

EFFECTS OF MODELING AND
DIFFERENTIATED PRACTICE
UPON INTERVIEW SKILLS OF
PARAPROFESSIONALS

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ABSTRACT

EFFECTS OF MODELING AND DIFFERENTIATED PRACTICE UPON INTERVIEW SKILLS OF PARAPROFESSIONALS

By

Nancy A. Tyler

This research examined the effects of model, practice, and activation on the attainment and retention of initial interview skills in a training program for dental health paraprofessionals. To assess the results of the video modeling and differentiated practice procedures used in the interview skills training program, three companion studies were formulated. The companion studies were intended to provide comparative measures of both the effect of modeling via videotape and the efficiency of different types of practice in the mastery and generalization of initial non-verbal and verbal interview skills.

Specifically, the objectives of this research were:

1. Study One: To assess the effect of a specific example of modeling vs. no modeling in the performance of non-verbal and verbal interview skills.
2. Study Two: To compare differential practice treatments in the mastery and retention of both verbal and non-verbal interview skills.

3. Study Three: To investigate differences in the level of activation of the practice treatments and differences in activation level at the end of the interview performance.

To meet the objectives of the research, a training program was developed with the intent of making systematic comparisons of the outcomes of the video modeling plus cues and differentiated practice procedures used in teaching initial non-verbal and verbal interview skills.

Study One contrasted the effect of the modeling plus cues treatment with no treatment to test the power of the training model on both non-verbal and verbal interview skill performance. The basic design of this study was an experimental "post-test only" design recommended by Campbell and Stanley (1963). Subjects were randomly assigned to the modeling treatment (M_1) or the no model group (M_2). The model treatment was administered via videotape in a group setting. Group interaction was not included in the model treatment; subjects simply viewed the video presentation on initial interview skills. After interview performance data were collected, and prior to the practice treatments, the no model group (M_2) viewed the identical model videotape so that all subjects were equivalent before the practice phase of the research was administered.

During the practice phase, Study Two, subjects were randomly assigned to the five practice treatments: discrimination, feedback and supervisor, teach another,

combination, and control. All practice treatments were administered individually. Immediately following the practice session, each subject completed a second interview which provided data for the comparative evaluation of the practice treatments. Three weeks following the treatment administration, a delayed-post measure was collected to assess the retention of interview skills across time. The basic design for Study Two was a $2 \times 13 \times 5$ repeated measures design: that is, the design contained 2 times, 13 interview skills, and 5 levels of practice with Ss nested with practice but crossed with measures and times. Each cell contained an equal number of subjects ($n = 7$; total $n = 35$).

The third phase, Study Three, of this investigation provided for the exploration of the activation properties of practice treatments, the relationship of activation to the attainment of interview skills, and subject differences in activation. Activation was defined as the degree of arousal or alertness as measured by the four factors of the Activation-Deactivation Adjective Check List. Data were collected twice; immediately after practice and prior to the second interview, and after the final delayed-post interview.

The criterion measures used in this study were formulated to examine both non-verbal and verbal interview skills. The same dependent variables comprising frequency and duration observations and global ratings were included in each

companion study. Interview data in the form of seven-minute videotaped interviews were collected on three occasions: after modeling, after practice, and three weeks following practice. Videotaped interview skill performance data were subsequently rated by three independent judges for the criterion measures. Reliability estimates were calculated for the mean judges' ratings on each interview skill measure for each set of interview data collected at the three different times. Reliability estimates ranged from .98 to .55. Also, reliability estimates were obtained for the total non-verbal and verbal scores at each of the three data collection times.

It was hypothesized that subjects who received the model would exhibit superior non-verbal and verbal interview skills to those who did not receive model instruction. It was also hypothesized that subjects receiving differential practice treatments would exhibit different performance levels of non-verbal and verbal skills. Further, in regard to the hypothesized effects concerning the practice treatments, the practice treatment groups were predicted to order themselves in terms of performance of interview skills as follows:

- a. Combination or teach practice superior to feedback or discrimination practice
- b. Feedback or discrimination practice superior to control group.

No formal hypotheses were proposed for the investigation of activation; questions were developed for post hoc analysis.

The data were analyzed for Study One with multivariate and univariate analyses of variance. Data for Study Two were analyzed with repeated measures multivariate analysis of variance for the combined (across time) practice results. The initial interview data were investigated as a covariate for the practice study results, but when the covariate results failed to improve the analysis, this procedure was dropped.

A statistically significant ($\alpha = .05$) effect was found for verbal interview skills due to presenting the model treatment. Significant effects were found for the multivariate test of all verbal items ($\alpha = .05$), for the total verbal score ($\alpha = .05$), and for the univariate test for the verbal invitations to talk ($P\text{-ITT}, \alpha = .05$). Thus, the model videotape treatment did make a difference in the acquisition of initial verbal interview skills. Results for the non-verbal variables were not significant.

For the combined practice data (across time), a statistically significant ($\alpha = .05$) result was found for the total non-verbal measure. This result was not supported by the multivariate test for all non-verbal items; however, one item (non-verbal attending rating) was judged significant on the univariate test ($\alpha = .05$). Results for the verbal variables were basically not significant. Although the

multivariate test for all verbal items failed to be statistically significant, one item (ECT rating) achieved statistical significance ($\alpha = .05$). Contrasts calculated for the non-verbal total results reflected the significance of all practice treatments compared to the control group. The feedback-supervision and combination practice treatments were the stronger treatments.

Post hoc analysis of the activation data yielded significant correlations for the general activation and deactivation sleep factors with verbal interview skill performance. The verbal total measure was positively correlated ($r = .29$) with general activation and negatively correlated ($r = -.36$) with the deactivation sleep factor. In addition, multivariate analysis of variance results for changes in all subjects' levels of activation from practice to delayed-post assessment times were statistically significant ($\alpha = .05$). The concept of activation appears to be an interesting one that may provide some understandings about learning sequences and treatments.

EFFECTS OF MODELING AND DIFFERENTIATED PRACTICE
UPON INTERVIEW SKILLS OF PARAPROFESSIONALS

By
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CHAPTER I

INTRODUCTION AND REVIEW OF LITERATURE

Introduction

Counselor skills are too important to be confined to the counseling cubicle alone. Recent conceptions of the practicing counselor's role expand the activities to include serving as a counselor educator, as a trainer, and as a consultant in human relations skills (Ivey, 1971; Carkhuff, 1969a, 1969b, 1972). As counselors move into a larger community to conduct training programs for paraprofessionals, teachers, and students, research questions and methods focus on the specific skills needed to be effective. Teaching beginning counselors and therapists "how to counsel" is one of the more complex issues facing counseling psychology (Krumboltz, 1967; Matarazzo, Wiens, and Saslow, 1966; Wrenn, 1962). These issues are central in preparing counselors for their role in training others. In this study the concept of a broad counselor role, training and serving as consultant in developing programs for health paraprofessionals, was implemented.

In the development of training programs, some counselor educators call for systematic efforts. The systems approach

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emphasizes the creation of step-by-step programs both in counselor education and the efforts of counselors to assist others. Unfortunately, counselor education and counselor-directed programs have too often been less than systematic. In addition, personal convictions and preferences have often been given priority over comparative investigations seeking to establish effective practice. Counselor training has not generally been efficient or economical in the use and development of human resources (APA, 1972a, 1972b; Ivey, 1971; Whiteley, 1969). Systematic programs that promise to deliver specific skills appear to be needed most. The present investigation attempted to develop and analyze an interview skills training program in a comparative, systematic manner.

Counselor research which can offer understandings for counselor practice meet the criteria of relevance. As Krumboltz recommends, the test of relevance consists of asking one simple question and probing the answers: "What will counselors do differently if the results of this research come out one way rather than another?" (Whiteley, 1969, p. 191). Throughout the years counselor educators have relied on little empirical evidence and a variety of teaching methods. Lectures, demonstrations, role-playing, case studies, and audio and videotapes have been commonly used

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in training. However, the need for comparative studies of these methods to build a base of empirical evidence still exists.

The present study was a comparative investigation of modeling and different types of practice in training dental health paraprofessionals in initial interview skills. This research was based upon the contention that counselors and counselor educators need to systematically investigate the nature and comparative effectiveness of different teaching procedures and methods for training paraprofessionals. Whiteley (1969), in a review of counselor education literature, singles out the training process as being in particular need of systematic study. Often studies avoid or neglect the question of comparative effectiveness (Horan, 1972). The issue of what works, with whom, and under what conditions is circumvented. There is a need to train paraprofessionals in effective interview and human relations skills so that they may grow personally, will relate effectively to others, and perform competently on their jobs. In view of limited resources and budgets available for human development training programs, comparative studies are needed to focus upon methods of training. In the research undertaken here, an effort was made to compare the effectiveness of video

modeling and the different types of practice that might enhance an interview skills training program for health paraprofessionals.

One approach to researching specific skills in counselor education and interview training, microcounseling, was pioneered by Ivey and associates (Ivey, 1968). The principal aim of microcounseling is to provide prepracticum training to narrow the gap between theory and actual practice. In preliminary studies, specific skills identified and specified enable important aspects of interviewing and relationships to be isolated. In essence, the microcounseling paradigm allows controlled and systematic study of the interview process in naturalistic settings. Microcounseling techniques provide a framework, a structural or methodological approach, to interview training and research (Ivey, 1971).

What are the basic dimensions of microcounseling? Emphasis on a single skill, feedback, modeling, and supervision are four essential elements (Ivey, 1971, p. 87).

The basic model allows for learning through video models, written materials, feedback by self-observation and supervisory comments. Basic components and alternative models allow for systematic, controlled research in training.

To summarize, developments and extensions of the counselor role, increased demands for systematic, comparative

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and accountable studies in counselor education research, and microcounseling components for paraprofessional training establish a foundation for the present investigation. From this foundation the present research focused on modeling and practice dimensions characteristic of microcounseling and other learning approaches.

Purpose

A group of dental hygiene paraprofessionals at Charles Stewart Mott Community College was selected for interview training. The purpose was to investigate the comparative effect of modeling and practice upon the attainment and retention of initial interview skills. This investigation was divided into three companion studies.

The companion studies were intended to measure both the effect of modeling via videotape and the efficiency of different types of practice in the mastery and generalization of non-verbal and verbal interview skills. For organizational purposes and the investigations desired, each companion study will be considered an independent one.

More specifically, the objectives of this research were:

1. Study One: To assess the effect of modeling vs.

no modeling in the performance of non-verbal and verbal interview skills.

2. Study Two: To compare differential practice treatments on mastery and retention of both verbal and non-verbal interview skills.
3. Study Three: To investigate differences in the level of activation of the practice treatments and differences in activation level at the end of interview performance.

Both non-verbal and verbal aspects of interview performance were deemed to be of importance. Initial interview skills were defined from attending behaviors such as demonstrating to the interviewee that the interviewer respects him as a person and is interested in what he says (Ivey, 1971). Evidence of skill in initial non-verbal attending or listening behaviors was observed in the initiation and maintenance of eye contact and in the relaxed, natural posture and movements as the interviewer directly faced the other person. Initial verbal attending behaviors for interview trainees comprised offering invitations to talk (ITT) and encouragements to continue talking (ECT).

This research was designed to test the proposition that modeling and practice methods used in the interview

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training program are differentially effective in increasing the use of both non-verbal and verbal initial interview behaviors.

Non-verbal total scores were based on the following observations: duration and frequency of breaks in eye contact; and global ratings of body posture, gesture, and non-verbal attending behavior. Verbal total scores were composed of the frequency and quality of invitations to talk (ITT), encouragements to continue talking (ECT); and global ratings of quality and effectiveness in the use of invitations, encouragements and verbal attending behavior. Observations and ratings were made from seven-minute interviews made by dental health paraprofessionals involved in the interview skills training program.

Assessment of the effect of modeling and comparisons of different modes of practice on mastery and retention of interview skills were of interest. The modeling and cues treatment was a videotape demonstration of positive and negative student examples of initial interview skills. Practice modes incorporated in this study included:

1. Discrimination Practice

Ss* viewed videotapes of a variety of interviewers and practiced by rating to discriminate the number and quality of others' interview skills.

2. Feedback and Supervisor Practice

Ss viewed their own performance with a supervisor, and talked about ways to improve their next performance.

3. Teach Another Practice

Ss taught another person the interview skills. After reviewing the skills from a written script, each S was provided with a practice individual to instruct in interview skills.

4. Combination Practice

Ss experienced a combination of discrimination, feedback with supervisor, and teaching another practice.

5. Control Group

Ss studied dental hygiene materials not related to the mastery of interview skills.

Thus, the major purpose of this research centered on modeling and the differential effectiveness of practice modes in mastering and retaining initial interview skills.

Additional benefit was gained by observing activation level of practice mode and interview performance. The

*Subjects will be abbreviated for this chapter and in the following chapters: Subject as S, and Subjects as Ss.

intent of this section of the research was to study the activation properties of practice treatments, the relationship of activation to the attainment of interview skills presented in training, and individual subject differences in activation. Activation was defined as the degree of arousal or alertness as measured by the Activation-Deactivation Adjective Check List factors.

Review of Literature

First, the review will report current developments in training that outline initial interview skills and related training programs. Then, relevant literature concerning modeling will be discussed in terms of social learning theory and techniques and the development of learning sequences and training programs. Next, the review will focus on the practice dimension and the generalization and transfer of skills. Finally, a discussion of the concept of activation and the applicability of this line of inquiry will be undertaken.

Initial Interview Skills

In the writings of Ivey and his associates (1971), extensive treatment is given to the identification and

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description of interview skills. Many specific skills, each carefully documented, are an outgrowth of the microcounseling framework. Initial, or beginning interview skills, involve both non-verbal aspects and verbal behaviors intended to assist the trainee in attending to another (Ivey, 1971). These initial interview behaviors are deemed appropriate for the focus of this inquiry. Beginning interview skills incorporated as good attending behaviors which give evidence of listening are:

- (a) maintaining some type of consistent eye contact,
- (b) being physically relaxed with natural posture and movements--body directly facing the other person,
- (c) opening the interview with invitations to talk,
- (d) encouraging the patient to continue talking.

Background information and descriptive formulations of these skills are contained in Appendix A.

Modeling

Historically, a theoretical viewpoint of imitative learning was developed by Miller and Dollard (1941) from social psychology, psychoanalytic, and instrumental conditioning concepts. These theorists stated that the four factors essential to imitative learning are drive, cue,

response, and reward. The four factors operate in two different forms of imitative learning--matched-dependent behavior and empathic learning. Matched-dependent behavior proposes that an observer learns to match a model's response as a result of reinforcement which is experienced directly or vicariously. The imitator in copying behavior not only responds to cues from the model, but he also responds to cues of sameness and difference produced by internal stimulation. Mowrer (1960) has described an identification process whereby one person makes a response while rewarding another; later the rewarded person attempts behaviors exhibited by the model even though the model is no longer present. In the second form of imitation called empathic learning the model experiences the reinforcement. Imitation of the model's behavior follows from the observer vicariously experiencing reinforcement simultaneously with the modeled behavior.

