a one-way repeated measures analysis of variance was performed. All groups showed significant changes over trials—for low assertives, $F(4, 124) = 5.98$, $p < .001$; for moderate assertives, $F(4, 160) = 6.13$, $p < .001$; and for high assertives, $F(4, 108) = 5.18$, $p = .001$. For each group, pairwise comparisons among trial means were performed to determine which changes over trials contributed to the significance. No groups differed from CRI base heart rate to before RBRAT 1, indicating that the pulse reading was reliable. Even though all groups increased their heart rate from before RBRAT 1 to during RBRAT 1, only the low-assertive group demonstrated a significant increase, HSD = 4.31, obtained difference(60) = 4.88, $df = 60$, $p < .01$. By RBRAT situation 6, no group increased their heart rate significantly from before to during the situation. For low assertive, HSD = 4.31, obtained difference(60) = 3.38, $p > .05$; for moderate assertive, HSD = 3.87, obtained difference(60) = 2.37, $p > .05$; for high assertive, HSD = 4.97, obtained difference(60) = .71, $p > .05$. Therefore, whatever differences in heart rate increases may have existed between low-, moderate-, and high-assertive subjects on Situation 1, these differences no longer existed by Situation 6.

Self-perceived tension. Low-assertive subjects consistently reported themselves to be more nervous than high assertives, with moderate assertives falling midway between. This was true for base tension, $F(2, 83) = 6.57$, $p = .003$, post-RBRAT 1 tension, $F(2, 83) = 5.38$, $p = .007$, and for post-RBRAT 6 tension, $F(2, 83) = 5.51$, $p = .006$. Using a one-way analysis of variance of average tension on RBRAT Situations 1 and 6 combined, groups again differed significantly, $F(2, 98) = 6.05$, $p < .01$. Using the Tukey HSD test, it was found that low- and moderate-assertive subjects differed in self-perceived tension, HSD = .91, obtained difference(60) = 1.06, $p < .05$; low- and high-assertive subjects also differed, HSD = 1.15, obtained difference(60) = 1.28, $p < .01$. The moderate- and high-assertive subjects, however, did not differ significantly on self-perceived tensions, HSD = .91, obtained difference(60) = .22, $p > .05$. Three repeated measures analyses of variance were performed to assess the trials effect. All three groups of subjects reported less tension on RBRAT Situation 6 than on RBRAT Situation 1: For low assertives, $F(1, 31) = 6.00$, $p = .019$; for moderate assertives, $F(1, 40) = 4.42$, $p = .039$; and for high assertives, $F(1, 27) = 5.29$, $p = .028$.

Cognitive self-statements (ASST). Significant differences were found between low-,

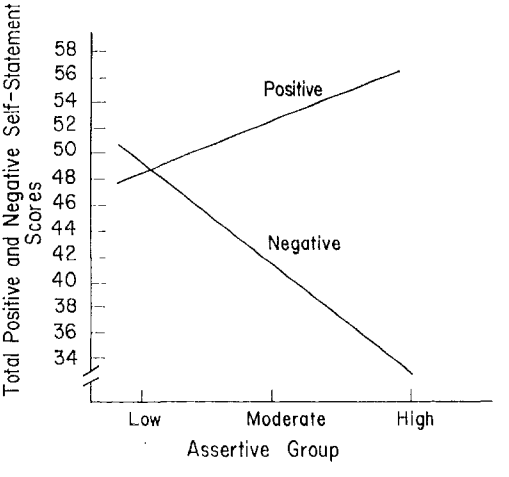

FIGURE 2. Positive and negative self-statement scores as measured by the ASST (85 = highest possible score).

moderate-, and high-assertive subjects on positive self-statements, $F(2, 83) = 6.53$, $p = .003$. Even stronger differences were found on negative self-statements, $F(2, 83) = 36.25$, $p = .00001$ (see Figure 2). High-assertive subjects had more positive and fewer negative self-statements than low-assertive subjects; moderate-assertive subjects fell midway between.[2] The Tukey HSD test indicated that only the low- and high-assertive groups differed significantly on positive self-statements, HSD = 6.41, obtained difference(60) = 7.99, $p < .01$. On negative self-statements, however, all groups differed significantly as shown by the following pairwise comparisons among the groups—for low- and moderate-assertive groups, HSD = 5.63, obtained difference(60) = 8.08, $p < .01$; for moderate- and high-assertive groups, HSD = 5.63, obtained difference(60) = 7.81, $p < .01$; for low- and high-assertive groups, HSD = 5.63, obtained difference(60) = 15.89, $p < .01$.

