This paper presents a research method derived from the functional analysis of behavior currently common among operant behavior therapists. Naturalistic observation, the method used, encompasses behavioral-level description of events, systematic observation and recording by means of codes, assessment of inter-judge reliability, as well as targeting both verbal and nonverbal behaviors. This method is applied to therapist behavior in group psychotherapy as a first step in its verification and application to more complex interactions. The results of this investigation support the idea that many therapist behaviors can be readily classified by use of naturalistic observation procedures. These procedures, specifically designed for gathering data with a minimum of interference yet without sacrificing either precision or reliability, retain the spontaneity which systematic laboratory efforts have often lost. References are included. (Author/SES)
Methodology for Naturalistic Observation of Therapist Behavior in Group Psychotherapy

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This paper presents a research method derived from the functional analysis of behavior currently used among operant behavior therapists. This method is applied to therapist behavior in group psychotherapy as a first step in its verification and application to more complex interactions.

Naturalistic observation procedures have proved applicable to a number of clinical problems (Barton, et al., 1970; Craig & Holland, 1970; O'Leary et al., 1969; Wahlster, 1969). These techniques, elaborated by Bijou and his associates (1969), are a conceptual extension of the functional analysis of behavior and single-subject design to free-field settings. Naturalistic observation as an analytic method encompasses behavioral-level description of events, systematic observation and recording by means of codes, assessment of inter-judge reliability, as well as targeting both verbal and nonverbal behaviors.

Logically it would seem that this method could be employed beyond developing programs for children who are

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disruptive in class (Kubany, et. al., 1971). It is ideally suited, for instance, to analyzing a complex social situation with consistent, repeating elements, and also for examining the action patterns of these elements; that is, how often and under what social circumstances people engage in a behavior.

Group psychotherapy is one complex social situation which invites investigation. Several issues present themselves: Can naturalistic observation procedures be effectively applied in a study of groups, and to which aspects? More specifically, can therapeutic maneuvers be broken down into observable units? Can a therapist label his own behavioral units and can he expect others to grasp his concepts?

Phase I: Sampling the Therapist's Behavior

A clinical psychologist with six years of experience volunteered to serve as a model of therapist behavior during group therapy. His conceptual and methodological orientations may be described as Gestalt-Humanistic (Fagen & Shepherd, 1970; Perls, 1969; Schutz, 1967). The "model therapist" conducted two different therapy groups. Members of both groups were carefully screened. They all reported difficulties in interpersonal relations and complained largely of anxiety, depression, and/or
loneliness. Videotape recordings of the clinician's behavior during each group provided a permanent record.

The first group was conducted in the mental health clinic of a local hospital. This group consisted of seven women and three men, plus the model therapist and his co-therapist. Group sessions lasted from two to six hours with weekly meetings over a four month period. This group was routinely observed through a one-way mirror by trainees. The recording equipment was stationed with them in the same room. Portions of the fourth, fifth, seventeenth, and eighteenth meetings were taped yielding four hours of film.

The second group, a marathon, lasted forty-eight hours. Eight women and five men participated. The videotape equipment was set up in a large doorway and a microphone was placed on a wall where it went unnoticed. Three hours of film were made.

In both groups the camera crew was instructed to focus on the therapist, including only enough patient activity to provide a context for his actions.

**Phase II: Development of the Behavior Code**

When the films were completed, the model therapist viewed them with the investigator and commented on his actions. In addition to describing himself the model therapist provided specific labels for what he saw,
commonly adding the defining features. For example, he looked at his nonverbal behavior, a particular posture, and called it his "detached, attentive posture; intermediate level involvement." When he heard himself say on the tape, "If you trust your organism, you'll do what you want," he labeled this a "didactic intervention--teaching my theory." When it was not clear how the model therapist organized his observations, he was asked to be more specific. Every attempt was made to avoid telling him how he appeared. The object of this inquiry was to elicit the model therapist's own organization of his behavior, prompting only a concrete descriptive level following an ethnoscientific approach (Weiss & Callimore, 1970).

The result of this discussion was a list of some discrete therapist behaviors. These were spontaneously placed on two dimensions by the model therapist -- involvement and verbal intervention. Examples of each category were chosen from the videotapes and the definitions were organized into a manual, or code book, for easy reference.

Phase III: The Code Book

The code reflected the two dimensions of therapist behavior. Involvement was defined posturally; that is, the
model therapist believed his posture reflected the intensity of his interaction with the patient. Five distinct body positions were identified.

In the verbal intervention dimension the therapist talks to the patient. Seventeen different verbal interventions were labelled by the clinician; eight were selected for investigation. The criterion for inclusion in the code book was at least five occurrences during the seven hours of taped behavior. Nine verbal categories did not occur often enough to permit inclusion.