Bourdon (1969) and Bandura and Walters (1963) have demonstrated the implications of theories of imitation. Bandura, Ross, and Ross (1963) developed a social learning-imitation learning theory based on contiguity and mediational theory. This theory proposed that sensory images aroused by the model became structured through association by proximity. Reinforcement, however, to the model or to the

observer is not necessarily essential for learning to take place. Imitation learning research suggests that a behavioral change will occur when a trainee sees a model do something that is contrary to his own behavior (Bandura 1965a, 1965b; Bandura & Walters, 1963). In an extensive review of the research on observational learning, Bandura (1969) concluded that the behavior of models often serves as discriminative cues for observers to facilitate learned responses.

Thus, current literature concerning behavior change emphasizes modeling in developing and maintaining skills. Bandura (1969), Bandura and Walters (1963), Kagan, Krathwohl, and Farquhar (1965) and Whalen (1969) illustrate different kinds of modeling in creating immediate behavior change. Many counselor training and educational programs concerned with human relationship skills rely heavily on modeling procedures. Krumboltz (1966) and Krumboltz and Hosford (1967) have additionally illustrated the applicability of modeling to counseling.

Related research suggests further that the counselor is an effective model for behavioral change in the client (Kanfer, 1965; Krumboltz, 1965; Mowrer, 1966; Shoben, 1965). A traditional approach to counselor training is for the trainer or supervisor to serve as a model (Bonney & Gazda, 1965; Driekurs & Sonstegard, 1966; Fraleigh & Buchheimer, 1969; Ruble & Gray, 1967). Usually the counselor educator lectures about and demonstrates the skills of counseling to prospective trainees.

Models of desirable therapeutic behavior have been presented to counselor trainees via audiotape recordings (Carkhuff & Truax, 1965; Palmer, Fosmire, Breger, Straughan, & Patterson, 1963). Exposure to audio-recorded modeling conditions resulted in trainees' behavior changes in desired directions. Beaird and Standish (1964) trained counselors through audio-simulated experiences to discriminate between cognitive and affective client responses and to use counselor response leads to facilitate more affective client responses. Performance of the experimental group receiving audio simulation improved over time at a significantly greater rate than the control group that did not receive audio simulation training.

In research on interpersonal skills and counselor effectiveness, Carkhuff (1969a, 1969b) has focused on the counselor-trainer as a critical source in learning. This research highlights the importance of the trainer as an effective model. Utilization of the counselor educator as a model (Eisenberg & Delaney, 1970) combined with appropriate application of positive reinforcement techniques (Berliner, 1969) can facilitate change. Of especial interest here is the Eisenberg and Delaney (1970) research conducted with three purposes: (a) to compare the effectiveness of modeling Procedures with operant conditioning procedures in the acquisition of counselor responses, (b) to investigate whether the manipulation of verbal reinforcement would

improve counselor behavior, and (c) to explore the effect of prestigious models. The use of modeling procedures seemed more effective in establishing responses than operant conditioning procedures. Verbal reinforcement of counselor response leads was not instrumental in shaping counselor trainee behavior. Eisenberg and Delaney concluded that a video-simulation procedure which involved the systematic presentation of a model significantly influenced the trainees's behavior...also, that... one way trainees learn to behave as counselors is by emulating their mentors (p. 18).

Video Simulation in Modeling

The development of video technology has provided a means of furnishing a close approximation to real-life situations. The recent literature abounds with statements of advocacy concerning video simulation methods in the training of skills. In recent years counselor education programs have developed and adapted videotaping procedures and technology in a variety of directions and with greater frequency (Delaney, 1969; Eisenberg & Delaney, 1970; Ivey, 1971; Kagan, Krathwohl, et al., 1967; Miller, Morrill, Weston, Uhleman, 1970; Poling, 1968a, 1968b; Ryan, 1969). A typical application is the use of video recording in Practicum supervision (Poling, 1968a, 1968b; Ryan, 1969) where the trainee, with either actual or role-played client, is videotaped, and then critiqued by the supervisor. Videotapes offer both verbal and non-verbal performance records of interview skills and interaction.

Kagan and associates (1967) offer a variety of innovations with videotape; principally, an adaptation of video simulation and feedback, Interpersonal Process Recall (IPR). The IPR process involves videotape recording and then playing back the videotape so that client and counselor can study their reactions. A further adaptation of the IPR methodology incorporates affect simulation (Kagan & Schauble, 1969) and videotapes of individual reactions to actors and actresses portraying intense emotions of rejection, pseudo-acceptance, seductiveness, guilt, or affection. Affect simulation appears to be an effective tool in combination with IPR (Schauble, 1970) or as a treatment methodology by itself (Danish & Brodsky, 1970).

An extension of the feedback mode has recently been developed to increase the effectiveness of the IPR process (Kagan, 1971). Physiological activity measures are recorded, videotaped, and played back to the individual to enhance understanding of behavior. Kagan and associates offer unique applications of the videotape feedback procedures to counselor training programs. The continued studies and research add to the data supporting the use of video technology in training programs.

Of direct interest to the present investigation, is the research of Eisenberg and Delaney (1970) and Stone (1972). These investigators have applied video simulation in training counselors to acquire a specific verbal skill, counselor

tacting response leads. As previously cited, the Eisenberg and Delaney research is especially significant in supporting the use of videotape modeling procedures. Results of the Eisenberg and Delaney study demonstrated that model procedures affected the trainee's use of these concrete response leads; but transfer effects were lacking. Stone (1972) contrasted written, audio, video, and in vivo simulations in a comparative investigation focusing on the fidelity of modeling. Manual simulations, written and audio, were considered to be low fidelity, and video and in vivo simulations to be high fidelity. The specific interview skill, tacting response leads, was again featured. In the practice phase, manual and in vivo simulation methods were compared. The data of the Stone investigation support the effectiveness of the high fidelity model and high fidelity practice on the short-term measure. The low fidelity model, practice, and test groups were low in comparison with all other groups who performed about equally. The long-term measure data yielded contradictory results, especially the interaction of written forms of model simulation and practice.

Poling (1968a) suggests theoretical reasons to support videotape being more effective in counselor training than audiotape because of the similarity to the actual counseling situation. Yenawine and Arbuckle (1971) studied the question by contrasting the effects of audiotape and videotape recording techniques on counselor-trainee practicum experiences.

The nature of this pre-experimental investigation with small sample, design problems, and the confounding variable of supervision do not provide conclusive answers.

Ward, Kagan, and Krathwohl (1972) attempted to evaluate the use of Interpersonal Process Recall (IPR) with videotape, as opposed to more traditional methods. In comparing video-IPR, audio-IPR, and supervision using an audiotape of a regular counseling session, the results did not demonstrate the effectiveness of any one treatment procedure. The researchers discussed problems in the use of a coached client, low interrater reliability, lack of specificity in the training, and the confounding of supervision and treatment.

These studies do not contribute definitive results regarding simulation methods or the use of videotape modeling techniques most effective in attaining particular counseling skills. As indicated, evidence is often lacking, incomplete, and ambiguous. There remains a need to adopt research models which seek to define techniques, detail their limits of applicability, and show their comparative effectiveness. Miller (1972) writes of simulation and the use of instructional objectives in counselor education. He provides definitions of interest:

Simulation is a controlled representation of a real situation. The use of simulation provides the student with learning experiences leading up to the attainment of instructional objectives. Levels of simulation are used to introduce a programmed aspect into the sequence of learning experiences and serve as degrees of

approximation to actual counseling. The lowest level is theoretical and abstract; the highest level of simulation contains most of the elements of the desired terminal behavior (p. 84).

Four levels of simulation that could be used for each performance skill being taught in counselor education are proposed by Miller: reading and listening, modeling, practice responses and role playing, and supervised experience. Miller in discussing these levels of simulation notes that the use of videotape in modeling experiences for the trainee is extremely useful in developing counseling skills of all types. He states, "the use of videotape models bridges the gap between theories and the actual practice of counselor skills (p. 85)."

The present research is based on the contention that video simulation will provide appropriate models for initial interview skills training and that video simulation would provide controlled representation of the real situation.

Microcounseling

Even more germane to the development and intent of this study are the concepts of microcounseling set forth by Ivey (1971). Stemming from the microteaching skills approach of McDonald and Allen (1967) at the Stanford Center for Research and Development in Teaching, microcounseling is based on the focus of learning procedures which stress intense supervision, immediate feedback, and evaluation aided by videotape recordings (Cooper, 1967). Essentially,

microcounseling refers to a method of video instruction of counselors in the basic skills of counseling which can be achieved in a short period of time.

Ivey (1971) stresses the consideration of microtraining techniques as a "structural or methodological approach" to interview training. Microcounseling is based on several essential propositions: focus on single skills, self-observation and confrontation, learning from observing video models, and real interviewing. The basic microcounseling model is outlined as a set of progressive steps (see Appendix B) allowing for actual videotaped interviews, reading written manuals describing specific skills, supervisory instruction, video models, feedback from video performance in the presence of a supervisor, and additional interview practice with feedback and evaluation. Basically, this methodological innovation allows variations for teaching interviewing skills in a wide area of diverse theoretical and practical frameworks. With the adaptability of the microcounseling framework, it becomes a useful research tool, permitting controlled studies.

Ivey, Normington, Miller, Morrill, and Haase (1968) in a classic study combined the principles of videotape models and feedback to effectively train beginning counselors in the behavioral skills of attending behavior, reflection of feeling, and summarization of feeling. Ivey et al. defined attending behavior in terms of three highly reliable, easily

identifiable component behaviors--eye contact, relaxed postural position with appropriate gestures, and accurate verbal following behavior (p. 30). The validity of the specific skills taught via the microcounseling paradigm is attested to by the fact that every pretraining and post-training comparison of the client's reactions was positive and significant. Clients' reactions to interviewers was assessed by the Counselor Effectiveness Scale (Ivey, Miller, Morrill, & Normington, 1967), and a relationship questionnaire adapted from Truax and Carkhuff (1967). The counselors trained in attending behavior were rated as being more effective.

A growing body of literature continues to substantiate the validity of the microcounseling research paradigm. Moreland, Phillips, Ivey, and Lockhart (1970) utilized microcounseling to teach six interviewer skills to first-year clinical psychology graduate students. This study demonstrated that the effects of microcounseling training generalized from the instructional lab to actual interview situations with real patients. Haase and DiMattia (1970) demonstrated via microcounseling training that the skills of attending behavior, reflection of feeling, and expression of feeling can be attained by counseling paraprofessionals. In addition, Haase, DiMattia, and Guttman (1971) reported that these skills were sustained over a year's time. Paraprofessionals retained improved non-verbal communication

and ability to express feeling; although performance remained above original levels, verbal following and reflection-of-feeling statements decreased.

Miller, Morrill, Ivey, Normington, and Uhlemann (1969) demonstrated that the skill of selective attending can be used to shape a client's verbal behavior toward talking about his attitudes toward tests. In another microcounseling variation, Higgins, Ivey, and Uhlemann (1970) trained college students in the interpersonal skills of direct, mutual communication, skills which are related to those emphasized in encounter groups. Research study compared three approaches to teaching this skill: (a) full treatment in the traditional microtraining paradigm, (b) programmed text and video models only with no supervision or video feedback, and (c) reading material only. The full-treatment group doubled the amount of direct mutual communication (100 per cent increase); group b increased 50 per cent; and group c did not change.

Other studies report differing success in training a variety of clients. Haase, Forsyth, Julius, and Lee (1969) trained clients at a university counseling center in the skill of expression of feeling. Moreland, Phillips, Ivey, and Lockhart (1970) demonstrated the feasibility of defining skills to the degree that good and bad models can be made for an increasing variety of interviewer behaviors. Thus,

microtraining provides a framework wherein individual responses to models may be studied systematically.

In controlled lab situations many of the possibilities of the microcounseling model emerge. Frankel (1970) examined the effects of videotape models and videotape feedback in teaching accurate reflection of feeling. A comparison group received instructions only. Half of the experimental subjects received feedback first and half viewed models first. Viewing the model first followed by self-observation produced more positive change in the subjects' skill to accurately reflect feeling. Hutchcraft (1970) presented interesting data on the role of models in microtraining. Group one viewed a tape of a model counselor interviewing, followed by a videotape of a supervisor reinforcing the model counselor. Group two viewed only the model counselor tape; group three only the supervisor's tape, and a control group, none of the models. Each group conducted four interviews and received feedback from their training. The presentation of the supervisor model provided the most potent force for change. McDonald and Allen (1967), cited earlier, varied microtraining methods with teachers and reported that self-viewing accompanied by supervisor comments was the most powerful aspect of the microtraining treatment. It was also found that the presence of a supervisor facilitated learning from the video modeling tapes.

McDonald and Allen reached the conclusion that the full complement of microtraining methods (feedback, modeling, supervision with cueing and discrimination) was the most effective way to impart skills. If the behavior is relatively simple, they suggest that simple instructions may be sufficient; however, as behavior becomes more complex, the importance of more extensive training seems to appear. Finally, on a more clinical basis, it is noted that some individuals seem to respond only to certain aspects of the microcounseling training program, while others seem to prefer the full treatment package (Ivey, pp. 123-24).

In summary, the microcounseling paradigm provides a variety of modeling, practice, review, and reinforcement procedures all aimed at helping the trainee incorporate the skill of interest.

Practice Dimensions

Practice is necessarily critical in the development, mastery, and retention of skills in any learning sequence. In the review of variables governing retention, Bandura (1969) describes practice as the variable that effectively stabilizes and strengthens acquired responses. The level of observational learning can be enhanced through practice or overt rehearsal of modeled behaviors (Margolius & Sheffield, 1961). Practice, specifically, seems to be much overlooked in theories of imitation learning. However, reinforcement activities, which seem to be a component of practice, have received attention in the literature.

Bellucci (1972) recently reviewed pertinent research and theory relating to microcounseling, imitation learning,

and behavioral approaches to counselor education, and in this discussion highlighted some related lines of inquiry dealing with reinforcement. Millenson (1967) states that since behavior is lawful, it will be related to an individual's history of reinforcement. Rotter (1966) has identified a "control continuum of reinforcement" which simply stated says that the effect of reinforcement for an individual depends upon whether the individual perceives a causal relationship between his behavior and the reinforcement. Rotter posited two types of control, external and internal. Definitions describe external control as occurring "when a reinforcement is perceived by the subject as following some action of his own, but not being entirely contingent upon his action" (p. 1). Internal control is defined as occurring "when a person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics" (p. 1). Phares (1957, 1962) concluded that individuals in control (internal) of specific situations are more likely to exhibit perceptual behavior that can assist them in coping. Battle and Rotter (1963) found a significant relationship between internality and intelligence. In essence, these investigations seem to suggest that the acquisition, performance, and practice of skillful behaviors are related to individual perceptions of internal and external control of reinforcement. So differences in individual perception of internal and

external control of reinforcement could influence the effectiveness of practice procedures.

McDonald and Allen (1967) reported the delay of reinforcement phenomenon. In a microteaching situation the delay of reinforcement by an educator produced no significant differences in intern teachers' skill acquisition, regardless of manipulation of the time dimension. This finding, which differs with Berliner's (1969) suggestions about positive reinforcement and previous research with animals and humans, may perhaps be related to the internal versus external control of reinforcement (Rotter, 1966).