To test for an interaction between groups and self-statements, a repeated measures analysis of variance was performed with two levels of self-statements (positive and negative). A significant interaction was obtained, $F(2, 98) = 29.82$, $p < .0001$.

To investigate differences between positive and negative self-statements within groups, a t test for matched samples was performed. The low-assertive group had more negative than positive self-statements, but this difference was not significant, $F(1, 31) = 1.77$, $p = .190$. On the other hand, the moderate group had significantly more positive than negative self-statements, $F(1, 40) = 24.65$, $p = .001$. The high-assertive group also had significantly more positive than negative self-statements, $F(1, 27) = 66.51$, $p < .0001$.

To investigate whether the assertive groups differed in the way they sequenced positive and negative self-statements, a chi-square contingency table test was performed and found to be significant, $\chi^2(6) = 16.01$, $p = .025$. A greater percentage of the high-assertive subjects checked the item characterized by "unshaken confidence" (+ +) than the low-assertive subjects, with the moderate subjects falling midway in between (see Table 1). Within the low-assertive group, there were individual differences in the sequence of positive and negative self-statements, with no preference shown for any of the sequences (excluding unshaken confidence). In fact, the alternative sequences were chosen by equal (22%) percentages of low-assertive subjects. Those in the moderate group not characterized by "unshaken confidence" did show a preference for the coping sequence (− +), with 20% choosing this sequence.

In addition to the assertive and nonassertive scores on the CRI, McFall and Lillesand (1971) calculated the difference between the assertive and nonassertive scores. Difference scores in the present investigation ranged from a low of −24 to a high of 34. In an attempt to gain greater descriptive and predictive precision, a polynomial regression was performed for positive and negative self-statements on assertiveness. The relationship between assertiveness and both positive and negative self-statements was best described by a linear function; for positive self-statements, $F(1, 97) = 63.1$, $p < .01$. Neither the quadratic nor the cubic terms were significant (see Figures 3 and 4).

TABLE 1

CHI SQUARE CONTINGENCY TABLE SHOWING THE PERCENTAGES OF SUBJECTS CHOOSING EACH OF THE FOUR SELF-STATEMENT SEQUENCES

	Self-statement sequence			
Assertive group	Coping (−+)	Unshaken doubt (−−)	Unshaken confidence (++)	Giving up (+−)
Low	22	22	34	22
Moderate	20	7	61	12
High	7	4	82	7

DISCUSSION

Items selected from the CRI to form the AKI, HYPO, and RBRAT did not differ significantly on perceived discomfort. Discomfort

[2] The self-statements that distinguished low and high assertives the most tended to fall into the following categories: (a) concern about negative self-image and fear of being disliked and (b) other-directed versus self-directed—concern for the other person's position, feelings, and needs.

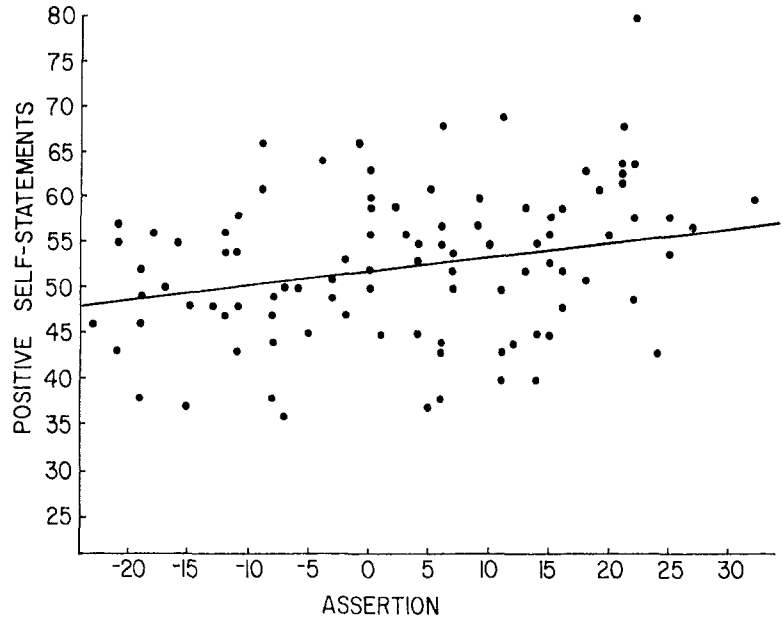

FIGURE 3. Polynomial regression of negative self-statements on CRI assertion difference score.

