*SOCIAL-SKILLS TRAINING TO MODIFY
ABUSIVE VERBAL OUTBURSTS IN ADULTS*

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Social-skills training was used to modify abusive verbal outbursts displayed by two adult psychiatric patients. Five target behaviors—looking, irrelevant comments, hostile comments, inappropriate requests, and appropriate requests were monitored during role-played situations. Social-skills training, consisting of behavior rehearsal with modelling, focused instructions, and feedback, was introduced in a multiple-baseline design across individuals. Training improved all target behaviors. The improved behavior generalized to: (1) novel scenes role-played with the original respondent, (2) training and novel scenes role-played with a different respondent, and (3) interpersonal situations on the hospital ward.

DESCRIPTORS: aggressive behavior, assertive training, social skills training, generalization, modelling, role playing, multiple baseline, recording, measurement, psychiatric patients

Individuals who display abusive outbursts frequently attempt to resolve interpersonal disagreements through avoidance (withholding responses or emitting irrelevant comments), and by intimidation or personal attacks. These strategies ultimately fail because interpersonal problems cannot be resolved by avoiding important issues. Further, abusive outbursts frequently engender nonproductive counterattacks.

Because abusive verbal attacks do not occur at a high frequency, they are hard to predict and alter in the natural environment. These difficulties are somewhat circumvented if the individual displaying these behaviors is a child accessible to close supervision (Pinkston, Reese, LeBlanc, and Baer, 1973; Repp and Deitz, 1974) or an adult in a closed environment (Edwards, 1974). Individuals can be taught appropriate social skills to handle interpersonal situations that previously elicited abusive behavior, as shown in uncontrolled case studies with an adolescent (Kaufman and Wagner, 1972), and

an adult male (Wallace, Teigen, Liberman, and Baker, 1973).

Social-skills training conducted in a group setting has modified aggressive behavior of adult psychiatric patients (Rimm, Keyson, and Hunziker cited in Rimm and Masters, 1973) and nonhospitalized male volunteers (Rimm, Hill, Brown, and Stuart, 1974). Trained subjects in both studies improved on global ratings and self-report measures, although no measures of specific behavior change were included and no generalization data were reported.

Foy, Eisler, and Pinkston (1975) employed a single-case design to train a 56-yr-old male psychiatric patient with a history of abusive episodes to respond appropriately in role-playing situations. Specific behavioral deficits and excesses were modified using behavioral rehearsal, modelling, focused instructions, and feedback. The patient continued to exhibit his new repertoire of responses to role-played situations over a six-month period and reported using these skills in his natural environment.

In the present investigation, a multiple-baseline design across two subjects was used to determine whether social-skills training applied

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to patients receiving treatment on either a token economy unit, or a more traditional "therapeutic milieu", would increase appropriate social responses. Training consisted of modelling, focused instructions, behavior rehearsal in a role-playing situation, and feedback on specific target behaviors. Generalization of these responses was evaluated during novel role-played situations, situations role-played with a different respondent, and actual interpersonal situations unobtrusively reproduced on the hospital ward.

METHOD

Subjects

The two subjects were psychiatric inpatients at the Veterans Administration Hospital in Jackson, Mississippi. The first patient was a 48-yr-old single black male with a history of 10 previous psychiatric hospitalizations related to his antisocial behavior. Abusive episodes both reported by the patient and those observed on the ward indicated that they were preceded by two general classes of situations: failing to elicit the response he desired from another individual, *e.g.*, help on a task, or money; and when another individual had requested that the patient alter his behavior (*e.g.*, when asked to stop smoking or take a shower). No physical assault occurred during the study. This patient was involved in a "therapeutic milieu" program, including attendance at group and occupational therapy meetings where he was encouraged to express his feelings openly and make postdischarge plans.

The second subject was a 26-yr-old single black male who was hospitalized on a token economy ward. In this program, goods and special privileges were contingent on self-care, work, participation in activities, and maintenance of general ward rules. This patient's problem behavior were associated with his dismissal from six jobs during the eight months before admission. He described incidents where supervisors criticized his work. At first, he complied

with their requests but in subsequent situations became verbally abusive.

Facilities and Apparatus

Role-played social interactions were assessed in a comfortably furnished room equipped with videotape camera and microphone. An adjoining control room contained television monitors and a videotape recorder. Audio descriptions of the role-played scenes were presented from the control room through a two-way intercom (see Eisler, Hersen, and Agras, 1973).