No doubt the concepts of internal and external control, individual histories of reinforcement, and delay of reinforcement affect outcomes in modeling and practice strategies. These factors, however, go beyond the limits of the present investigation. These reinforcement properties would seem to provide explanations for differences noted in various Practice strategies.

Comparative studies of the efficiency of various kinds of practice appear to be lacking in the counselor education literature. In the present investigation particular interest is placed on a comparative study of different learning Practice strategies. These different types of practice in a learning sequence stress the acquisition, mastery, and retention of the modeled initial interview skills. It is the contention of the present study that the different

practice modes vary in their nature to obtain mastery and to generalize over time, and that there is a need for evaluation of the differentiated practice strategies often lumped together and employed in microcounseling and other counselor training programs.

Discrimination Practice. Carkhuff (1969a, 1969b) in interpersonal skills training stresses the importance of discriminating the quality of responses. This component is incorporated in pre- and post-evaluations on research scales, and used as an integral part of Carkhuff's group training procedure. In continuing practice sessions, each individual is trained in appropriate responding skills by discriminating and discussing his rating of each response offered. Discrimination practice assists each trainee in identifying skills, and in assessing the quality of skill performance.

Orme (1970) concluded that differential effectiveness of different teaching models can be attributed to distinct cueing properties. Imitative learning can be facilitated, he stated, by increasing the distinctiveness of relevant model stimuli. Orme stated that "training systems which seek to increase both the range and availability of sub-skills within a given teaching strategy must systematically highlight salient cues in the initial phases of training" (p. 3). Discrimination practice increases the trainee's ability to spot and use cues appropriately.

Feedback and Supervisor Practice. Stoller (1965) has stressed the necessity of "focused feedback" in therapeutic work with videotape. Focused feedback means that the supervisor focuses training only on a single dimension of the trainee's behavior. Not all behaviors are corrected at once. In feedback and supervisor practice, the trainee and supervisor view the trainee's interview and each in turn verbally evaluates one aspect of the trainee's initial interview behaviors. Each segment of the videotape is viewed to focus on the different skills being taught. Verbal feedback which is focused can reinforce the trainee's skill development.

There is some evidence supporting the idea that verbal approval has great potential in reinforcing adult behavior (Krasner, 1958). Eisenberg and Delaney (1970), however, found that verbal reinforcement was not instrumental in shaping appropriate counselor behavior. Berliner (1969) summarized the issue in this manner:

The absence or presence of someone in a supervisory role providing discrimination training and reinforcement does seem to be an important variable in the acquisition of complex teaching skills when training occurs with modeling and the videotape system (p. 31).

Perhaps, the combination of reinforcement and discrimination provides the necessary ingredient to make the feedback more effective.

Teach Another Practice. Ivey and Rollin (in press) are currently exploring the microtraining framework as a useful

method of teaching interpersonal skills. The "do-use-teach" model of imparting behavioral skills asks the trainee to demonstrate his ability to engage in a selected behavior, develops his own way to use the behavior in his daily life, and then demonstrates his understanding of the skill by teaching it to someone else. As Ivey (1971) states, "the value of teaching others what you yourself have just learned appears to be a promising avenue for increasing self-learning and producing a multiplier effect" (p. 134).

The differentiated types of practice--discrimination, feedback and supervisor, teach another, combination, and control--will be the treatments compared in this research study.

Generalization and Transfer

Certainly, generalization of learned responses provides the critical task for any training procedure (Greenspoon, 1962). Often, analyses of the effects of modeling lack data which might support the transfer of learning. Thorndike's theory of transfer of training (Thorndike & Woodworth, 1901) suggests that the more identical the elements, the greater the transfer. Studies often assess only the immediate effects of learning, but neglect to check on treatment effects over time.

The present investigation is planned to incorporate approaches in video simulation, emphasis on practice, and

the element of generalization to emphasize retention. Efforts will be made to approximate the typical real-life interview situation as closely as possible in order to provide for the greatest degree of generalization and retention over time.

Guttman and Haase (1972) reported the generalization of counseling skills learned via microcounseling to actual counseling settings. Of particular interest to this study is the finding that across the three skills trained for--attending behavior, reflection of feeling, and summarization of feeling--there were no significant differences between experimental and control groups on attending behavior skills. Greater learning and retention of skills in reflection of feeling and summarization of feeling were found for the experimental counselor group experiencing microcounseling training. Attending behavior was rated on three five-point Likert-type rating scales for eye-contact, verbal following, and posture. Reflection of feeling was rated on a 14-point scale adapted from Ivey and others; summarization of feeling was rated on a five-point constant response scale adapted from Ivey and others. The results of this study are consistent with others; not all skills behave in the same manner. Posture and eye contact variables showed no differences as a result of training and no improvement across trials as reported in previous investigations with these variables (Ivey, Normington, Miller, Morrill, & Haase, 1968; Haase & DiMattia, 1970). Explanations reported that eye contact and

a relaxed posture are social skills possessed by most counselors at this level. The researchers assumed that persons selected for counselor training programs already possessed rather sophisticated levels of these two attending skills. Thus, in this replication (Guttman & Haase, 1972) the microcounseling paradigm tested the generalization of training of specific behavioral skills in counseling to actual counseling settings. The skills did generalize but showed a loss of skill commensurate with what was expected in terms of an extinction curve.

Ivey (1971) urged that research designs incorporate trend analysis design with repeated measures of a single treatment group, control or comparison designs, and multiple comparison groups. Ivey has reported that microcounseling research only recently reached the stage whereby adequate follow-up testing has been possible. Research by Haase, DiMattia, and Guttman (1970), Miller, Morrill, Ivey, Normington, and Uhlemann (1969), and Moreland, Phillips, Ivey, and Lockhart (1970) illustrated that trainees retained skills over time. Hutchcraft (1970), however, noted a fairly rapid extinction of learned skills. Apparently, considerable additional work is called for in examining the retention and generalization of microtraining skills.

Activation

The concept of activation appears pertinent to investigations in counselor education seeking to understand the

nature of different learning and practice strategies. Involvement or activation concepts appear to be central to issues of motivation, learning, and mastery of skills. Many researchers in the area of motivation and emotion have utilized such concepts as activation, arousal, or energy release to unify a vast amount of diverse data. The term "activation theory" is often given to theoretical conceptions that dichotomize behavior into direction and intensity and that view the intensity dimension as common to all states of motivation and emotion (Thayer, 1967).

Activation as an experimental variable is prevalent in psychological research. Specifically, the research findings of interest relate that variations in activation affect performance in qualitatively different ways. The inverted U curve describes performance as a function of low, medium, and high levels of activation. Activation concepts and the inverted U performance curve are illustrated in research in vigilance and attention (Frankmann & Adams, 1962), human verbal learning (Spence, 1963), curiosity and other aspects of cognitive behavior (Berlyne, 1960), personality (Goldstein, 1964), sleep, and functional mental disorders (Duffy, 1962).

Activation, usually assessed with psychophysiological measuring apparatus and equipment, has been related to paper and pencil measurements (Thayer, 1967, 1970, 1971; Thayer & Cox, 1968; Thayer & Moore, 1972). (see Appendix C--

AD-ACL, Activation-Deactivation Adjective Check List.) As counselor research seeks to assess what learning and practice treatments are best, for whom, and in what manner, the use of activation theory appears promising. An adjunct of the present study is an interest in applying the concept of activation to determine the motivating and involvement properties of the different practice treatments being compared, and the differences in individual levels of activation as assessed following both the practice and the delayed-post interviews.

Summary

The rationale for this research is based on the following needs: (a) the need for replication and comparative study of the effect of modeling vs. no modeling in the training of both non-verbal and verbal skills; (b) the lack of comparative findings of the efficiency of different types of practice involved in counselor and microcounseling training programs; and (c) the need to explore the concept of activation as a means of describing the effect of the various treatments used in counseling.

The decision to use the modeling and practice treatments was based on their extensive utilization in counselor and microcounseling training programs. Similar thinking was employed in the selection of dependent variables. Non-verbal and verbal initial interview skills were both deemed

appropriate in comparative tests of the use of modeling and practice treatments. Each of the skills incorporated can be defined operationally and specifically for the purposes of measurement and training.

The population of dental health paraprofessionals needs and uses interview skills consistently and routinely in its work. Yet, like many paraprofessional groups, they are not being trained in any systematic way in the people-relating skills expected of them. This group, like many others, can benefit from an expanded counselor role that seeks to extend the skills counselors and counselor educators use.

A comparative approach was selected to allow for tests of relative effectiveness of each of the methods, and to assist in answering the critical questions in counselor education by pinpointing which method(s) works best with which skill(s). There appears to be a need to investigate systematically whether behavioral skills following a micro-counseling format or adaptation do in fact generalize over time. As urged by Ivey (1971), Carkhuff (1969a, 1969b) and others, follow-up data were collected to see if the training and practice treatments were effectively retained.

This investigation was organized as a set of companion studies. Each study was considered as a discrete unit; each designed so there would be no confounding effects on the other studies. Each segment of the companion

set of studies is outlined in the following paragraphs.

Study One. Study One was concerned with the effect of modeling vs. no modeling. The acquisition of initial interview skills and the effectiveness of the model in introducing non-verbal and verbal interview skills were the focus of this segment of the total investigation.

Study Two. Study Two was designed to investigate the comparative effects of differentiated practice. The efficiency of different modes of practice in the mastery and generalization of interview skills was to be the focus of this portion of the total investigation. This part of the research incorporated immediate post and delayed-post measures of interview skill performance.

Study Three. Study Three was considered to be exploratory in nature. Questions relating to the concept of activation were of interest in this segment of the research. Of particular significance were understandings which can be gained: (a) in regard to the level of activation of each of the practice treatments; (b) in the maintenance of the level of activation for practice treatments across time; and (c) in the relationship of an individual subject's level of activation when compared to mastery of interview skills. No formal hypotheses were presented for this pilot study. Post hoc data analysis procedures will be used to investigate the questions described above.

CHAPTER II

EXPERIMENTAL DESIGN AND PROCEDURES

Overview

The major purpose of this set of companion studies was to measure both the effect of modeling via videotape and the efficiency of different types of practice in the mastery and generalization of non-verbal and verbal initial interview skills of dental hygienists. To carry out this purpose, initial non-verbal and verbal interview skills were defined from attending behaviors (Ivey, 1971). Evidence of non-verbal attending or listening behaviors was observed in initiation and maintenance of eye contact, and in relaxed, natural posture and movements as one directly faced the other person. Verbal attending behaviors comprised the skills of offering invitations to talk (ITT) and encouragements to continue talking (ECT). These total non-verbal and verbal initial interview skills formed the dependent variables in this study. Model and practice were the treatment variables researched. In addition, the trainee's initial performance of non-verbal and verbal interview skills was evaluated as a covariable. This covariate was used to control for subject differences that might have existed prior to the practice

treatment. The use of the covariate was planned for the immediate and delayed-post practice data. Activation level, as measured by the Adjective Check List, was studied in relation to the practice treatments, individual differences in activation factors, and interview performance. Activation level was defined as the psycho-physiological level of involvement as measured by the four factors of the Activation-Deactivation Adjective Check List.

Thus, separate and combined effects of the modeling and practice variables on the performance of initial interview skills of dental hygienists were the major thrusts of the present investigation. Level of activation was explored to determine its relationship to practice. The choice of modeling and practice treatments was based on learning theory and their extensive use in counselor education. The differentiated practice treatments were of special interest in this investigation.

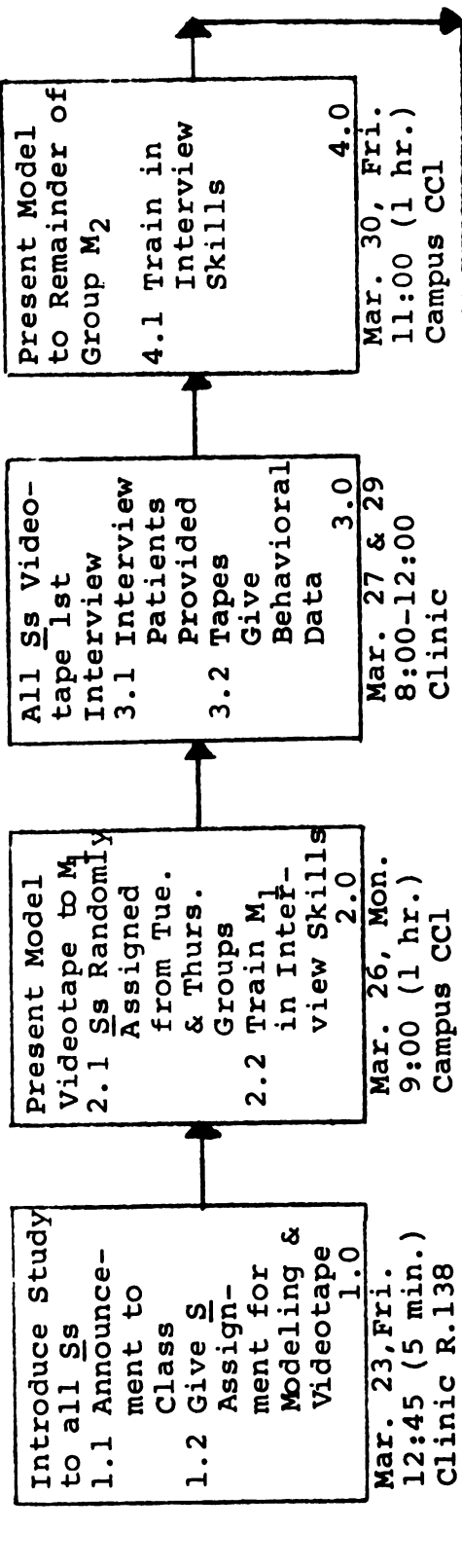
The research was conducted with dental health para-Professionals enrolled in the first year of the two-year dental hygiene curriculum at Charles Stewart Mott Community College. All 38 students enrolled for the Spring semester 1973 were involved in the interview skills training program. Subjects were randomly assigned within each phase of the treatment procedure, i. e., model and practice.

For the model phase, the subjects were assigned to one of two groups, model and no model. The model group (M_1) viewed a videotape before their first interview; the no model group (M_2) did not see the model videotape before their first interview. After their first interview the no model group was permitted to view the model videotape so that all Ss would be equal as they entered the practice phase. The sequence, flow of training activities, and data collection through the model and practice phases are illustrated in Figure 1.

During the practice phase there were five practice treatments: discrimination practice, feedback and supervisor practice, teach another practice, a combination practice with each of the first three elements, and a control practice group. At the completion of one fifty-minute practice period for each type of practice, each subject completed an adjective check list and their second interview. Both modeling and types of practice treatments will be described in detail later.

The delayed-post phase included a third interview and the completion of an adjective check list. Each of the three interviews provided measures of non-verbal and verbal interview skills. Each item measure reflecting both non-verbal and verbal interview skills was scaled so that a high score indicated better performance than a low score. Only one non-verbal item, frequency of breaks in eye contact, had to be rescaled in order to meet this requirement.