scores loaded highly on the CRI nonassertion factor. The three tests thus have similar psychometric properties, and the absence of between-group differences on the AKI and HYPO and their presence on the RBRAT have important implications in describing the nature of the response deficit in nonassertive subjects.

Nonassertive subjects did not differ from highly assertive subjects in their ability to

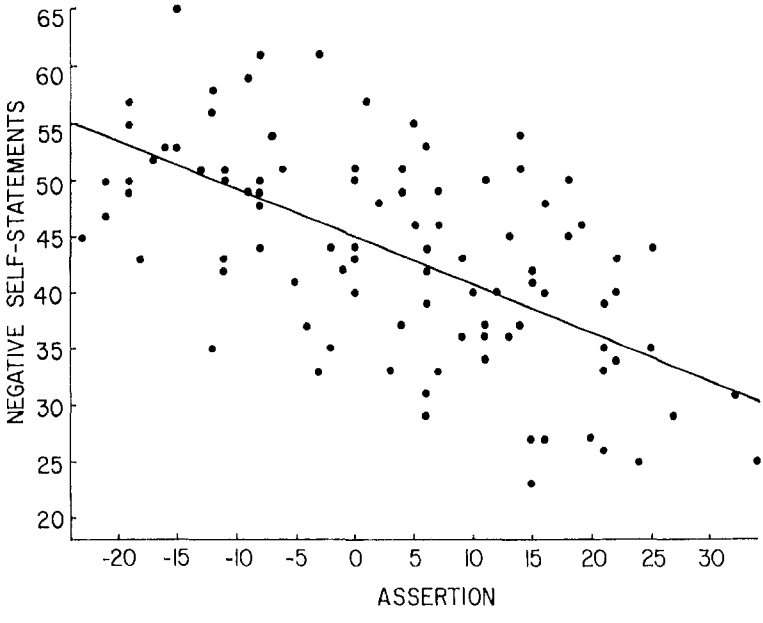

FIGURE 4. Polynomial regression of positive self-statements on CRI assertion difference score.

construct a written assertive response (AKI) or to verbally deliver the assertive response in hypothetical, and therefore safe, situations (HYPO). Although results on the HYPO must be interpreted with caution because of reduced interrater reliabilities, the finding of no group differences on both the HYPO and AKI indicates that perhaps low-assertive subjects do not suffer from a content knowledge deficiency or from an inability to deliver an assertive response, in the sense of merely knowing (formulating and articulating) the response. Nonassertive subjects do, however, lack the ability to perform these components of the task when confronted with a situation more similar to the real stimulus situation.

Since the population of the present investigation was similar to that of McFall and his associates, perhaps the effective components of coaching and rehearsal do not involve teaching the content of a good assertive response or the method of delivering it as narrowly defined above. Instead, the coaching and rehearsal component may focus on those dimensions of delivery skill that are involved in real-life situations. This raises the question of exactly which dimensions of delivery skill are necessary for competent assertive behavior in real life and what specifically was operating in the treatment program used by McFall and his colleagues. Order effects obtained on the RBRAT and AKI suggest that the assessment procedure was itself an intervention that enhanced the performance of all subjects on the RBRAT when the RBRAT followed the AKI and HYPO, and on the AKI when the AKI followed the RBRAT and HYPO. This suggests that mere practice in responding may be beneficial without coaching or rehearsal.

The present study suggests that physiological differences do not exist between low-, moderate-, and high-assertive groups. This may partially account for the results of an experiment comparing desensitization with assertion training. Bouffard (1973), in a 2 × 2 factorial design, studied the relative effectiveness of group desensitization, group response acquisition training, and the combined procedures compared to an attention placebo control group. Although Bouffard's range of assertiveness, as measured by McFall and Lillesand's (1971) CRI, was limited to moderate ranges, he found that desensitization did not improve performance on McFall's BRAT. Furthermore, a combined treatment package of desensitization and response acquisition, which would seem to be an ideal treatment package, failed to improve performance on the BRAT relative to the attention placebo control group. Differences in the present investigation were obtained in self-perceived tension on all situations despite the fact that all groups were reporting less tension over consecutive situations. These findings may suggest that differences in competent delivery may not be a function of physiology but what subjects are telling themselves about their physiology.

