

Training Issues in Behavior Therapy

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This article addresses training issues in behavior therapy. Methods and skills that are most important for affecting changes in client behavior are identified, and the progress that has been made in demonstrating that these skills can be taught effectively are reviewed. Among the skills discussed are the decision-making skills used to identify problems, to select appropriate interventions, and to evaluate client progress as well as the relationship and technical skills used to implement interventions effectively. A critical goal of professional training is to prepare students to be active learners over the course of their careers. Within this context, issues of quality assurance, the role of broad-based scientific training, and the importance of research on training are examined.

The purpose of this article is to address training issues in behavior therapy. We will identify the methods and skills that are most important for affecting changes in client behavior, discuss the progress that has been made in demonstrating that these skills can be taught effectively, and address issues related to training and its evaluation. Because behavior therapy is applied to diverse problems, populations, and settings, it is difficult to specify a set of methods and skills that have general utility. Nevertheless, the general tasks confronting the behavioral clinician include identification of the problem, assessment of its maintaining and contributing factors, selection and implementation of appropriate interventions, and evaluation of client progress. The methods and skills of these elements affect therapy outcome.

Behavior Therapy Skills

The behavioral clinician is confronted by both assessment and intervention tasks. Most of the evaluation and training literature has focused on intervention. Critical assessment issues such as problem identification, the selection of interventions, and the evaluation of progress have been relatively ignored. Assessment is highly dependent on the theoretical conceptualizations of the assessor. In this regard, behavior therapy is not merely a set of treatment interventions. It is also a collection of "small theories" (Lipsey, 1987) about how problem behavior occurs and how treatments affect behavior. The theories can be simple and unidirectional, as in operant models that posit that problem behaviors are established as a result of reinforcing consequences in particular situations. Likewise, the theories can be complex, as in systems theory that views problem behavior as imbedded within an interconnected network of environmental, psychological, and biological events (Kanfer, 1985). It is theories such as these that guide the selection of assessment instru-

ments, the specification of treatment priorities, and the hierarchy of treatment interventions.

In recent years, behavioral clinicians have utilized complex theories that consider the role of cognitions as well as the environment (Mahoney, 1974; Meichenbaum, 1977), the importance of covarying clusters of behavior (Kazdin, 1985), and the broader system in which the problem behavior is imbedded (I. M. Evans, 1985; Kanfer, 1985). The behavioral clinician thus engages in a complex problem-solving and decision-making process in which there is a continuous interplay between information gathering, formulation of treatment objectives, and feedback from the implementation of interventions.

The complexity of the task raises difficult questions regarding the assessment and training of clinical competence. One can, in a rather straightforward manner, teach and assess the competence with which particular assessment methods, such as observation, self-monitoring, and standardized tests, are used. It is considerably more difficult to teach or evaluate the clinical decision-making skills with which the therapist identifies the problem and formulates a treatment plan.

The little research that exists indicates that there is a lack of consensus about the formulation of individual cases (Hay, Hay, Angle, & Nelson, 1979). For example, in a simulation study in which behavior therapists were sent three case study descriptions of child disorders, there was an average of only 38.6% agreement on the priority target behavior (Wilson & Evans, 1983).

It has been argued that, because the clinical decision-making process involves a continuous interplay between theory and information, high levels of agreement between clinicians should not be expected. Skilled clinicians may follow different paths toward the same end (Kanfer, 1985). However, if we do not evaluate the appropriateness and effectiveness of the conceptualization, how can competence be assured? An additional difficulty is that human judgment research has indicated that the decision-making process is itself vulnerable to numerous biases (e.g., Alloy & Tabachnik, 1984; Kahneman & Tversky, 1979). Therapists' case conceptualizations may be affected more strongly by prior expectations and heuristics than by the information provided by the client (Mash, 1985).

A number of methods to limit decision-making biases and to

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strengthen the problem identification skills of behavior therapists have been suggested. First, because the decision-making process involves the repeated formulation and modification of hypotheses through the evaluation of feedback, the clinician should be well-trained in theory evaluation and scientific method. The skills of keen observation, critical thinking, and methodological rigor combined with inventiveness when putting conceptualization to the empirical test and following the lead of empirical evidence (McFall, 1985) may be the best assurance that the effects of expectations, biases, and heuristics are minimized.