STUDY ONE: (March 23-30) Modeling



STUDY TWO: (April 3-May 3) Differentiated Practice

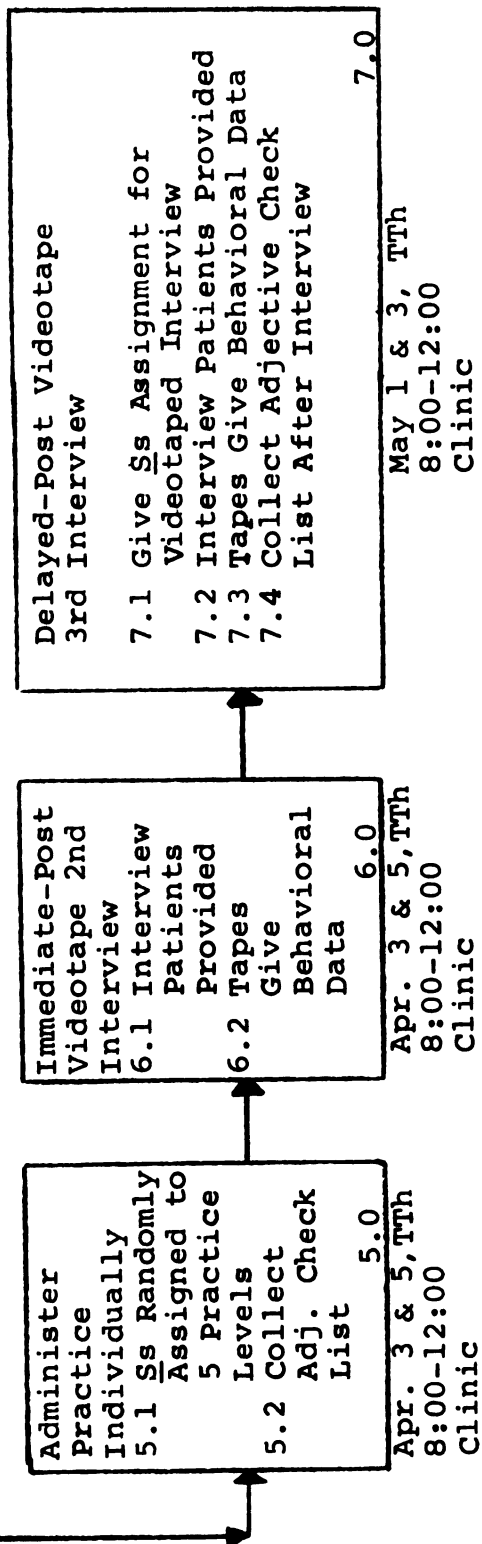


Figure 1. Sequence and Time Chart for Training Activities and Data Collection

In each of the three testing interviews the criterion measures for non-verbal and verbal interview skills were assessed in the same manner. Non-verbal total scores were based on the sum of the following observations of each seven-minute interview: duration of eye contact, the number of breaks in eye contact; and global ratings on four-point scales of body posture, gesture, and non-verbal attending behavior. Verbal total scores were comprised of the sum of observations during each seven-minute interview: the number of good invitations to talk (G-ITT), the number of poor invitations to talk (P-ITT), the number of encouragements to continue talking (ECT); and global ratings on four-point scales of quality and effectiveness in the use of invitations, quality and effectiveness in the use of encouragements, and verbal attending behavior.

As mentioned previously this research was conceived as a set of companion studies. Prior to frequency counts and ratings, all interview tapes were randomized across time and treatment groups. Hoyt reliability estimates across the three judges' observations and global ratings were computed for each of the non-verbal and verbal items in each study. In addition, internal consistency reliability coefficients were computed for the total non-verbal and verbal measures. Data within Study One were processed through the use of multivariate and univariate analyses. Data for Study Two were subjected to repeated measures multivariate analysis of variance analyses. Both multivariate

and univariate analyses were used so that any differences in interview skill items could be identified as well as differences in total non-verbal and verbal interview skill measures. The data for Study Three were processed through analysis of variance techniques. Also, the activation data were correlated with total non-verbal and verbal criterion measures.

Model

Materials

For the modeling phase, Study One, a fifty-minute video presentation was prepared by the researcher. Based on the skills defined by Ivey (1971), this film detailed the concept of attending behavior, and outlined and demonstrated the verbal and non-verbal skills contained in this interview training Program. Additional cues for offering effective invitations to talk were provided. The materials on offering invitations to talk go beyond the original formulations by Ivey (1971). Descriptive background information that was adapted and incorporated in the audio portion of the tape is included in Appendix A. When background information was included in the audio portion of the videotape, visual aids in the form of posters were presented on the accompanying video segments (Appendix D). After this background, example models were taped.

In making the model videotape advanced dental hygiene students were used as models. These models were peers, but more experienced than the Ss viewing the tape. Developed in the clinic situation, with a variety of senior students and actual patients, the model materials illustrated pros and cons of the interview skills. It was assumed that the variety of examples and models, filmed in the dental setting, increased the authenticity of the simulation so that the materials were realistic and life-like. Video materials, scripts, and modeling examples were prepared so that effective learning of skills could be achieved.

One third of the model videotape was devoted to the non-verbal interview skills; approximately equal thirds of the tape illustrated verbal skills of invitations to talk (ITT) and encouragements to continue talking (ECT). Non-verbal models were a minute in length and visual only, with no audio. Six examples of a minute's length were included. Verbal model examples were audio and video and purposely either 30 seconds or one minute in length. The length of the example depended on the skill being illustrated. Again, multiple examples were incorporated; a total of ten 30 second and nine one-minute verbal examples were included. Besides the variety of hygienist models, dental hygiene faculty introduced various sections of the model videotape. A complete outline of the content of the fifty-minute model Videotape is provided in Appendix E. Two minutes were

devoted to the introduction of the training program by the Director of Dental Health Programs and a member of the dental education faculty.

As Ivey (1971) recommended in his discussion of micro-counseling presentations, the skills presented were explicitly illustrated. Even though microcounseling approaches generally include only one skill, i.e., attending behavior, invitations to talk, or encouragements, Ivey has stated that it might be appropriate to include these initial skills together (p. 148-149). All of the initial interview skills presented in this modeling experience were deemed by Ivey to be within the parameters that could be easily perceived, comprehended, and digested in a beginning training session.

Assistants

Only one general assistant was available with the researcher to greet Ss, take roll, and help with the arrangements for the presentation of the model videotape (see Appendix F). No video technicians were present for the model videotape presentation. The television playback equipment was positioned in advance and ready for operation by the researcher.

Facilities and Apparatus

One classroom in the College Center of Charles Stewart Mott Community College served as the facility for the model

treatment. This classroom with two television monitors, 20 spaces for seating, and large tables created a spacious, quiet area for comfortable viewing of the model videotape. The same room and arrangement were used for the no model group after the model test interview was completed (prior to the practice sessions).

Shibaden Model FPC-1000 vidicon color camera with EIAJ Type 1 videotape format was used to create the videotape for the model presentation. This half-inch equipment yields good video and audio quality reproduction. For purposes of this study, the model presentation was replayed in black and white. The videotape model taping facility was compatible with Sony playback equipment.

Treatment Procedures

Obtaining and Scheduling Subjects. The interview skills training program developed for this study was presented to the director and faculty of the dental hygiene curriculum. With their approval and direction, the cooperation of the entire first-year, second-semester class was solicited. Of greatest concern was the additional time requirement, which required a commitment of an extra hour for each S and a rearrangement of individual lab and study time during clinic hours. The entire class group was extremely cooperative in agreeing to participate in the interview skills program. An announcement was made, previous to assignment and

participation, regarding the experimental nature of the training program (see Appendix G). Subjects were aware that the training program was being evaluated for the improvement of instruction and being considered for inclusion in the total curriculum.

Since Ss were appraised of the experimental nature of this learning situation, the problem of external validity should be raised. Campbell and Stanley (1963) describe the importance of the artificiality of experimental settings and a Ss awareness of participation in an experiment. In order to reduce the effects of reactive arrangements, the experimental procedures need to be similar to the kinds of experiences Ss have already encountered. An effort was made to structure the model experience as a classroom experience; practice experiences were adapted to the clinic and lab arrangements that existed. A detailed and careful explanation of the sample and experimental procedures provide the reader with knowledge about how this population might compare with some population to which he might wish to generalize (Cornfield & Tukey, 1956).

Model Videotape Presentation. After the group of Ss was informed of the interview skills training program, and agreement to participate had been secured, an arrangement was made to excuse half the group from a regularly scheduled lecture. A randomly assigned group was scheduled in this manner for the model presentation. Assignment times were

distributed a day in advance to each individual (see Appendix H) at the end of a regularly scheduled lecture.

For the model group, lecture was excused and they attended the presentation of the videotape demonstrating initial interview skills. The no model group attended their next regularly scheduled lecture class which contained information unrelated to interview skills. Following the presentation of the model, all Ss completed their first interview. At the end of the first week, the no model group was scheduled for the model presentation and the model group attended the lecture they had missed. In this way, the total group of Ss had completed the model experience before the practice phase of the experiment was scheduled.

For the model presentation, the procedures for all Ss were exactly the same. With the modeling experience recorded on videotape, the same materials could easily be presented to the two different groups and still allow for the test of the effect of the model. For each of the model demonstrations, Ss were given room times and assignments in advance. An assistant checked attendance, and the videotape was played by the researcher. The same classroom and set-up with two television monitors was employed for each presentation. The researcher was present in the rear of the classroom during the model presentation. The total time for the administration of the videotape model treatment procedure was 50 minutes.

Practice

Materials

For the practice phase, Study Two, detailed materials were prepared and selected by the researcher for each of the five levels of practice. All practice materials were tried and modified before they were finally prepared for administration to the subjects. A large envelope was assembled for each S for the scheduled practice session. Every large envelope had a set of general instructions taped to the outside (see Appendix I). The general instructions directed each subject that everything was provided in the envelope and practice room, that the S was to follow the instructions inside the envelope carefully, and was to return the materials to an assistant at the end of the 50-minute practice period. In order to structure the practice sessions uniformly, a "Practice Instructions Checklist" was constructed for each of the five levels. This checklist listed step-by-step numbered instructions for each activity, estimated time for each activity, and provided a space for the S to check that activity when it was completed. In essence, the "Practice Instructions Checklist" amounted to a very complete lesson plan for each practice session.

From this common format, the different materials were created for each of the types of practice: discrimination, feedback and supervisor, teach another, combination, and control groups.

Discrimination Practice. The purpose of discrimination practice was to create an awareness of the interview skills and to aid the subjects in distinguishing the degree to which the skills exist in a model. Basically, this type of practice was designed so that the majority of the time was directed toward viewing videotape model excerpts and rating the non-verbal and verbal excerpts. The "Discrimination Practice Handout" included in the packet of materials explained to each S that before mastery of interview skills could be achieved one must first be able to discriminate or be aware of them when they are present. Discrimination was defined as being able "to make a distinction, to separate one from another, to distinguish, or to differentiate." The two kinds of discrimination pointed out to each S included, (a) becoming more keenly aware of the presence of a particular skill, and (b) noting the degree to which the interviewing behavior exists.

Materials organized for each subject to accomplish the two kinds of discrimination in this type of practice session included the following:

1. Practice Instructions Checklist
(activity list lesson plan)
2. Discrimination Practice Handout
3. Discrimination Rating Form
4. Reaction Sheet
5. Discrimination Videotape

Appendix J contains the written materials created for discrimination practice sessions. The videotape examples of interview skills were selected and copied from the model videotape. During the 50-minute practice session Ss watched, rated, and made discriminations on 26 examples.

Feedback and Supervisor Practice. This type of practice session was devised so that the S meeting with a dental hygiene supervisor could review her first performance on videotape to make her own observations and obtain comments from the supervisor. This practice was constructed so that the session involved: (a) observation of self-performance, (b) analyzing and discussing what the S wanted to change in the next interview, (c) receiving comments and suggestions from the dental supervisor, and (d) reviewing the suggestions and comments as preparation for the second interview experience.

The opportunity was created for the S to view her own interview performance three different times, with the seven-minute tape subdivided into two, two, and three-minute segments. The instructions for viewing prescribed the different approaches for each of the three viewings. The first time, the S was to view the tape with the supervisor and share her comments with the supervisor discussing what she observed that she wished to change. The second time, the supervisor provided feedback to the S. For the third observation, the hygienist reviewed the supervisor's feedback and repeated the suggestions that had been discussed. To assist the S and the

1.

2.

3.

4.

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6.

7.

supervisor a "viewing log" form was provided for written comments during each of the segments of the three observations.

Thus, materials created for this feedback and supervisor practice session filled 50 minutes and included:

1. Practice Instructions Checklist
(activity list lesson plan)
2. Instructions for Viewing
3. Viewing Logs (for S and supervisor)
4. Videotape copy of Ss first interview.

The kinds of materials used in this practice are contained in Appendix K.

Teach Another Practice. If an individual can effectively use a skill, tell another about it, and show another person the skill so that the other learns it, the practice of this skill by the learner instructing increases the likelihood of skill mastery by the instructor. The "Teach Another" practice session was based on this idea. From the fundamental do-use-teach approach of mastering skills, this set of practice materials was arranged. Ss were told that the practice session was to involve individualized tutoring, explaining the interview skills to another individual, demonstrating the interview skills to another, answering questions asked by the other, and assisting in every way possible so that the other could identify, label, and use the initial interview skills. Based on the adage, "If you wish to learn something, to master it, try to teach it to someone

else," materials for the S included a teaching guide suggesting activities and time allowances. Over 40 minutes of the 50-minute session were detailed on this teaching guide. The S was instructed to explain, present ideas, demonstrate, illustrate, discuss, and ask questions of the other. To assist the S in the teaching process, a set of six posters was provided (Appendix D) identical to those utilized in the model videotape. In order to check the S's teaching performance a short quiz was included in the materials; the S administered these eight questions to the individual being taught at the end of the practice session. The quiz was included as a motivational device for the S.

In summary, the materials established for this practice (see Appendix L) included:

1. Practice Instructions Checklist
(activity list lesson plan)
2. Teaching Guide
3. Summary Guide on Attending Behaviors
4. Set of Six Posters
5. Interview Skills Information Test (for the trainee working with the S).

Combination Practice. The design of the materials for the combination practice was based on the elements of each of the first three types of practice--discrimination, feedback and supervisor, and teach another. Approximately equal times were allotted for a dozen discrimination ratings, feedback and analysis of the S's first interview, and

individualized tutoring of another. The structure of the materials for this 50 minute practice was identical to the first three practice conditions, but in mini form.

Thus, the S's set of materials included the following:

1. Practice Instructions Checklist
(activity list lesson plan)
2. Discrimination Practice Handout
3. Mini Discrimination Rating Form
4. Discrimination Videotape (model examples)
5. Instructions for Viewing
6. Viewing Logs (for S and supervisor)
7. Videotape copy of Ss first interview.
8. Mini Teaching Guide
9. Set of Six Posters

The written materials for the combination practice are found in Appendix M.