McFall and Marston (1970) did obtain heart rate changes as a result of their assertion training program. These differences were on the order of 5–7 beats per minute. The result of the present investigation that low-assertive subjects' change in heart rate from before to during was significant on RBRAT Situation 1 but not on RBRAT Situation 6 suggests that heart rate change could be a by-product of increased confidence produced by the graded escalation of situations over sessions. Session 2 in McFall and Marston's study escalated the situations over those in Session 1 so that refusal became more difficult. The placebo therapy control group was not exposed to additional problem situations or situations in escalating fashion. Pulse rate changes obtained from the treatment group after responding dropped an average of 6.47 beats/min. This change is similar to the 5 beats/min change obtained in the present investigation.

The size of the effects in the present task analysis suggests that the most likely source of nonassertiveness in low-assertive subjects could be related to the nature of their cognitive positive and negative self-statements. Low-assertive subjects had significantly fewer positive and more negative self-statements than high-assertive subjects. Even though both positive and negative self-statements showed highly significant differences, the effect was most dramatic for negative self-statements. This agrees with Meichenbaum and Camer-

on's (1973) findings that a variety of patients had thought patterns characterized by negative and maladaptive self-statements. It is worth noting that not one low-assertive subject in the present investigation had cognitive self-statement scores that were similar to those of the high-assertive group. This demonstrates an extremely strong and consistent group difference that was not spuriously produced by averaging the data.

Comparing positive and negative self-statements within the groups, the moderate- and high-assertive subjects had significantly more positive than negative self-statements; the low-assertive subjects did not differ in their positive and negative self-statements. This indicates that highly competent assertive people have a greater discrepancy between their positive and negative self-statements, in favor of the positive ones. There is little doubt in their minds about the appropriateness of their action. The low-assertive subjects, on the other hand, can be characterized by an "internal dialogue of conflict" in which positive and negative self-statements compete against one another. Such a state would hardly facilitate appropriate and effective assertive behavior. These findings suggest that some type of cognitive restructuring (Ellis & Harper, 1961) or manipulation of cognitive self-statements (Meichenbaum, 1972) may be an appropriate form of treatment for nonassertiveness.

Direct intervention using cognitive self-statement modification may enhance transfer of training effects. McFall and Marston (1970) found that transfer effects occurred on one of five measures in a telephone follow-up resistance to a magazine salesman. McFall and Lillesand (1971) failed to show a significant difference between treatment and assessment-placebo control groups in their telephone follow-up. McFall and Twentyman (1973) reported the results for four studies dismantling a standardized semiautomated assertion training program. In the first study no transfer of training was demonstrated in a telephone follow-up. In the second study experimental groups again did not show transfer of training in two in vivo resistance to pressure measures, although performance was improved on behavioral and self-report measures in untrained situations of the RBRAT. The third study again found no transfer effects for a pressuring telephone call. The fourth study, however, did result in transfer of training using a modification of the all-or-none procedure for measuring transfer of training used in their third study to a more continuous procedure. Although it may be that obtaining transfer effects is a function of the assessment procedure, taken together it is clear that transfer of training is an issue in response-acquisition methodology.

Meichenbaum and his associates have been successful in obtaining transfer effects using a coping self-statement intervention with hospitalized schizophrenics (Meichenbaum & Cameron, 1973), speech-anxious subjects (Meichenbaum, Gilmore, & Fedoravicius, 1971), and test anxiety (Meichenbaum, 1972). Glass, Gottman, and Shmurak (1976) collaborated in a study of the relative effectiveness of coaching and rehearsal versus cognitive self-statement modification in a dating skills program for girl-shy college males. They found that the greatest transfer effects to untrained laboratory role-playing situations, and ratings made by females the subjects called for a date, were obtained by the cognitive self-statement intervention. These findings are consistent with the current task analysis study and suggest that transfer of training effects may be enhanced with a cognitive self-statement assertion training intervention.

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