Behavioral Assessment of Social Skills

Role-played scenes. Seven role-played scenes were developed for each patient. Three of these were specific to each individual, reconstructing interpersonal situations that had previously elicited problem behaviors. The four remaining scenes were general, in that they required assertive responses, but were not based on experiences described by either patient. These general scenes were used with both patients. An additional seven scenes (three specific and four general) were developed for each individual, to assess generalization to different scenes following training. The novel generalization scenes paralleled training scenes and involved the same basic interpersonal problems occurring under somewhat different conditions.² Patient responses to all role-played scenes were recorded on videotape.

On-Ward Situations

Before training, two episodes that occurred spontaneously on the ward were selected if the patient had displayed socially inappropriate abusive behavior, and if the situations could be unobtrusively reproduced. Staff members scored the patient's response on the five variables described below. Following training, each patient was presented with three situations. Situation (A) was one of the two pretraining episodes. Sit-

²Verbatim descriptions of all the situations and scenes used, including the prompts delivered by the respondent, are available on request.

uation (B) was similar to the second pretraining episode, but involved interactions with different individuals. Situation (C) was one that neither patient had encountered before or during training (see Footnote 2).

Dependent Measures

Behavioral deficits and excesses were identified for both patients, based on observation of their baseline role-played scenes and spontaneous ward behavior. The operational definitions of these measures are shown below. Measures 1 to 5 were scored by the research assistant from the videotape of the role-played scenes. Measures 2 through 6 were scored by the staff members following their unobtrusive observation of the on-ward situations. Measures 2, 3, 4, and 5 were scored on an occurrence-nonoccurrence basis for each scene.

(1) *Looking time.* The duration (in seconds) that the patient looked at his partner while talking and the total time the patient talked were timed separately. Looking percentage was computed by dividing the duration of looking while talking by the total duration of talking. This measure could not be obtained unobtrusively during the ward situations.

(2) *Irrelevant comments.* Any verbal statement unrelated to the theme of the situation (e.g., commenting about the weather when questioning repayment of an overdue debt).

(3) *Hostile comments.* A threat or comment likely to provoke a nonproductive counterattack (e.g., "Go to hell!").

(4) *Inappropriate requests.* A request for the respondent to change his behavior which directly or indirectly threatened that psychological or physical harm might follow the respondent's noncompliance (e.g., "Move, or I'll throw you off the bus!").

(5) *Appropriate requests.* A request for the respondent to change his behavior which did not imply harm (e.g., "Please move, I have to sit down.").

(6) *Social-skill rating.* A global rating of the social skill exhibited by the patient in response

to each ward situation was made on a five-point scale (5 = "very skillful", 1 = "very unskillful") by staff observers. The raters judged the social effectiveness of the response without an operational specification of cues by the experimenters.

Reliability of Observations

Role-played scenes. One assistant rated all of the videotaped role-played interactions. A second assistant independently rated one-third of the scenes selected randomly from each experimental phase.³ Percentage agreement for each behavior is shown in Table 1.

For the measure of "looking time", each assistant calculated the percentage of looking for each scene. Agreements were scored if the independently obtained percentages did not differ by more than $\pm 2\%$. Discrepancies of greater than 2% were scored as disagreements.

For irrelevant comments, hostile comments, inappropriate requests, and appropriate requests, agreement was calculated using two methods to ensure that reliability was acceptable for both high-frequency and low-frequency behaviors. In the first method, agreement was scored only if both judges agreed that the behavior had either occurred or had not occurred during a particular scene. Disagreement was scored if only one judge scored the occurrence of a behavior. Percent agreement was calculated by dividing the total number of agreements by the total number of agreements plus disagreements $\times 100$. Agreement was recalculated without counting the number of agreements on nonoccurrence. Thus, the second set of agreement percentages presented in Table 1 is based on the total number of agreements *on occurrence* over the total number of agreements plus disagreements.

On-ward situations. A composite score of the appropriateness of the patient's behavior in the ward situations was obtained by assigning 25 percentage points to each of the following com-

³The authors express their appreciation to Susan Pinkston and Harriet Alford for their assistance in rating the videotapes.

Table 1

Percentage agreement calculated by two methods for all dependent measures. The frequencies used in calculating the percentages are shown in parenthesis.