Control Practice. The control Ss were provided with an activity of interest to dental hygienists, but not related to interview skills. A set of commercially prepared audio cassettes and accompanying booklets with pictured and written materials on dental plaque diseases was secured for the control Ss. The Ss were asked to listen to three short tape cassettes, answer some brief questions on each, and complete an evaluation form on each cassette. Two sets of tapes of equivalent content were available to be randomly assigned to the control group. Appendix N contains samples of the

written materials prepared for this group. The cassettes, a set of self-learning audio visual education materials, were available through the Preventive Dentistry Section of the Dental Health Center, San Francisco, California. The content did not involve any reference to interview skills.

In total, Ss for each level of practice received a packet of written materials and pencils from an assistant. As prescribed, some of the materials contained videotapes. The other assistants, facilities, and apparatus incorporated into the practice sessions will be discussed in the following sections.

Assistants

Practice General Assistant. One general assistant was available with the researcher to greet Ss, take roll, pass out materials, collect and check-in materials for the practice sessions. Appendix F contains a list of the duties and instructions to the model and practice general assistants.

Video Monitor Technicians. During the practice sessions that contained discrimination practice, the practice that involved entirely discrimination tasks and the first segment of the combination practice, a video monitor technician was necessary. The S was not expected to operate the television equipment, only to view the videotape provided and complete the appropriate observational and rating activities.

These technicians were instrumental in setting up the facilities for the practice sessions. Also, technicians were available to load tapes on the monitor for playback for the feedback and supervisory sessions. This was completed in advance of the practice session. Once the feedback practice was underway, the supervisor operated the television monitor as necessary.

Practice Personnel. Practice personnel were involved in three of the types of practice included in this research. The feedback and supervisor practice sessions utilized each of the four different clinical dental hygiene staff. The staff were assigned to practice sessions as available from the clinic and so that as much as possible each faculty member was involved equally with 50 minute and 15 minute feedback sessions. Supervisors experienced three hours of inservice training prior to implementation of the program; one hour of additional training was provided by the researcher so that each supervisor would be experienced in delivering the practice format (see Appendix O). All four female staff members were experienced dental hygienists and clinical supervisors. The two dentists on the faculty were involved in administrative and lab responsibilities and not available for the feedback sessions.

To complete the practice personnel, each subject assigned to teach another practice had a different person to train in initial interview skills. Volunteers for the ss completing

this type of practice were solicited from the one-year dental assistants program. Thus, the candidates working with the teach another treatment could be described as motivated, interested, health occupations college students.

Facilities and Apparatus

Five small rooms or offices at the Mott Children's Clinic Dental facility of Charles Stewart Mott Community College were used for practice sessions. These practice rooms were similar in size, but varied in arrangement and decor. These were the only spaces available. Although not totally equivalent, efforts were made to set up the rooms similarly for practice sessions.

Ideally, totally equivalent office space for all practice sessions would have been desired. This was not possible. It was assumed, however, that the effects of the facilities were minimal. A quiet, private room with necessary equipment and materials was provided in all cases. Appendix P illustrates the floor plan of the Dental Clinic facility.

Sony AV series video recorders with 19 inch monitors were utilized for the playback of interview and discrimination materials. For purposes of the practice sessions requiring videotape materials, second generation copies were provided of discrimination models and subject interviews. Original seven-minute interview videotapes were set aside for data analysis.

Treatment Procedures

Following the presentation of the modeling phase, all Ss were involved in the practice treatments. Again, Ss received time and room assignments in advance. The practice sessions were added into the clinic experience. Each S completed these activities during what had been allotted as individual study time.

Practice treatments were all designed to take place in one hour's time, actually a 50 minute class period. All treatments were administered individually. Ss reported to the assistant at the time designated on their assignment notice. After receiving an envelope of materials from the assistant, each S proceeded to the assigned room for her practice session.

Practice treatment content varied for each of the five levels of practice described previously. Practice treatments involving discrimination, feedback, and supervision and the combination necessarily involved the use of a television monitor and playback unit with prepared video materials. These were provided in the practice room. Practice treatments involving feedback and supervision, teaching another, and the combination included another individual. A dental hygiene instructor was involved in the feedback practice treatment; teaching another practice involved a volunteer for the S to train in interview skills. The combination practice included both instructor and volunteer for each S

experiencing the practice treatment. The supervisors and volunteers were scheduled to arrive at the assigned practice rooms as needed for the various treatments.

After completion of the practice treatment, the S returned to the assistant and checked in the envelope of materials. The practice session was followed immediately by a second videotaped interview. Subjects were scheduled for practice so that five reported and completed different practice treatments; a second group arrived for practice for the next hour while the first group completed its interviews. Practice treatments were prepared uniformly and administered in an individual setting.

Hypotheses

The overall purpose of this set of companion studies was to measure the acquisition of initial interview skills modeled via video simulation and practiced differentially. For purposes of clarity, the different phases of this study were considered to be separate, but companion pieces of research. Study One was concerned with the effect of modeling vs. no modeling on the acquisition of initial interview skills. Study Two was designed to investigate the efficiency of different modes of practice in the mastery and retention of skills. Study Two included both immediate and delayed-post tests. Study Three focused on the relationship of activation to practice treatments, individual differences, and interview performance. Formal hypotheses were developed for Study One and Study Two of the companion investigations.

Study One

Study One was designed to provide a means of evaluating the effect of the model plus cues presentation. Modeling and video simulation have been advocated in counseling literature. Ivey (1971) and others have adapted modeling in the microcounseling approach to meet the needs of a variety of subjects. A comparison of the effect of the prepared modeling simulation to a control was desired to determine the potency of the model treatment in training dental hygienists in both initial non-verbal and verbal interview skills. To test the expectation that the model treatment would make a difference, the following directional hypotheses were formulated:

1. Ss who receive the model instruction tape will exhibit superior non-verbal interview skills to those who do not receive model instruction.
2. Ss who receive the model instruction tape will exhibit superior verbal interview skills to those who do not receive model instruction.

Study Two

Different types of learning practice procedures are prevalent in the counselor education literature. Single types of practice experiences often exist when a variety of studies are reviewed. Also, differential kinds of practice are often coupled with a variety of learning models, or used in a multiple fashion which confounds types of practice.

There seemed to be a lack of comparative investigations contrasting the efficiency of different kinds of practice. Therefore, the hypotheses for the practice treatments reflect a needed comparative analysis. The following general hypotheses were formulated:

1. Ss who receive differential practice treatments will exhibit different performance levels of non-verbal interview skills.
 - a. Ss who receive combination practice treatment (P_4) or teach practice treatment (P_3) will exhibit superior non-verbal interview skills to those who receive feedback practice treatment (P_2) or discrimination practice treatment (P_1).
 $(P_4 + P_3 > P_2 + P_1)$
 - b. Ss who receive feedback practice or discrimination practice treatments (P_2 and P_1) will exhibit superior non-verbal interview skills to those who receive the control practice treatment (P_5).
 $(P_2 + P_1 > P_5)$
2. Ss who receive differential practice treatments will exhibit different performance levels of verbal interview skills.
 - a. Ss who receive combination practice treatment (P_4) or teach practice treatment (P_3) will exhibit superior verbal interview skills to those who receive feedback practice treatment (P_2) or discrimination practice treatment (P_1).
 $(P_4 + P_3 > P_2 + P_1)$
 - b. Ss who receive feedback practice or discrimination practice treatments (P_2 and P_1) will exhibit superior verbal interview skills to those who receive the control practice treatment.
 $(P_2 + P_1 > P_5)$

Sample

A sample of 38 Ss was obtained from the second-semester, first-year dental hygiene program at Charles Stewart Mott Community College. This group of Ss comprised the total membership of the 1973 Spring semester freshman class; all members of the class were females. A careful delineation of the sample and sampling procedure follows in order to permit the reader to judge how this population compared with populations to which he might wish to generalize (Cornfield & Tukey, 1956).

Sample Characteristics

1. Sex: 38 females.
2. Age: range = 19-37 years; mean = 22.7 years; median = 20 years.
3. Marital status: 10 married, 26 single, 1 divorced, and 1 widowed.
4. Class standing at Charles Stewart Mott Community College: second semester of a four-semester associate degree program in dental hygiene.
5. Academic standing: All students must obtain a 2.5 average, complete 80 hours experience in a dentist's office, and take the Dental Hygiene Aptitude Test before being considered for selection in the degree program.
6. Employment: All students are full-time students. Some of the subjects maintain limited, part-time employment in addition to their full-time college study.
7. Clinic Experience: All subjects in the second semester of their first year are expected to spend 4 hours a week for 15 weeks in actual clinic work under supervision. All subjects

were engaged in interviewing and patient care at the time the interview skills training program was initiated.

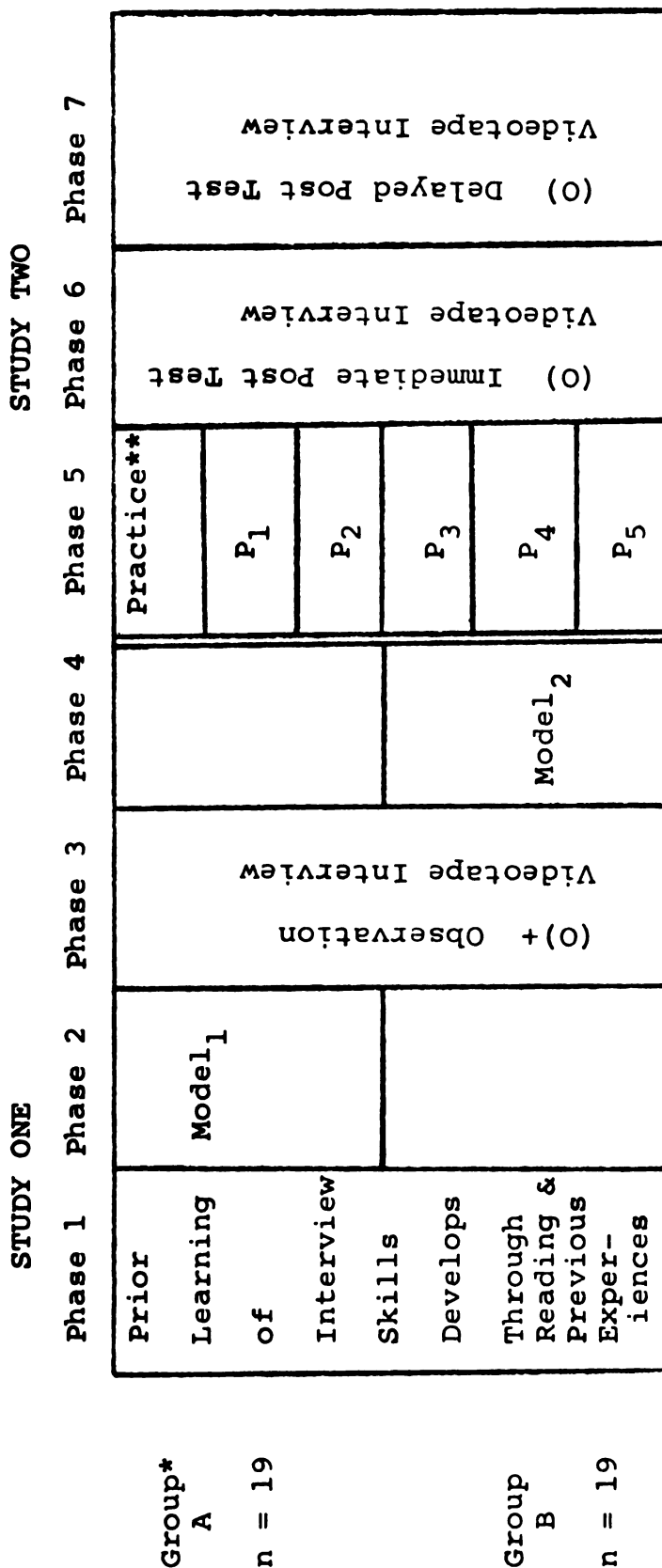
For purposes of this study students enrolled in the Health Occupations Division, Dental Hygiene program at Charles Stewart Mott Community College, Flint, Michigan, provided a group of paraprofessionals interested in interview training skills. Students routinely interview, instruct patients in dental hygiene procedures, and perform dental cleaning and charting activities. In general, trainees seek to motivate and reinforce co-operative patient behavior toward appropriate individual dental care. This first-year class had no specific training in interview skills. Although class discussion highlights the necessity for relating with patients and the importance of motivating them to engage in appropriate hygiene procedures, no systematic skill training program existed in the area of interview behaviors. Each student is expected during the course of the second semester to complete between 10 and 15 patient interview, instructional, and cleaning sequences in the dental clinic program. In the course of these expected patient interviews each trainee must begin to relate to a variety of individuals seeking dental hygiene care. For these reasons both students and faculty were interested in the interview skills training program and actively supported the program.

Subject Assignment

The procedural steps in the random assignment of Ss are presented in Figure 2. In the modeling phase, Study One, Ss were randomly assigned to one of two groups, model (M_1) or no model (M_2). Because of artificial scheduling requirements dividing the class into Tuesday and Thursday sections, random assignment was completed by section A and section B (two random halves for each section). There was no planned difference between sections other than the sequencing created by the two times offered in the scheduling of clinic times; only 20 students could be handled in the clinic at one time period. In the practice phase, Study Two, Ss were randomly assigned to one of five levels of practice treatment. All interviews were conducted on Tuesday and Thursday at the three times indicated in Figure 2, phases 3, 6, and 7. For examples of the individual assignment forms prepared for each S see Appendix H.

For Study One, data for all 38 subjects were collected. In Study Two, the subject pool was reduced by one subject because she did not complete an interview. Covariate analysis included all available completed data, $n = 37$. Multivariate and univariate analyses of variance for Study Two included a total of 35 subjects, seven subjects for each level of practice. Two additional subjects were dropped prior to analysis of data to obtain an equal cell size of seven for each practice treatment. Three subjects failed to complete

Companion Studies



* Study One: Random assignment of Ss to model instruction-- Tuesday: ½ to M₁, group A and ½ to M₂, group B; Thursday: ½ to M₁, group A and ½ to M₂, group B.

** Study Two: Random assignment of 38 Ss to practice treatment.

Study Three: Data collection of AD-ACL after Phases 5 and 7.

+ Phase 3 observation used as covariate to adjust for individual differences that might exist prior to practice treatments.

Figure 2. Effects of Modeling and Differentiated Practice Upon Interview Skills of Dental Hygienists

the adjective check lists; resulting in complete data for 35 of the 38 subjects for the analysis of the activation data.

Interviewee Population

Patients available for dental hygiene trainees to interview during phases 3, 6, and 7 consisted of children and adults from the general population in the local geographic area. For purposes of this training experience only adult individuals seeking dental hygiene care at the Mott Clinic were involved. Only adult patients were asked to participate because of the limited time schedule, television equipment, and the additional complications anticipated in involving children. Willing adults from the waiting rooms in the dental clinic were solicited to be interviewed by the Ss. The individuals being interviewed were from the population served by the clinic--both sexes, adults ranging from college students to senior citizens, different socio-economic levels, racial and cultural backgrounds were included. Patients agreeing to be interviewed were paired in the order of their arrival so that the patients were random to treatment conditions. No one individual was interviewed more than one time. Student assistants kept records of each person's name so that a complete list of all those who volunteered for interviews was available. Very few adults declined as they were visiting the clinic and had time as they waited to seek dental care for themselves or their children.