Second, the use of standardized training in problem identification (Kratowchwill, 1985) has been suggested. Problem identification is a key element in the successful resolution of clients' problems. In a study of school psychologists, those who lacked the skills to identify client problems failed to develop or implement treatment. On the other hand, those psychologists who successfully identified clients' problems generally solved them (Bergan & Tombari, 1976). In subsequent research, the authors found that structured training in problem identification was feasible and effective (Bergan, Kratochwill, & Luiten, 1980).

Third, the use of actuarial decision algorithms using microcomputers (Mash, 1985) may also serve to limit decision-process biases. With precise and reliable input, the examination of issues such as system interrelationships may be achievable. However, an actuarial solution, used even as a supplement, requires reliable information. Thus, behavioral clinicians must learn to use methods that are well-standardized and psychometrically sound.

Once a treatment plan has been formulated, which skills are used to implement which interventions? There is a vast literature on the effectiveness of particular techniques for specific problems, populations, and settings (see, for example, O'Leary & Wilson, 1987). In addition, there are many detailed texts and manuals for the novice therapist. Thus, training programs usually focus on teaching students how to use specific behavioral interventions such as contingency management, relaxation training, systematic desensitization, participant modeling, stress inoculation training, and cognitive restructuring.

Although there is a strong empirical foundation for these interventions, there is little evidence that the techniques are being used in clinical practice as they were evaluated in research studies. Behavior therapy outcome studies typically use checks to ensure that therapists implement the techniques appropriately, but we lack information about the clinical expertise of the typical practitioner. Thus, although the current research literature provides an ideal standard for training, we need considerably better data on the effectiveness of such procedures as they are routinely administered.

In recent years, there has been an increased interest in the commonalities of therapy (e.g., Garfield, 1980). Recent reviews of therapist characteristics and of the relationship between process and outcome in psychotherapy research have concluded that most of the variance in patient outcome is due to aspects of the therapeutic relationship rather than to specific treatment interventions (Beutler, Crago, & Arizmendi, 1986; Orlinsky & Howard, 1986).

Although the evidence is sparse, aspects of the therapeutic relationship are also important in behavior therapy (Sweet,

1984). Skills for developing a working alliance between client and therapist may be particularly important for behavior therapists because many treatment plans rely heavily on between-session assignments. If clients do not perceive that a working alliance exists with the therapist, they may be less likely to follow through on self-management procedures.

Supporting evidence for this hypothesis has been reported by Alexander, Barton, Schiavo, and Parsons (1976), who, in a study of the behavioral treatment of delinquents and their families, found that therapist relationship skills (affect-behavior integration, warmth and humor, directiveness, and self-confidence) accounted for 60% of the variance of outcome. However, in an earlier study of a Rogerian approach, relationship skills alone were not effective in modifying the behavior of delinquent families (Parsons & Alexander, 1973). Relationship skills appear to enhance the effectiveness of interventions rather than to substitute for them.

The challenge facing those who design behavioral clinical training is multidimensional. Behavior therapists must learn both the process and the methods of assessment. They must learn how to formulate a case conceptualization using multiple sources of information and feedback and must master how to obtain precise, reliable, and valid information. They must also learn specific intervention procedures and relationship skills that help build a working alliance.

Training of Behavior Therapists

There is ample evidence that specific, discrete skills (e.g., facilitative communication, attending behaviors, basic assessment) useful to the behavior therapist are amenable to training (for reviews, see Alberts, 1987; Bernstein, 1982; Ford, 1979; Matarazzo, 1978). An impressive array of training procedures has been proposed for their acquisition. These include didactic teaching of the theories of experimental psychology and learning theory; live, written, or videotaped modeling; reinforcement; role playing and rehearsal (Bailey, Deardorff, & Nay, 1977; Koegel, Glahn, & Nieminen, 1978; Levine & Tilker, 1974); performance feedback (Bouchard et al., 1980; Carlson, 1974; Payne, Winter, & Ball, 1972; Thomson, Holmberg, & Baer, 1978); cueing (Bates, 1977); and self-monitoring (Bornstein & Hamilton, 1978). Not surprisingly, the same procedures that have proven effective in helping clients acquire new coping skills have been used to help trainees acquire new therapeutic skills. What is surprising, given the empirical emphasis of behavior therapy, is the paucity of research evaluating the effectiveness of this training.