<i>Dependent Measure</i>	<i>Method</i>	
	<i>Including Agreement on Nonoccurrence</i>	<i>Excluding Agreement on Nonoccurrence</i>
<i>Role-Played Scenes</i>		
Looking	99.7% (160/161)	98.4% (124/126)
Irrelevant comments	95.0% (153/161)	67.7% (21/31)
Hostile comments	92.8% (149/161)	74.0% (27/36)
Inappropriate requests	97.5% (157/161)	77.8% (16/21)
Appropriate requests	99.0% (159/161)	97.0% (65/67)
<i>On-Ward Situations</i>		
Irrelevant comments	100% (10/10)	100% (4/4)
Hostile comments	90% (9/10)	75% (3/4)
Inappropriate requests	100% (10/10)	100% (4/4)
Appropriate requests	90% (9/10)	80% (4/5)
Appropriateness rating	80% (8/10)	

ponents of his response: the presence of (1) an appropriate request for the respondent to change his behavior, and the absence of (2) irrelevant comments, (3) hostile comments, and (4) inappropriate requests. Thus, depending on specific aspects of the patient's response, the appropriateness score could range from 0% to 100%. Reliabilities were obtained by comparing independent ratings of the patient's behavior made by two staff members (nurses, psychiatric aides, or medical students). Nine different ward staff members observed the situations, with no individual scoring more than four of the 10 situations. For ratings of social skillfulness, agreement was scored if observers assigned the same numerical rating (1 to 5) to each situation. All discrepancies counted as disagreements.

Procedure

A multiple-baseline design across subjects (Baer, Wolf, and Risley, 1968) was used. A black male therapist (JJ) administered social-skills training (training respondent) to both patients. Transfer of response was evaluated by a white male therapist (DF) who role-played all scenes with both patients during baseline, probe sessions, and posttraining.

Baseline. Training scenes were role-played with instructions to patients to respond as if

they were actually faced with the situation described. Following each scene description, the respondent delivered an appropriate one-sentence prompt. Scenes were administered sequentially without experimenter comment. Patient 1 received three baseline sessions, and Patient 2 received six baseline sessions with each respondent.

Training. During each half-hour session, the patient received training on each of the seven training scenes. The training procedure used consisted of four components: (1) *Instructions*—the trainer (JJ) first described the specific target behavior to be taught (*e.g.*, "Look directly at the other person when you talk to him."), and offered a rationale for its use (*e.g.*, "Looking makes you appear more confident."); (2) *Modelling*—the patient was instructed to attend to specific target behaviors as a videotape of the model's performance was played on the television monitor. The tape showed the trainer making appropriate responses (*i.e.*, emitting all of the target behaviors) to each scene. The patient then rehearsed the modelled scene; (3) *Behavior rehearsal*—the trainer delivered his one-sentence prompt (*e.g.*, in a scene where the patient was to collect an overdue debt the trainer would say, "What money? I don't owe you any money."). The patient's response to the

prompt was then videotaped; (4) *Feedback*—the trainer then gave the patient immediate verbal feedback on his performance. Positive aspects of his performance were emphasized while still pointing out deficiencies.

Training then progressed to the next scene, where the same procedures were followed until all seven scenes had been completed. Training of the target behaviors was introduced in a cumulative fashion across sessions, beginning with looking and followed by irrelevant comments, hostile comments, inappropriate requests, and appropriate requests. Nine training sessions were employed for Patient 1, and six training sessions for Patient 2.

Probe. Following two training sessions, a single probe session was conducted with (DF) to assess response generalization to a different respondent before training was completed for both subjects.

Posttraining. After training, each patient role-played the seven training scenes and seven novel (Generalization) scenes. Four sessions were conducted with the training respondent and four with the generalization respondent. The patient was informed that he would receive no further instructions, nor view the modelling tape or receive feedback.

On-ward situations. During the first week following training, the three posttraining situations, A, B, and C (described above), were arranged to occur on the ward in an unobtrusive fashion. The observers (medical students, nurses, and aides who would normally have been present during such interactions) rated the patient's performance immediately after it occurred. The training and generalization respondents were not present during these situations. After the third ward situation, each patient was asked to identify the contrived situations.

RESULTS

Figure 1 shows the rates of the five target behaviors during sessions with the training respondent in baseline, training, and posttraining.