Measures and Data Collection

Both total non-verbal and verbal measures were used to compare outcomes. Each set of non-verbal and verbal measures included interview skill items composed of frequency counts, duration, and global ratings based on observed data. The same measures were applied to the model, practice, and generalization effects.

Non-Verbal Measures

Items included in the total non-verbal measure of initial interview skills were developed from the assessment of the videotaped interview data. Observational items of duration of eye contact and number of breaks in eye contact were combined with three judges' global ratings of body posture, gesture, and general non-verbal attending behavior. Both observational and subjective rating items seemed important in the assessment of total non-verbal interview skills. Examples of the four-point non-verbal rating scales used for body posture, gesture, and non-verbal attending behavior are provided in Appendix Q.

Verbal Measures

Items incorporated in the total verbal measure of initial interview skills were developed in a similar manner from videotaped interview data. Observational items of the frequency of the number of good (open) and poor (closed)

invitations to talk, and the frequency of encouragements to continue talking along with three judges' global ratings of the effectiveness of invitations, encouragements, and general verbal attending formed the total verbal outcome measure. Appendix Q also contains an illustration of the four-point, verbal rating scales developed for global ratings. Again, both the frequency and duration as well as the global types of items were viewed as contributing important elements to the assessment of total interview skill performance.

Data Collection

Raw data in the form of videotaped interviews were collected on three different occasions: after modeling, after practice, and as a delayed-post measure three weeks after practice. Each S was asked to complete a seven-minute interview with a volunteer interviewee. Instructions for videotaping interviews were the same for all three interviews (see Appendix S).

Subjects were accustomed to the use of television as an instructional tool. They were also aware that video-recording of interviews was expected in the diet interview sequence planned for the second year of the dental hygiene curriculum. These interviews, however, were the first experience scheduled in their training program.

Facilities and Apparatus. For collection of data, one dental surgery unit was converted into a television studio for the videotaping of interviews. This large area with controlled access also furnished an anteroom where videotape technician, assistant, and equipment could be stationed out-of-sight from the interviewing process.

Sony AVC 3210 cameras and AV series video recorders with 19" monitors were utilized for recording S interviews. The same studio facility at the clinic was employed for videotaping the model materials and interviews. The positioning of dental equipment, chair, and props was as similar to the clinic stations as possible. Identical arrangement of dental equipment and wide-angle camera set-up was maintained for all subject interviews.

Sufficient black and white television equipment was available for all phases of the study. The complete cooperation of the college Instructional Media Center for materials preparation and equipment was required and received. The advisement, cooperation, and competence of the Instructional Media Center Director and staff of Charles Stewart Mott Community College enabled the implementation of this study.

An additional piece of equipment, a 20 channel Esterline Angus Event Counter was employed in the data collection aspects of this research.

Assistants. To execute the interview experience and collect the data, a general assistant, videotape assistant,

and videotape technician were needed. The general assistant checked off Ss as they reported for their interview experience, asked the S to read the instructions for videotaping her interview, recorded names of patients and completed general clerical tasks. This general assistant worked closely with both the videotape assistant and technician that were actually carrying out the duty of videotaping the interviews. The videotape assistant timed the interviews, ushered subjects and people in and out of the studio facility; the videotape technician was responsible for the technical and mechanical functioning of the videotaping operation. Responsibilities and materials used by these assistants are presented in Appendix T.

From the seven-minute videotape excerpts, judges completed frequency and duration counts as well as global ratings that provided the data for the dependent variables in both Study One and Two. The Esterline Angus Event Counter was employed to obtain frequency and duration counts and to provide the specific record for data analysis. Non-verbal total scores included items based on eye contact duration and the number of breaks in eye contact. The amount of eye contact duration was measured from the observational records recorded by the three judges, these totals were transformed to represent the number of seconds of eye contact duration during the seven-minute period. The number of breaks in eye contact was tallied from the same observational record

and reversed so that the smaller or minimum frequency of breaks was recorded negatively ($y = 100 - x$). Thus, all scales on the non-verbal and verbal items reflected a higher score as being more desirable. The four-point global rating scales were set in the same way so that a higher score reflected better performance.

Verbal skills data also were developed from the videotape excerpts, so that observational records of judges contained frequencies of the extent of use of verbal interview skills (ITT and ECT). Again, the Esterline Angus Event Counter was used to facilitate data collection. The three four-point global rating scales were constructed in the same manner as the non-verbal so that a higher score reflected better performance.

Judges

Two sets of three judges each were selected and trained by the researcher to make assessments of non-verbal and verbal interview skills performance. All judges were employed in counseling or psychology fields. Judges from the counseling discipline all had master's degrees, graduate course work beyond the master's degree, and experience in counseling; of the two judges from the psychology discipline one had completed a doctorate and the other was working on the advanced degree, both had psychology teaching experience. Two females and one male were included in each set of judges. One of the females in each set represented the counseling discipline

and one the psychology discipline. Thus, all the judges were considered to be competent professionals with similar training and experience.

The three judges making non-verbal assessments were trained by the researcher to record the duration and frequency of breaks in eye contact, and then at the end of the seven-minute segment of interview performance to make the three global ratings for the S on body posture, gesture, and non-verbal attending. Their training consisted of the following sequence of experiences.

1. Introduction to attending behavior.
2. Observation of the model videotape (non-verbal portion).
3. Explanation and discussion of non-verbal skills.
4. Demonstration of the Esterline Angus Event Recorder.
5. Try-out of recording equipment.
6. Practice in observing eye contact and breaks in contact.
7. Discussion and further practice.
8. Presentation of global rating scales.
9. Observation of models.
10. Practice rating and discussion.

Steps 6 through 10 in the training sequence were repeated until all the judges and the researcher agreed that the ratings were similar. Training was continued until doubts and concerns on how to rate a specific example of behavior were removed through continued discussion and practice.

The researcher carefully presented a variety of interview excerpts developed in tryouts of various rating systems to insure the competence of the judges to handle the required discriminations. Model tape excerpts and five interviews not included in the practice treatment data analysis provided materials for the judges.

All judges' ratings of non-verbal interview performance were made from videotapes with no audio background. This procedure focused attention on the necessary observations and removed the audio component as a source of contamination.

The three judges making verbal assessments were trained by the researcher to record the frequency of good (open) invitations (G-ITT) and poor (closed) invitations (P-ITT) to talk, and the frequency of encouragements to continue talking (ECT). At the end of the seven-minute interview performance segment, the judges were also trained to make the three global ratings for the S on use of ITT, use of ECT, and verbal attending. The training consisted of the following sequence of experiences.

1. Introduction to attending behavior.
2. Observation of the model videotape (verbal portion).
3. Explanation and discussion of verbal skills.
4. Visual presentation of verbal skills (posters) and discussion.
5. Demonstration of the Esterline Angus Event Recorder.
6. Try-out of recording equipment.
7. Practice in listening and rating ITT and ECT.

8. Discrimination discussion and further practice.
9. Presentation of global rating scales.
10. Practice in global ratings and continued discussion.

Again, steps 7 through 10 were continued until the judges and the researcher agreed that the ratings were similar. As previously stated, the training sequence was repeated until doubts and concerns on how to rate a specific example of behavior were removed.

All judges' ratings of verbal interview performance were made from the audio portion of the videotapes with no pictures. This procedure focused attention on the necessary listening and removed the video component as a source of contamination.

In both the non-verbal and verbal rating procedures, each of the three judges was furnished with an independent work station which contained a videotape monitor for viewing or listening, a table and chair, an appropriate rating board for the event recorder, and global rating materials. The rating stations were positioned in one room and the recording equipment, tapes, and videotape recorder partitioned in an adjoining room.

Videotapes for all three sets of interviews (model, practice, and delayed-post phases) were first collected and then randomly ordered and presented to the raters. The judges observed or listened to each interview, made appropriate responses on the event recording equipment, and then rated

the Ss on the global rating scales. Examples of the event recorder output are illustrated in Appendix R.

Reliability

Using an analysis of variance technique developed by Hoyt (1941), rater reliability was estimated on each of the items contained in the non-verbal and verbal measures. The ANOVA was calculated on a Control Data 6500 computer using a program developed by Jennrich (1961). This procedure yielded estimates of reliability of the mean judges' ratings on each of the items composing the total non-verbal and verbal scores at each of the three data collection phases. Results are reported in Table 1.

The subject pool used in estimating the judge reliability contained all 38 subjects of the model and delayed-post interview data. The lack of one subject's interview data for the practice phase resulted in 37 subjects for the reliability coefficients reported for the immediate practice interview data.

As obvious from the coefficients reported in Table 1, frequency and duration data resulted in much higher coefficients than the judges' global ratings. Only on one frequency item (G-ITT) did the reliability (.75, .73, and .63) appear to be lower. Apparently, the judges found it more difficult to consistently determine good quality of an invitation than poor quality. In essence, the judges were

Table 1
 Hoyt Reliability Coefficients for the Mean Judge Ratings
 For Each Non-Verbal and Verbal Measure at Each Testing Time

Interview Skill Measures	Model Interview Data	Practice Interview Data	Delayed-Post Interview Data
Non-Verbal Items			
Eye Contact Duration	.96	.96	.96
Breaks in Eye Contact	.84	.89	.88
Body Posture Rating	.64	.76	.55
Gesture Rating	.63	.77	.72
Non-Verbal Attending			
Global Rating	.75	.82	.74
Verbal Items			
Good Invitations	.75	.73	.63
Poor Invitations	.90	.91	.84
Encouragements	.95	.95	.98
Use of ITT Rating	.80	.63	.73
Use of ECT Rating	.75	.61	.77
Verbal Attending			
Global Rating	.81	.62	.72

not only distinguishing the frequency of invitations and encouragements as they listened, but also discriminating whether the verbal content reflected a poor attempt or good attempt by the Ss in offering an invitation to talk.

Other than the one exception, the difference in observational and global item reliability appears to be substantial. It can also be noted from Table 1 that the consistency of the reliability coefficients across the model, practice, and delayed-post testing phases of the data remained more similar for the frequency and duration data than the global rating items. Regardless of the differences in reliability of frequency and duration vs. global rating items, and the greater variance in reliability of the global rating items, the reliability coefficients were well within the generally acceptable range for such data.

In addition to the mean judges' ratings on model, practice, and delayed-post interview items, the internal consistency reliability of non-verbal and verbal total scores (a simple sum of the variables in Table 1) at each of the three phases (times) was estimated. These total non-verbal and verbal reliability estimates were obtained by the Hoyt analysis of variance technique. Results are reported in Table 2.

Table 2

**Hoyt Reliability Coefficients for Total Non-Verbal
And Verbal Measures at Each Testing Time**

Interview Skill Measures	Model Interview Data	Practice Interview Data	Delayed-Post Interview Data
Total Non-Verbal	.23	.26	.37
Total Verbal	.53	.41	.33

Total score reliabilities were lower than the item reliability estimates (Table 1) based on the mean judge ratings. Since total reliability estimates were affected by the correlations of all non-verbal or verbal items to each other, differences in reliability estimates were expected, i.e., the first set of reliabilities addressed the question of inter-judge agreement while the second set of reliabilities addressed the question of inter-item agreement.

Activation Data

In addition to the videotape performance record, Activation-Deactivation Adjective Check List data were obtained. Immediately following the practice treatment and after the last videotape performance record, activation data were gathered. These data provided four factor levels of activation information. The four factors, or subscales, of the Activation-Deactivation Adjective Check List were

derived from analyses of student self-ratings to a group of activation-descriptive and mood-descriptive adjectives (Thayer, 1967). The following are brief descriptions of the properties of each of the four factors:

1. High Activation adjectives (clutched-up, jittery, intense, stirred-up, fearful) are most representative of feelings associated with anxiety or stress.
2. General Activation adjectives (lively, active, full-of-pep, energetic, peppy, vigorous, activated) represent moderate activation feelings which do not particularly describe feelings associated with anxiety or high stress; adjectives probably represent a middle range of activation feelings.
3. General Deactivation adjectives (at-rest, still, quiet, leisurely, quiescent, calm, placid) probably best discriminate feelings associated with high anxiety and stress or the opposite feelings to those states. This factor has been the least stable of the factors; interpretation of this factor score must be made with caution.
4. Deactivation Sleep adjectives (sleepy, tired, drowsy) are probably not sensitive to stimulus conditions inducing stress or high anxiety. Scores on the factor best represent the middle to low range of activation feelings.

Feedback Data

After the study had been completed, the researcher met with all Ss during a scheduled meeting hour. During this time, an offer was made for those Ss who had not had an opportunity to view their interview performance to make arrangements to see the videotapes of their interviews. Any questions regarding the nature of the experiment were answered and discussed.

Additionally, this opportunity provided time for structured feedback in the form of a student survey (see Appendix U). Although not planned in the initial proposal, the information collected through the student survey provided informal information for the dental hygiene faculty as well as the researcher.

Design and Analyses

Experimental Design

As mentioned before, the organization of this research was conceived as a set of separate companion studies. Therefore, the experimental designs used followed the basic outline designated for Study One and Study Two.

The design model for Study One is illustrated pictorially in Figure 3. This study used a "post-test only" design which is strongly suggested by Campbell and Stanley (1963) for educational and psychological research. Random assignment of Ss to the model treatment and no model groups permitted absence of pre-test measures. The 38 Ss were divided equally between the model and no model groups. Six non-verbal and seven verbal interview skill variables were incorporated in the design.

A representation of the experimental design for Study Two is illustrated in Figure 4. Study Two included the same non-verbal and verbal dependent variables as Study One. Interview skills (13) by times (2), with levels of practice (5)

		M ₁	M ₂
		S ₁S ₁₉	S ₂₀S ₃₈
V ₁ Non- Verbal	I ₁		
	I ₂		
	I ₃		
	I ₄		
	I ₅		
	Total Non- Verbal		
V ₂ Verbal	I ₆		
	I ₇		
	I ₈		
	I ₉		
	I ₁₀		
	I ₁₁		
	Total Verbal		

M₁ = Model Prior to First Videotape Experience
 M₂ = No Model Prior to First Videotape Experience
 S = Subjects, Dental Hygiene Students
 V₁ = Non-Verbal Interview Skills
 V₂ = Verbal Interview Skills
 I₁₋₅ = Non-Verbal Interview Item Measures
 I₆₋₁₁ = Verbal Interview Item Measures

Figure 3. STUDY ONE: Pictorial Representation of the Experimental Design to Test the Effect of Modeling

			P ₁	P ₂	P ₃	P ₄	P ₅
			S ₁₋₇	S ₈₋₁₄	S ₁₅₋₂₁	S ₂₂₋₂₈	S ₂₉₋₃₅
T ₁	V ₁	I ₁ . . I ₅ Total					
	V ₂	I ₆ . . I ₁₁ Total					
T ₂	V ₁	I ₁ . . I ₅ Total					
	V ₂	I ₆ . . I ₁₁ Total					

P₁ = Discrimination Practice
 P₂ = Feedback and Supervisor Practice
 P₃ = Teach Another Practice
 P₄ = Combination Practice
 P₅ = Control Group
 S = Subjects, Dental Hygiene Students
 T₁ = Immediate-Post Test
 T₂ = Delayed-Post Test
 V₁ = Non-Verbal Interview Skills
 V₂ = Verbal Interview Skills
 I₁₋₅ = Non-Verbal Interview Item Measures
 I₆₋₁₁ = Verbal Interview Item Measures

Figure 4. STUDY TWO: Pictorial Representation of the Experimental Design for Comparative Study of Practice

with Ss nested within practice but crossed with times and skills formed the basic matrix. Only 35 Ss were included in the analysis procedure; each practice level had equal cell size.