One nonverbal behavior, monitoring, was included as an alternative to the verbal intervention.

**Phase IV: Inter-Observer Reliability**

Examples of each behavior category were selected from the filmed material and edited into a forty-minute videotape. The tape was in two parts. The first section consisted of those items contained in the code book and served as illustrations. This training section was followed by forty-three test items randomly arranged which the judges were to observe and rate using the therapist behavior code.

To determine if the model therapist's categories were communicable, five judges and the model therapist were asked to categorize the videotaped samples of therapist behavior. These observers ranged widely in theoretical
orientation and clinical experience. Among them were three Ph.D psychologists, two graduate students, and an undergraduate. Clinical practice ranged from eight years to none at all. Four of these observers had used similar coding procedures in other contexts. Two of the judges, including the model therapist, were unfamiliar with this technique.

The training section of the tape was shown first. Discussion of the categories and the examples clarified questions about both the definitions and the rating procedure. For each subsequent test item raters then recorded which of the eight verbal interventions occurred and which of the five postures the therapist assumed.

Results

The model therapist's observations were considered the criterion. Item agreement was calculated between the model therapist's judgment of each item and those of each other observer. The reliability coefficient, R, was determined by dividing the number of agreements by number of agreements plus disagreements (after Bijou, et al., 1969). R was obtained for each pair of raters for each dimension of therapist behavior. That is, inter-judge agreement about verbal intervention was calculated separately from inter-judge agreement about posture.
Reliability coefficients were then determined with the two dimensions combined into a unit. Both judgments—type of verbal intervention and posture—had to match for the ratings to be considered in agreement.

The mean inter-judge agreement for type of verbal intervention was 85.6%, for posture, 90.6%, and for the whole behavioral unit, 79.0%.

Discussion

Does the model therapist behave systematically enough in a group situation that his actions can be categorized? Can he identify his own behaviors and communicate his labels to others? Can a descriptive method identify behavioral variables in such a complex interaction situation as group therapy?

The results of this investigation support the idea that many therapist behaviors can be readily classified. The two interacting dimensions of behavior in this study produced a possible forty-five distinct units of behavior which were discriminated with a mean reliability of 79.0% for five naive observers.

The communication value of the model therapist's labels is reflected in the reliability coefficient of each category. With only two exceptions, agreement among the observers ranged between 75% and 100% with a mean of
89.54%. This suggests that this model therapist can communicate accurately about his own clinical behavior. Since the defining features for each category were provided by the clinician with minimal prompting by the investigator, these labels reflect largely his own ideas. In short, an idiosyncratic behavior rating scale was developed for the model therapist.

The larger issue, however, is the applicability of this naturalistic approach to more complex clinical investigations. It was not intended in this study to detail the whole clinical repertoire of the model therapist. The behaviors selected depended partly on their frequency and partly on how easy they were to identify. The fourteen high-frequency behaviors were sufficient to demonstrate the reliability of the method.

Before research into the complex interactions in group therapy can proceed along these lines it is necessary to validate the application of the method to patient behavior. A preliminary investigation has produced encouraging results (Duhig, 1970; Weiss, 1970). For one dimension of patient verbal behavior, congruent expression of feelings, inter-rater reliability of 97% was achieved. This indicates that aspects of patient behavior in groups may be amenable to naturalistic investigation.

The naturalistic observation procedure has several
advantages and potential applications. First, it can produce idiosyncratic behavior rating scales in contrast to the standardized ones widely used to rate both patients and therapists. Such scales can be organized to reflect either the special constructs of the target therapist or those of the experimenter, as desired.

Secondly, a descriptive behavioral code could provide information about generalization and persistence of treatment effects. For instance, changes in patient behavior repertoires could be marked in the group as well as concurrently outside the group and after the group terminates.

Thirdly, coding has potential as a training device. The emphasis upon defining and recording behavioral variables focuses attention on observable interpersonal events. Observation is an important clinical skill and it improves with practice. Training in observation can sensitize clinicians to their own behavior as well as the patients' thus increasing their self-awareness.

Fourthly, videotape sampling of therapist behavior might become a useful adjunct to clinical training. It is well established that symbolic modeling is an effective way to produce new patterns of behavior (Bandura, 1969), but in addition to passive observational learning, trainees could be actively coding, thus focusing their attention on specific, subtle cues emitted by both patient and
clinician. This might speed both the learning of a distinct repertoire of clinical techniques by modelling and accelerate the acquisition of observation skills.

The interactions of psychotherapy are natural events although they are often studied by experimental procedures. While systematic laboratory efforts may give us a good deal of information about relevant variables, it is often at the expense of the spontaneous process. Naturalistic observation procedures are specifically designed for gathering data with a minimum of interference and thus seem an ideal tool for "free-field" studies of the therapeutic process without sacrificing either precision or reliability.
References