In general, studies have suggested that instruction alone may contribute to a trainee's knowledge of behavioral principles but does not produce reliable changes in trainee skills (Bernstein, 1982; Kazdin & Moyer, 1976; Sepler & Myers, 1978). Multi-component training packages, which combine instruction, modeling, rehearsal, and feedback, have been shown to aid trainees in the reliable acquisition of more complex verbal and skill repertoires (Alberts, 1987; Bailey et al., 1977; Bouchard et al., 1980; Dancer et al., 1978; Eisenberg & Delaney, 1970; D. R. Evans, 1976; Fabry & Reid, 1978; Ford, 1979; Isaacs, Embry, & Baer, 1982; Iwata, Wong, Riordan, Dorsey, & Lau, 1982; Milne, 1982, 1983, 1984a, 1984b; Milne, Burdett, & Conway, 1985;

Miltenberger & Fuqua, 1985). The opportunity to practice written or actively modeled responses (Froehle, Robinson, & Kurpius, 1983; Hazler & Hipple, 1981; O'Toole, 1979) and to receive feedback, regardless of the source (Hosford & Johnson, 1983; Robinson, Froehle, & Kurpius, 1979), appears to facilitate trainee acquisition of basic communication responses. In addition, there is evidence to suggest that modeling, regardless of its mode of presentation or of the number and sex of actors, augments trainee's performance of these same skills (Alberts, 1987; Kurpius, Froehle, & Robinson, 1980; Robinson, Froehle, & Kurpius, 1979; Robinson, Kurpius, & Froehle, 1981).

Iwata et al. (1982) conducted analogue and field replication studies to assess and teach behavioral clinical interviewing skills to university practicum students. Following the collection of baseline data on both therapist and client responses, training was provided by written materials, classroom instruction, practice, and quizzes. Results of a multiple baseline design across subjects showed improvements in therapists' interviewing skills and subsequent increases in client responding. Similar findings were documented in the field replication study. Results from the analogue study suggested that training may not require extensive modeling or in vivo practice because written instructions, role playing, and feedback were sufficient for the development of a basic interviewing repertoire. Additional training, however, was necessary to produce consistently high levels of performance.

A number of features of this effort were particularly noteworthy. A task analysis of interviewing was provided in which interviewing was defined as a series of therapist statements and questions designed to prompt both general and specific client responses. The authors described procedures for assessing both interviewer and client conversational behavior and provided a means for teaching interviewers how to obtain more useful information from their clients by modifying the questions they asked. A clearly delineated instructional program, which used procedures resembling Ivey's (1971) "microcounseling" approach, was used to teach interviewing skills. Interviewer effectiveness was assessed by measuring the extent to which questions elicited the desired client responses.

In a partial replication of the Iwata et al. (1982) study, Miltenberger and Fuqua (1985) compared the use of a conventional training package (i.e., instructions, modeling, rehearsal, feedback) to an instructional manual that required no trainer time in teaching behavioral assessment interviewing skills to eight psychology trainees. The results, based on a multiple baseline across subjects design, indicated that trainees in both groups attained a performance criterion of 90–100% correct responding in 4–6 hr of training, regardless of condition. The results replicated the effectiveness of the one-to-one training method for teaching a set of behavioral assessment questions (Iwata et al., 1982) and documented the effectiveness of a training manual for teaching these skills. However, because of the extremely small sample, the use of a specific training manual, and the individualized training format, additional research is necessary to establish the generalizability of the reported results.

One area of behavioral clinical skills in which there has been considerable evaluation has been the teaching of therapists to provide social skills training. For example, Wright, Horlick, Bouchard, Mathieu, and Zeichner (1977) found that eight expe-

rienced therapists were superior to eight inexperienced therapists in a simulated therapy session in shaping patients' use of terminology, designing a charting system for self-monitoring, commencing role playing on a target behavior, and modeling behaviors.