Analysis of Data

Data were keypunched and verified at the Michigan State University Computer Center. The various statistical analyses were calculated for Study One and Two on a Control Data 6500 computer; Study Three analyses were calculated on the Control Data 6500 and 3600 computers. An analysis of variance program developed by Jeremy Finn (1968) formed the base for the analysis of data in Study One and Study Two.

As outlined before, the companion nature of the studies included in this research provided an approach to the design and analysis of data. Three different phases were considered in developing the analysis.

1. Study One: The analysis of non-verbal and verbal performance of interview skills for those receiving model and no model instruction.
2. Study Two: A total analysis of non-verbal and verbal performance of interview skills for those receiving different practice treatments ($P_1 \dots P_5$) at two points in time.
3. Study Three: Activation dimensions were to be analyzed post hoc to gain understandings of the

nature of activation factors in relation to the practice treatments, individual differences, and the performance of interview skills.

Following the design for Study One, the data were subjected to multivariate and univariate analyses of variance. Thus, the data collected were analyzed using analysis of variance techniques for a one-way design with 13 dependent variables (six non-verbal and seven verbal). The model hypotheses were stated in a directional manner since the direction reflected the expected results. However, since the results were of interest even if in the non-predicted direction, the model data were analyzed in a non-directional fashion (at the .05 level instead of the .10 level).

Data analysis for Study Two proceeded with repeated measures multivariate analysis of variance for the combined practice data. The use of a covariate, the Ss initial interview performance, was evaluated. Appropriate contrasts of practice treatment results were calculated based on the analyses of non-verbal and verbal total scores. The sub-hypotheses ordering the different practice procedures reflected the best guess regarding the properties of the practice treatments. Since the results were of interest even if in the non-predicted direction, tests were made in a non-directional fashion (.05 level of error instead of .10 level of error).

As noted earlier, no formal hypotheses were prepared for Study Three. Data analysis was completed on a post hoc basis to gain understandings of exploratory questions of interest. First, an investigation of the activation effect of practice treatments was studied. An analysis of variance technique for a two factor (5 x 4) experiment was utilized--practice treatments by activation dimensions, with groups of subjects nested within practice treatments. Secondly, the individual changes in activation from practice to last interview were examined. A repeated measures analysis of variance technique for a two factor (4 x 2) experiment was utilized--activation dimensions by time of measure, with all subjects crossed with activation factors and times. Finally, the relationship of activation dimensions to performance was investigated. Correlations were computed for activation dimensions and total non-verbal and verbal interview skills.

The outcomes of these data analysis procedures are reported in Chapter III.

CHAPTER III

RESULTS

The results of this investigation were based upon measures of both non-verbal and verbal initial interview skills. Total scores for both non-verbal and verbal interview skills were obtained from frequency and duration counts and global ratings. Therefore, the results reported will include analyses of the composite non-verbal and verbal criterion measures as rated by three judges. Also, analyses of the non-verbal and verbal item data used to develop the composite measures will be reported. Together, composite and item data will provide a complete, comprehensive and comparative view of the non-verbal and verbal initial interview skills. Because of the organizational structure of the companion studies, results will be presented separately for each study.

Multivariate and univariate analyses of variance were used in Study One to test the effect of the model videotape. Study Two incorporated repeated measures multivariate analysis of variance techniques to investigate the combined effect of the different types of practice over time. Planned contrasts were calculated as required. For all hypotheses the .05 probability of a Type I error (α) with appropriate

degrees of freedom was used. Analysis of variance results and correlations were completed for Study Three.

Study One: Modeling

General Findings

The effects of the model videotape can be observed in terms of the result means for model and no-model groups. The means for each item and total non-verbal and verbal means are recorded in Table 3*. The range of values for

*In the tables presented in this chapter, the following abbreviations will be used for the initial interview skills.

Non-Verbal Interview Skills:

Eye Contact	= Eye Contact Duration
Breaks	= Frequency of Breaks in Eye Contact
Posture	= Global Rating of Relaxed Posture
Gesture	= Global Rating of Natural Gestures
Non-Verbal	= Global Rating of Non-Verbal Attending
Total Non-Verbal	= Total Non-Verbal Score (All Non-Verbal Interview Skills)

Verbal Interview Skills:

G - ITT	= Good Invitations to Talk
P - ITT	= Poor Invitations to Talk
ECT	= Encouragements to Continue Talking
ITT Rating	= Global Rating of Effectiveness for Invitations to Talk
ECT Rating	= Global Rating of Effectiveness for Encouragements to Continue Talking
Verbal Rating	= Global Rating of Verbal Attending
Total Verbal	= Total Verbal Score (All Verbal Interview Skills)

Table 3

Cell Means and Standard Deviations
for Model and No-Model Groups
on Verbal and Non-Verbal Interview Skills, All Judges

Interview Skill Items	Model (n = 19)		No-Model (n = 19)		Pooled (n = 38)	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Eye Contact	1030.9	151.1	993.2	156.4	1012.1	153.7
Breaks*	247.0	23.1	240.8	22.2	243.9	22.7
Posture	7.9	2.0	7.3	1.5	7.6	1.7
Gesture	8.1	1.9	7.6	1.8	7.8	1.9
Non-Verbal	8.6	1.8	7.7	1.8	8.2	1.8
Total	1302.5	170.0	1256.7	173.9	1279.6	172.0
Non-Verbal	1302.5	170.0	1256.7	173.9	1279.6	172.0
G - ITT	16.4	9.4	9.1	7.3	12.7	8.4
P - ITT	40.3	13.9	22.5	17.9	31.4	16.0
ECT	38.9	23.7	39.3	24.9	39.1	24.3
ITT Rating	7.5	1.5	6.1	2.0	6.8	1.8
ECT Rating	7.4	2.1	7.2	1.9	7.3	2.0
Verbal Rating	7.3	1.7	6.7	2.0	7.0	1.9
Total Verbal	117.8	37.5	90.8	43.7	104.3	40.7

*Frequency of breaks in eye contact as rated by each judge was transformed by reversing the direction so that the minimum number of breaks reflected the higher and positive end of the continuum with maximum breaks resulting in lower scores ($y = 100 - x$).

each of the interview skill items reported in Table 3 is indicated below:

1. Eye Contact: 0 - 1260

Eye contact was reported as seconds of eye contact duration summed across three judges (60 seconds x 7 minutes x 3 judges = 1260 seconds maximum eye contact).

2. Breaks: 0 - 300

Breaks in eye contact were based on the frequency of shifts in eye contact summed across three judges. The number of breaks as rated by each judge were transformed by reversing the direction so that the minimum number of breaks reflected the higher and positive end of the continuum ($y = 100 - x$).

3. All Non-Verbal and Verbal Ratings: 3 - 12

Ratings for global items (posture, gesture, non-verbal attending, effectiveness of ITT and ECT, verbal attending) were based on a 1-4 point scale summed across the three judges.

4. Invitations and Encouragements: 0 - 60 (estimate)

Verbal observations (G-ITT, P-ITT, and ECT) were based on the frequency of verbal invitations and encouragements summed across the three judges.

Cell means for the model group were higher for both total non-verbal and verbal measures than for the no-model group. Higher means were recorded for the model group on all item measures except the verbal item encouragements to continue talking. Intercorrelations for all interview skill items are reported in Appendix V. With the background of these general findings in mind, the hypotheses dealing with the effect of the model videotape are reported.

Results of the Tests for Hypotheses

Hypothesis 1 was planned to test the effect of model instruction on non-verbal interview skills. A multivariate and a univariate analysis of variance procedure were used to test Hypothesis 1. The results of the analyses are shown in Table 4.

The model hypotheses were stated in a directional manner because the direction reflected the expected results. However, since the results were of interest even if in the non-predicted direction, the model data were analyzed in a non-directional fashion (at the .05 level instead of the .10 level). Thus, the .05 probability of a Type I error was used to test both the multivariate statistic ($F = .44$, df 5, 32) for all non-verbal interview skill items and the total non-verbal univariate statistic ($F = .43$, df 1, 36). The .05 level of error was partitioned for the five non-verbal measures and each measure was tested at the .01 level. Partitioning of the level of error was deemed appropriate to control for the over-all Type I error (Whitla, 1973). None of the results were significant. The differences in the means between the groups were in the predicted direction; however, the differences were not substantial enough to be statistically significant.

Hypothesis 1 was not supported. It stated:

Ss who receive model instruction will exhibit superior non-verbal interview skills to those who do not receive model instruction.

Table 4

Analysis of Variance for Non-Verbal Interview Skills
Model (n = 19) vs. No-Model (n = 19) Comparison

Multivariate F = .44 with 5, 32 df			
Non-Verbal Items	Mean Square Between	Mean Square Within	Univariate F 1, 36 df
Eye Contact	13566.42	23633.93	.57
Breaks	360.24	513.85	.70
Posture	3.79	3.03	1.25
Gesture	1.68	3.43	.49
Non-Verbal	6.74	3.29	2.05
Total Non-Verbal	19964.24	29571.75	.42

Hypothesis 2 was structured to test the effect of model instruction on verbal interview skills. Again, a multivariate and a univariate analysis of variance procedure were used to test the effect of the model treatment. Viewing the model videotape did facilitate statistically significant differences in the performance of total verbal interview skills. The results of the analyses are illustrated in Table 5. Both the multivariate statistic ($F = 3.43$, df 6, 31) for the interview skill item measures and the univariate statistic ($F = 4.18$, df 1, 36) for the total verbal measure were significant beyond the .05 probability level. The .05 level of error was partitioned for the six verbal item measures and each measure was tested at the .008 level. Only one verbal item was significant ($F = 11.73$, df 1, 36) at the .008 probability level. The one significant interview item involved attempts to offer invitations to talk although poor in quality (P-ITT). Even though P-ITT was the only statistically significant item, large between group differences were also obtained for successful invitations (G-ITT) and the global rating of the effectiveness of offering invitations to talk. Encouragements to continue talking, and the two global ratings for effectiveness of encouragements and global verbal attending had only trivial group mean differences. With the exception of encouragements, the differences in means reported were in the expected direction as seen in Table 3.

Table 5

Analysis of Variance for Verbal Interview Skills
Model (n = 19) vs. No-Model (n = 19) Comparison

Multivariate F = 3.43 with 6, 31 df*			
Verbal Items	Mean Square Between	Mean Square Within	Univariate F 1, 36 df
G - ITT	501.16	70.78	7.08
P - ITT	3006.42	256.36	11.73 **
ECT	.95	591.18	.01
ITT Rating	19.18	3.16	6.08
ECT Rating	.66	4.03	.16
Verbal Rating	3.18	3.49	.91
Total Verbal	6925.50	1656.97	4.18 *

*Significant beyond the .05 level.

**Significant at the .008 level.

Thus, Hypothesis 2 was supported. It stated:

Ss who receive model instruction will exhibit superior verbal interview skills to those who do not receive model instruction.

Next, the results for Study Two are reported. The second companion study included investigations of the effects of different practice over time.

Study Two: Practice

General Findings

The results obtained from the first interview assessment were predicted to be highly correlated in a positive way with the same dependent variables used to assess interview skills performance after practice. In order to determine the linear association between initial and practice assessments, an analysis of covariance (ANCOVA) was computed. Low correlations were found for all items except two (gesture rating and ECT observation) indicating that the use of initial performance data as a covariate was not helpful in gaining a more powerful significance test. Because the unadjusted and the analysis of covariance adjusted means would not differ meaningfully, the covariance procedure was dropped in order to simplify the analysis and interpretation of the results.

The effects of the different practice procedures can be observed in terms of the means for each of the five practice groups. The means and standard deviations for each practice group for total immediate and delayed observations are recorded in Table 6.

Table 6

Cell Means and Standard Deviations
for Total Verbal and Non-Verbal Interview Skills
for All Practice Groups on Immediate and Delayed-Post Observations

Practice Groups		Immediate Post		Delayed Post	
		Total Non-Verbal	Total Verbal	Total Non-Verbal	Total Verbal
Discrimination	Mean	1317.71	105.00	1249.14	119.00
	S.D.	131.08	21.98	111.33	47.68
Supervisor Feedback	Mean	1436.57	120.57	1425.43	129.57
	S.D.	94.52	62.86	98.88	45.99
Teach Another	Mean	1337.71	117.43	1231.14	101.43
	S.D.	148.68	33.30	184.75	44.04
Combination	Mean	1388.71	116.43	1400.00	115.71
	S.D.	140.97	28.24	132.52	33.62
Control	Mean	1226.14	91.29	1267.57	90.71
	S.D.	227.84	16.37	174.51	24.85

Non-verbal cell means generally drop slightly from the immediate to the delayed-post observation. An exception is the mean for the non-verbal total score for combination practice. Verbal cell means increase slightly from the immediate to the delayed-post observation for discrimination and supervisor-feedback practice. The teach another practice group drops slightly on the verbal mean from immediate to delayed observations. Both combination and control practice group verbal means remain almost identical from immediate to delayed-post observations. For immediate and delayed observations on both non-verbal and verbal means, the supervisor-feedback practice ranks first and the control group last. Ranks for the other practice groups vary with the non-verbal or verbal skill and the observation.

It is also interesting to compare these data in Table 6 with the prior levels of skill performance reflected by the means reported in Table 3 (model assessment time). Across non-verbal total means, all practice treatment means increased from the model to the immediate assessment time. The practice control group mean for non-verbal total (1226.1) on the immediate post test was less than the model (1302.5) and no-model means (1256.7). Across time, the non-verbal total means regressed for discrimination and teach another Practice, but increased beyond the model means for supervisor-feedback and combination practice.

Verbal total means from model to immediate assessment, increased for supervisor-feedback practice, reflected no change for teach another and combination practice, and decreased for discrimination practice. At the immediate and delayed-post assessments, the control group verbal means (91.3 and 90.7) were less than the model (117.8) and equal to the no-model mean (90.8). Delayed-post verbal means increased for discrimination (119.0) and supervisor-feedback (129.6) practice from the model (117.8) assessment time and decreased for teach another (101.4) and combination (115.7) practice groups.

A more detailed picture of the effects of the different practice procedures can be obtained by a review of the cell means of each interview skill item across immediate and delayed-post observations. This information is presented in Table 7.

With these general findings in mind, the results of the practice treatments will be developed further. Results of the repeated measures multivariate analysis of variance for the combined effect of practice over time will be presented next.