During baseline, all target behaviors remained stable or changed in a clinically undesirable direction, except for hostile comments, which decreased for Patient 2. Initially, both patients showed absences of looking, low frequencies of appropriate requests, and increasing frequencies of irrelevant remarks and inappropriate requests. With the introduction of training, all target behaviors changed in the desired direction within the first two sessions. By the end of training, all target behaviors were at or close to maximal levels.

The levels of appropriate performance observed at the end of training were maintained during the posttraining condition for both training and generalization scenes. Looking decreased temporarily during the initial posttraining session for Patient 1. However, this behavior recovered to the level observed during training without further treatment.

Generalization to Other People

Figure 2 shows the rates of target behaviors emitted during sessions with the *generalization respondent* in baseline, probe, and posttraining sessions. A comparison between Figures 1 and 2 shows close correspondence in patients' responses to the training and generalization respondents.

Generalization to Other Role-Played Situations

Responses to the posttreatment generalization scenes, role-played with the training respondent, closely paralleled responses to the training scenes (Figure 1). However, both patients emitted about half as many appropriate requests to the novel generalization scenes as to scenes used during training. Similar results were obtained during interactions with the generalization respondent (Figure 2).

Generalization to Extra-Training Situations

The patients' responses were given global social-skill ratings. Both patients showed very low rates of appropriate behavior and received low ratings of social skill on ward situations before training (see Figure 3).

Fig. 1. Frequency of the five target behaviors emitted by each patient during role-played interactions with the Training respondent. Behavior in Training scenes is represented with a solid line. Behavior in Generalization scenes is represented by a broken line (Post only).

Following training, Patient 1 emitted all of the appropriate behavior in Situation A. In Situations B and C, he did not exhibit inappropriate behavior but failed to emit an appropriate request. In Situations A and C, his behavior was given a subjective rating of 5 (very skillful) while his behavior in Situation B was given a rating of 4. For Patient 2, all of the appropriate

behaviors were observed in both the previously encountered and novel situations presented following training. He was also rated as exhibiting very skillful responses in all three situations.

DISCUSSION

The training procedure changed the targeted behaviors in the desired directions during role-

Fig. 2. Frequency of the five target behaviors emitted by each patient in role-played interactions with the Generalization respondent. Solid lines indicate behavior during Training scenes. Broken lines represent behavior in Generalization scenes (Post only).

played interactions. The effects generalized to another interpersonal partner of the same sex but a different race, and to similar role-played scenes not previously encountered. However, both patients made only about half as many appropriate requests during generalization scenes as during training scenes.

While the problem behaviors were modified in the role-played situations, the lack of follow-up in the patients' natural environment does not permit firm conclusions about the maintenance of these learned behaviors during the stress of actual encounters. Data from the on-ward situations do, however, suggest that there

Fig. 3. Per cent of appropriate behavior emitted by patients during each on-ward situation before and after training (solid bars). Ratings of social skill exhibited by patients during each situation pre- and posttraining.

was a concomitant change in extra-training behavior. Indeed, on-ward changes were reliably reported by several different staff members, most of whom were unaware that the patients had received treatment. Further, both the patients and ward staff reported improved functioning in a number of situations unrelated to the study. Finally, the on-ward situations used in assessment were apparently unobtrusive because neither patient identified them. Nevertheless, documenting wider change will require further experimental evidence obtained in the natural environment over a more extended period of time.

One final point relates to the "social validity" of the treatment. The global ratings of the patients' social skill in the ward situations following training suggests that the changes were important. For both patients, these ratings, made independently by different pairs of staff observers, changed from "very unskillful" to "very skillful".

In summary, socially appropriate responses in role-playing situations may be rapidly acquired using behavior rehearsal with instructions, modelling, and performance feedback. Preliminary evidence (Foy *et al.*, 1975) indicates that these learned responses may persist

for six months without additional training. However, other investigators (Hersen, Eisler, and Miller, 1974; Kazdin, 1974) have found weak generalization effects in role-played situations dissimilar from those used during training. This may have been due to the fact that insufficient training may have occurred in some clinical analogue studies. Additionally, many investigators have not determined whether the learned socially appropriate responses are reinforced by individuals in the natural environment. It may be necessary to use additional treatment strategies following the response-acquisition phase to ensure maintenance of the behavior in different situations over time. One possible strategy would be to provide an adequate sample of relevant social situations specific to each individual during the training phase. Additionally, it may be necessary to teach individuals who interact frequently with the patient how to respond to his new social behavior.

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