Subsequently, Wright, Mathieu, and McDonough (1981) evaluated the relative efficiency of three approaches (conference workshop, seminar format, and structured learning format) for teaching social skills training to mental health professionals. Trainees in all three conditions received a common reading package and videotaped modeling of competent social skills training. In addition to this package, trainees in the structured learning format received instructions, rehearsal, and feedback for a total of 20 hr; trainees in the seminar format discussed topics associated with social skills training raised by the readings and films for 20 hr; and trainees in the conference workshop format received concise instructions on how to carry out social skills training during 6 hr of training.

Trainees in all three conditions showed equivalent and significant pre- to posttraining improvement on a questionnaire of familiarity with social skills training and on a measure of therapist behaviors during a social skills training session with a simulated patient. However, only trainees in the structured learning and workshop conditions improved significantly in assessment skills, possibly because they had more exposure than workshop trainees to examples of precise social deficits.

It was on the measure of therapist behavior during a simulated social skills training interaction that the strongest predictions for the superiority of the structured learning format were advanced but not confirmed (Wright et al., 1981). The equivalence of the three training packages on therapist competence may have been due to the presence of modeling in all formats because modeling has previously been found to account for much of the change in social skills training (Heimberg, Montgomery, Madsen, & Heimberg, 1977) or interviewer skills (Matarazzo, 1978).

In one of the few studies in which combinations or repertoires of skills were the focus of training, Isaacs et al. (1982) evaluated a multicomponent training program (written manual, videotaped models, rehearsal, role playing, performance feedback) to train five family therapists in teaching child management skills to parents. Therapists were trained to provide parents with relevant instructions, to deliver contingent praise, and to impart information about child management issues. Improvements in parents' behavioral parenting skills and child compliance during in-session parent-child interactions corresponded to increases in therapists' target skills.

In a program to teach behavior therapy skills to psychiatric nurses, Milne (1982, 1983, 1984a, 1984b; Milne et al., 1985) followed a structured learning format (Bouchard et al., 1980; Wright et al., 1981) consisting of a definition and description of each skill to be learned, modeling, instructions, role playing, rehearsal, and feedback. The course involved a systematic progression of skills from classroom to ward through the use of single-case studies. Ten outcome measures, including those to assess knowledge; attitude; skill in selecting, defining, and recording behaviors occurring in a videotaped simulation; skill in formulating a treatment plan; and implementation of a behavior therapy plan with a patient, were used. The multicomponent

method was effective in promoting knowledge and skills in behavioral techniques in the experimental group; no improvement in outcome measures were obtained by the no-treatment control group that had been matched on baseline and demographic measures.

Several of these studies are notable because of the specific attention directed to remediating major methodological shortcomings evident in previous research on training (Alberts, 1987). For example, instead of training single, discrete verbal behaviors, sets of responses or skill repertoires were trained. These were defined and operationalized in objective, measurable behavioral terminology. The description of training and assessment methods was explicit. Simulated clients, when used, were trained to present consistent responses across subjects. Client responses served as indirect measures of interviewer (Iwata et al., 1982) or therapist (Isaacs et al., 1982) performance. The maintenance of trained skills over time was evaluated in several studies in which follow-up measures were collected from 2 weeks to 2 months posttraining (Iwata et al., 1982; Miltenberger & Fuqua, 1985).

Perhaps the most comprehensive competency-based training program was developed, over a 10-year period, as an in-service program to train Minnesota employees in behavior modification (Hirschenberger, McGuire, & Thomas, 1987). Two surveys of professionals active in the field were conducted, first to identify competencies and screening criteria and then to refine them. Thirty-two therapist competencies covering assessment, intervention, ethical issues, and report writing were identified. Training and evaluation materials, including written and oral examinations and videotaped simulations, were developed, revised, and updated for each competency. The primary evaluation of the Minnesota program has been formative, focusing on the assessment of process to improve training materials. Although there is considerable evidence that the training materials produced improved performance on the competency tests, there has been no evaluation of the relation between competency training and on-the-job performance. However, administrators have reported increased confidence that errors and abuses in the use of behavior modification have been minimized. Although this is an important outcome, the crucial tests of a clinical training program are whether trainees exhibit skills on the job and whether clients improve. Neither of these has yet been evaluated.

The evaluation of training experiences in behavior therapy is still in its infancy. Although we have described examples of innovative training methods that can be incorporated into graduate training programs, most studies have evaluated the acquisition of discrete behaviors to be applied in specific settings. Few have provided evidence that trainees apply their newly acquired skills selectively subsequent to training. "Even if a trainee has effectively acquired an adequate repertoire of discrete skills, the task remains to modulate or orchestrate the various skills in a therapeutic manner" (Fuqua & Gade, 1982, p. 288).

If the goal of a graduate training program is to produce an independent behavioral clinician who will be able to generalize training appropriately (Bernstein, 1982), generalization procedures must be consciously included in the training program. Several approaches to generalization, including gradual fading of supervisor contact (Levine & Tilker, 1974), self-monitoring

of therapeutic skill acquisition (Hector, Elson, & Yager, 1977; Loeber & Weisman, 1975), and the teaching of general procedures rather than specific techniques (Koegel et al., 1978), have been suggested but have not been carefully studied. A potential model for generalization that fits comfortably with the empirical focus of behavior therapy is the view of the clinician as "personal scientist" (Kelly, 1955; Mahoney, 1974). Just as the goal of therapy is often to help clients learn to test hypotheses regarding their personal interactions, the goal of training may be to help therapists learn to be more empirical and evaluative about their therapeutic activities.

Quality Assurance and Research Issues

There has been much public hand-wringing about the paucity of research related to the empirical evaluation of training methods used in behavioral clinical training (Bernstein & Karan, 1978; Collins, Foster, & Berler, 1986; Loeber & Weisman, 1975; Wright et al., 1977; Wright et al., 1981). This lack of data on training is by no means unique to behavioral training programs. The American Psychological Association (1982) Task Force on the Evaluation of Education, Training, and Service in Psychology stated that "there is no evidence that any specific educational or training program or experience is related to professional competence" (p. 2). Incentives to evaluate clinical training methods are virtually nonexistent (Edelstein, 1985), and few contingencies encourage their systematic review. Nevertheless, published research may underestimate the extent of evaluation activity that actually does occur (Foster, Berler, & Collins, 1982).

Three objects of evaluation should be distinguished. First, is the treatment intervention effective? In this area, behavior therapy researchers have been exemplary. A larger body of research evaluating behavioral interventions exists than for any other psychological treatment intervention.

Second, do trainees learn the skills necessary to make the appropriate assessment and deliver the appropriate intervention with competence? And third, what methods should be used to teach these skills? Although the publication of controlled studies is just beginning (as reviewed in the previous section), behavior therapy training programs do engage in the evaluation of trainees through tests of the acquisition of knowledge and through observation (often through practicum supervision) of the application of therapeutic procedures. Some competency-based procedures (e.g., in learning relaxation training or interviewing skills) are included in many programs. The difficulty is that much of the skill learning and evaluation in a given training program occurs within the context of a particular course, practicum experience, or research project rather than as a planned, clearly articulated process that is part of the course of graduate training. Evaluations arise from the accidental combination of faculty interests and clinical opportunities available to the student.

More systematic training opportunities may be desirable, but it is not possible for the trainee to learn everything or to sample every setting. It is important for trainees to learn how to generalize from current experiences to those they will confront in the future. Similarly, evaluation must be a balance between evaluat-

ing the trainee's mastery of particular therapeutic skills and assessing the more generalized capacity of learning how to learn.

One method that has not been explored sufficiently as a means of developing and maintaining skills is a formal self-assessment program (Sechrest & Chatel, 1987). For example, the American Psychiatric Association has a self-assessment program that permits psychiatrists to check their knowledge of diagnostic criteria and the basic literature. With the computer and video capabilities that are now available, self-assessment programs could be developed in a number of areas that would allow trainees and postgraduate therapists the opportunity to evaluate their knowledge and skill levels at intervals of their own choosing. If such self-assessment programs prove effective, training packages for acquiring related skills may also be developed.

Many partially answered questions regarding training and evaluation in behavior therapy remain the province of future research efforts. By what methods, with what measures, to what criteria, and at what points during the course of training should students be evaluated? Do trainees retain their skills over time, or do they revert to idiosyncratic styles once the evaluation process is completed? Which skills should be left to be developed during internships and postdoctoral experiences?

In our view, the importance of theory and research to the continued development of behavior therapy means that broad scientific training should be a core element of behavioral training programs. Much that is learned in the process of doing good research has implications for clinical practice and training. As discussed earlier, general skills such as keen observation, critical thinking, methodological rigor combined with inventiveness when putting conceptualizations to the empirical test, and the ability to follow the lead of empirical evidence (McFall, 1985) can prepare trainees to be effective behavioral therapists now and can contribute to their skill development in the future. Methods that are now commonplace in research can be used by training programs to develop and evaluate clinical skills. Among these methods are the importance of ongoing measurement in assessing change; the development of reliable and valid assessment instruments; the teaching of therapeutic skills through manuals, models, simulations, role playing, and supervision; and verification methods for the degree of implementation of therapeutic procedures (see also Kazdin, Kratochwill, & VandenBos, 1986).

We concur with Shakow (1969, 1976) and Stern (1984) that competence in clinical psychology inheres more in one's approach to clinical problems than in knowledge of any particular set of facts, theories, or techniques. We believe that the goal of professional training is to prepare students to be active learners over the course of their professional lifetimes. Toward this end, training curricula should integrate training in scientific methodology and active process skills. Training in the former provides students with widely applicable, broad-based concepts and skills for analyzing and treating clinical problems. It enables students to integrate information into their theoretical frameworks from diverse sources and encourages them to evaluate the empirical evidence that supports the utility of specific diagnostic and treatment methods (Collins et al., 1986). Training in the latter provides students with the requisite skills to criticize and integrate a body of research literature; to evaluate,

compare, and integrate psychological theories; to apply different conceptual frameworks in analyzing a social or clinical problem; and to create innovative applications for existing knowledge (Stern, 1984).

Another important issue demanding further research is the validity and utility of the measures used to assess clinical competence. Measures can be classified by content (knowledge, skill, attitudes, personality characteristics), scoring method (scaled ratings, behavior frequencies, multiple choice), behavior sampled (real therapy, simulation, paper-and-pencil tests), and source of evidence (observer, client, peer, trainer, self). For each of these categories, issues associated with face, content, criterion, predictive, and construct validity are relevant (Stevenson & Norcross, 1987). Scofield and Yoxtheimer (1983, p. 417) commented that "there is little evidence that any of these scales have validities that broadly generalize to real clinicians performing actual professional tasks." Until clear relations between clinical activities and client improvement are identified, we cannot be certain that we have selected valid dependent variables for study (Stevenson & Norcross, 1987).

Ultimately, it is essential to demonstrate that the changes in trainees' functioning that are generated by training interventions do, in fact, produce therapists who consistently provide effective behavior therapy. Until that is accomplished, it will be difficult to establish the predictive validity of the dependent variables used in training research and the true efficacy of the training interventions themselves (Ford, 1979). In the interim, skills that are selected on the basis of critical job analyses, role delineation studies, or surveys of practitioners in the field might provide useful information regarding the components of clinical competence amenable to training (Alberts, 1987).

We must continue to press for quality research based on explicit theories. Quality research mandates (a) clear operational or behaviorally anchored definitions of the therapy responses that are being trained; (b) the specification of measurable training objectives for each training domain (e.g., assessment, therapy, research) in each major category of learning outcome (knowledge, attitude, values, and behavioral and cognitive skills); (c) accurate descriptions of training processes (i.e., who teaches what to whom by what means); (d) the utilization of quantitative measures that are amenable to standardization and cross-site comparisons; (e) the use of pretraining assessment to ascertain trainee baseline skill levels; (f) the inclusion of control groups and equivalent training time across treatments; and (g) multiple criterion measurement strategies (see also Stevenson & Norcross, 1987). We must determine whether skills trained via analogue training techniques generalize to in vivo clinical situations and must identify the factors that augment this transition.

We are not yet in a position to answer the question about training posed by Schacht (1984, p. 26) as he paraphrased Paul (1969), "What training, by whom, is most effective with which student, who is acquiring which specific knowledge or competency, under which set of circumstances, and at what cost?"

It is our contention that professional training would benefit from even the first steps of evaluation. When goals for the acquisition of therapeutic skills are better articulated, the feedback available from evaluation will allow for the continued advance-

ment of training. If we are to improve our methods of training, we must evaluate them.

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