Combined Effect of Practice over Time

A multivariate multiple repeated measures analysis of variance was completed to assess the combined effect of the practice treatments. Combined scores for all practice groups

Table 7

Cell Means for Verbal and Non-Verbal Items
for All Practice Groups on Immediate and Delayed-Post Observations

Interview Skill Items	Immediate Observation				Con- trol	Dis- crim- ina- tion	Delayed-Post Observation			
	Dis- crim- ina- tion	Super- visor Feed- back	Teach Ano- ther	Com- bin- ation			Super- visor Feed- back	Teach Ano- ther	Com- bin- ation	Con- trol
Non-Verbal:										
Eye Contact	1045.4	1153.1	1073.1	1110.0	966.9	992.0	1145.1	972.0	1109.7	1004.3
Breaks	246.6	257.7	240.1	248.6	234.1	235.6	254.0	237.0	261.9	238.3
Posture	8.7	8.4	8.3	9.9	8.4	7.3	8.1	7.4	9.1	8.3
Gesture	8.1	8.3	7.6	9.9	8.1	7.6	8.7	7.3	9.3	8.0
Non-Verbal	8.9	9.0	8.6	10.4	8.6	6.7	9.4	7.4	10.0	8.7
Total Non-Verbal	1317.7	1436.6	1337.7	1388.7	1226.1	1249.1	1425.4	1231.1	1400.0	1267.6
Verbal:										
G - ITT	16.0	13.3	14.3	19.3	9.0	18.3	14.3	9.3	14.6	9.3
P - ITT	25.9	40.1	40.6	26.9	24.6	30.4	39.6	34.9	29.6	26.9
ECT	37.9	47.0	40.7	44.0	34.6	45.6	54.1	37.1	45.4	34.4
ITT Rating	8.3	6.6	7.1	8.6	7.6	8.4	7.1	6.7	8.4	6.4
ECT Rating	8.4	6.9	7.4	9.0	7.9	8.3	7.0	6.6	9.1	7.1
Verbal Rating	8.6	6.7	7.3	8.7	7.7	8.0	7.4	6.9	8.6	6.6
Total Verbal	105.0	120.6	117.4	116.4	91.3	119.0	129.6	101.4	115.7	90.7

for non-verbal and verbal totals were obtained from standardized immediate-post data added to standardized delayed-post data ($.707$ immediate post + $.707$ delayed post = standardized combined mean). This procedure was adopted to adjust for differences in variance existing for immediate and delayed observations. Using the combined data with the multivariate and univariate analyses of variance procedures provided results to determine the over-all effect of the differentiated practice treatments. Results are reported separately for non-verbal and verbal interview skills. First, the total score data are presented. Second, the item data are reported. Third, the analysis of variance data are included.

Total Non-Verbal Measure. In Table 8 the cell means for the total non-verbal measure are shown. Unadjusted data were included for the immediate-post and delayed-post assessments. The change across time score illustrated in the next to last column of Table 8 was based on the difference of standardized means (standardized delayed-post minus the standardized immediate-post mean). The change across time mean was used to test for differential retention across practice groups. Then, the standardized immediate and delayed-post measures were combined. The combined repeated measures were used to obtain the cell means which were employed in the analysis of the total across time effect of the practice treatments.

Table 8
Cell Means for the Effect of Practice on the Total Non-Verbal Measure

Practice	Immediate Post	Delayed Post	Change Across Time ¹	Standardized Combined ²
Discrimination	1317.71	1249.14	-48.48	1814.77
Supervisor Feedback	1436.57	1425.43	-7.88	2023.43
Teach Another	1337.71	1231.14	-75.35	1816.18
Combination	1388.71	1400.00	7.98	1971.62
Control	1226.14	1267.57	29.29	1763.06

¹Change across time means are based on the differences in the standardized means (.707 delayed post - .707 immediate post = change across time).
²Standardized combined means are based on standardized immediate and delayed-post data (.707 immediate post + .707 delayed post = standardized score).

As illustrated by the data in Table 8, cell means for non-verbal total interview skills vary for the different practice groups. The combined mean for each practice group provides a way of ranking the effect of the practice treatments across time. The supervisor-feedback practice group ranks first, the combination practice next, teach another and discrimination practice rank third and fourth with similar cell means, and the control group ranks last.

Changes from immediate to delayed-post illustrate differences in practice groups. Three practice groups--discrimination, supervisor-feedback, and teach another--decreased across time. Combination and control groups improved on the total non-verbal measure across time.

Total Verbal Measure. In Table 9 cell means for each of the practice groups on the total verbal measure are reported. Again, unadjusted immediate and delayed cell means, change across time scores, and standardized combined means are included. When combined cell means are reviewed, the supervisor-feedback practice group ranks first, the combination group second, discrimination and teach another groups next, and the control group last. Only one practice group mean decreased appreciably over time, teach another practice. Combination and control groups remained nearly the same. Very slight decreases are reported. Discrimination and supervisor-feedback practice cell means gained on the total verbal measure.

Table 9
Cell Means for the Effect of Practice on the Total Verbal Measure

Practice	Immediate Post	Delayed Post	Change Across Time ¹	Standardized Combined ²
Discrimination	105.00	119.00	9.90	158.27
Supervisor Feedback	120.57	129.57	6.36	176.75
Teach Another	117.43	101.43	-11.31	154.83
Combination	116.43	115.71	-.51	164.13
Control	91.29	90.71	-.41	128.57

¹Change across time means are based on the differences in the standardized means (.707 delayed post - .707 immediate post = change across time).
²Standardized combined means are based on standardized immediate and delayed-post data (.707 immediate post + .707 delayed post = standardized score).

Interview Skill Item Measures. Cell means for the non-verbal item measures are presented in Table 10. The means for each non-verbal interview skill item illustrate the effect of the practice treatment and indicate how each item contributes to the combined non-verbal total score. For the frequency and duration of eye contact items the supervisor-feedback and combination practice groups rank first and second. For the global ratings of posture, gesture, and non-verbal attending, the combination practice group ranks first. The supervisor-feedback practice group ranks second for the gesture and non-verbal attending ratings and third for the posture rating. Rank orders for the other practice groups are varied for each of the non-verbal items.

In Table 11 the cell means for the verbal item measures are presented. The rank order of the levels of practice varies for each of the different interview skill items. A similarity is observed in the control group which ranks fifth, or last, for all observational types of verbal items (G-ITT, P-ITT, and ECT).

After this review of the item measures and the way in which they contribute to the combined total non-verbal and verbal measures, the analysis of variance results based on these total non-verbal and verbal measures of interview skills will be presented.

Table 10
Cell Means for the Effect of Practice on Non-Verbal Measures
for Combined Immediate and Delayed-Post Observations

Practice	Non-Verbal Interview Skill Items			Total	
	Eye Contact	Breaks	Posture	Gesture	Non-Verbal
Discrimination	1440.46	340.88	11.31	11.11	1814.77
Supervisor Feedback	1624.89	361.78	11.72	12.02	2023.43
Teach Another	1445.92	337.34	11.11	10.50	1816.18
Combination	1569.34	360.87	13.43	13.53	1971.62
Control	1393.60	334.01	11.82	11.41	1763.06

Table 11
Cell Means for the Effect of Practice on Verbal Measures
for Combined Immediate and Delayed-Post Observations

Practice	Verbal Interview		Skill Items		Verbal		Total
	G-ITT	P-ITT	ECT	ITT Rating	ECT Rating	Rating	
Discrimination	24.24	39.79	58.98	11.72	11.82	11.72	158.27
Supervisor Feedback	19.49	56.36	71.51	9.60	9.80	10.00	176.75
Teach Another	16.67	53.33	55.05	9.90	9.90	10.00	154.83
Combination	23.94	39.90	63.23	12.02	12.83	12.22	164.13
Control	12.93	36.36	48.78	9.80	10.61	10.10	128.57

ANOVA Results for Non-Verbal Total Scores. An analysis of variance procedure (ANOVA) was used to test for differential retention on the non-verbal total means across the five practice treatments. Results are shown in Tables 12, 13, and 14.

Table 12

Analysis of Variance Test of Combined Total Non-Verbal Measure for Interaction between Practice Groups and Repeated Measures

Total Score	Mean Square Between	Mean Square Within	Univariate F 4, 30 df
Non-Verbal	12647.89	13931.75	.91

As documented in Table 12, the F statistic ($F = .91$, df 4, 30) for practice groups with repeated measures interaction was not significant. There was no differential retention across practice groups. The data for the test of repeated measures main effect for all subjects were incorporated in Table 13.

Table 13

Analysis of Variance Test of Combined Total Non-Verbal Measure for Repeated Measures Main Effect for All Subjects

Total Score	Mean Square Between	Mean Square Within	Univariate F 1, 30 df
Non-Verbal	12485.16	13931.75	.90

Again, the F statistic ($F = .90$, df 1, 30) was not significant. The average total non-verbal score across practice groups did not change from the immediate to the delayed-post tests.

The statistics used in the test of the main effect of practice are provided in Table 14.

Table 14

Analysis of Variance Test of Combined Total Non-Verbal Measure
for Practice Groups Main Effect

Total Score	Mean Square Between	Mean Square Within	Univariate F 4, 30 df
Non-Verbal	89158.37	30919.64	2.88*

*Significant beyond the .05 level.

The F statistic ($F = 2.88$, df 4, 30) was significant at the .05 level. There was a significant difference in the cell means for the total non-verbal measure based on the different types of practice. The different practice procedures do make a difference in the total non-verbal measure of interview skill performance. Next, information for the verbal total measure will be included.

ANOVA Results for Verbal Total Scores. Analysis of variance techniques were used to test the effect of differences in the verbal total means for the five practice treatments. Results are shown in Tables 15, 16, and 17.

As documented in Table 15, the F statistic ($F = .59$, $df\ 4, 30$) for practice groups with repeated measures interaction was not significant.

Table 15

Analysis of Variance Test of Combined Total Verbal Measure for Interaction between Practice Groups and Repeated Measures

Total Score	Mean Square Between	Mean Square Within	Univariate F 4, 30 df
Verbal	470.34	800.52	.59

There was no differential rate of retention across practice groups.

The test for the repeated measures main effect for all subjects was completed next. Data for this test are presented in Table 16.

Table 16

Analysis of Variance Test of Combined Total Verbal Measure for Repeated Measures Main Effect for All Subjects

Total Score	Mean Square Between	Mean Square Within	Univariate F 1, 30 df
Verbal	25.19	800.52	.03

Again, the F statistic ($F = .03$, $df\ 1, 30$) was not significant. There was no repeated measures main effect for the total verbal measure.

The statistics used in the test of the main effect across both testing times of the practice treatments for the total verbal measure are presented in Table 17.

Table 17

Analysis of Variance Test of Combined Total Verbal Measure
for Practice Groups Main Effect

Total Score	Mean Square Between	Mean Square Within	Univariate F 4, 30 df
Verbal	2194.54	2133.56	1.03

The F statistic ($F = 1.03$, $df\ 4, 30$) was not significant at the .05 level. There was no significant difference in the cell means for the total verbal measure across the five different types of practice. The different practice procedures did not make a statistical difference in the total verbal measure of interview skill performance. Information relating to the interview skill items will be presented next.

ANOVA Results for Non-Verbal Item Measures. Cell means for the non-verbal item measures were presented earlier in the data for Table 10. These cell means were used in the

multivariate and univariate analyses of variance tests to establish the effect of practice on the non-verbal items. Results of the analysis of variance tests are reported in Tables 18, 19, and 20.

Statistics for the multivariate test of interaction between practice groups and repeated measures are included in Table 18.

Table 18

Multivariate Test of Combined Non-Verbal Item Measures for Interaction between Practice Groups and Repeated Measures

Multivariate $F = .66$ with 20, 87.18 df			
Non-Verbal Items	Mean Square Between	Mean Square Within	Univariate F 4, 30 df
Eye Contact	9974.62	11193.78	.89
Breaks	295.93	403.42	.73
Posture	.91	2.24	.41
Gesture	.59	1.49	.40
Non-Verbal	3.77	2.17	1.74

The multivariate F statistic ($F = .66$, df 20, 87.18) was not significant. The .05 level of error was partitioned for the five non-verbal items and each item was tested at the .01 level. None of the univariate tests for the non-verbal items were

significant. There was no significant interaction effect due to differential rate of retention across practice groups.

The data for the test of non-verbal item repeated measures main effect for all subjects are included in Table 19.

Table 19

**Multivariate Test of Combined Non-Verbal Item Measures
for Repeated Measures Main Effect**

Multivariate $F = .98$ with 5, 26 df			
Non-Verbal Items	Mean Square Between	Mean Square Within	Univariate F 5, 26 df
Eye Contact	11009.30	11193.78	.98
Breaks	.13	403.42	.0003
Posture	8.23	2.24	3.67
Gesture	.91	1.49	.61
Non-Verbal	6.91	2.17	3.18

A non-significant F statistic ($F = .98$, df 5, 26) was found as a result of the multivariate test. Examination of the univariate test data reported in Table 19 indicated that no non-verbal items were statistically significant. Again, the .05 level of error was partitioned for the five non-verbal items and each item was tested at the .01 level.

Data for the analysis of variance tests of all non-verbal item measures across times for practice groups main effect are reported in Table 20.

Table 20

Multivariate Test of Combined Non-Verbal Item Measures
for Practice Groups Main Effect

Multivariate F = 1.09 with 40, 81.48 df			
Non-Verbal Items	Mean Square Between	Mean Square Within	Univariate F 4, 30 df
Eye Contact	66610.08	23606.64	2.82
Breaks	1243.57	774.84	1.60
Posture	5.88	2.94	2.00
Gesture	9.32	5.96	1.56
Non-Verbal	13.51	3.11	4.35**

**Significant at the .01 level.

The multivariate F statistic ($F = 1.38$, df 40, 81.48) was not significant. In univariate tests for each item measure, however, one item was statistically significant. Again, the .05 level of error was partitioned for the five non-verbal items and each item was tested at the .01 level. The over-all rating for non-verbal attending was judged significant at the .01 probability level for the univariate test ($F = 4.35$, df 4, 30). The significance of the non-verbal attending item

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was inconsistent with the earlier finding for the total measure.

ANOVA Results for Verbal Item Measures. Cell means for verbal item measures were presented earlier in the data for Table 11. These cell means were used in the multivariate and univariate analyses of variance tests to establish the effect of practice on verbal interview skill items. Results of the analysis of variance tests are reported in Tables 21, 22, and 23.

Statistics for the multivariate test of interaction between practice groups and repeated measures are included in Table 21.

Table 21

Multivariate Test of Combined Verbal Item Measures
for Interaction between Practice Groups and Combined Measures

Multivariate F = .44 with 24, 88.42 df			
Verbal Items	Mean Square Between	Mean Square Within	Univariate F 4, 30 df
G - ITT	40.22	40.13	1.00
P - ITT	56.25	140.42	.40
ECT	82.00	469.00	.17
ITT Rating	1.61	2.26	.71
ECT Rating	.79	2.71	.29
Verbal Rating	1.62	2.58	.63

The multivariate F statistic ($F = .44$, $df\ 24, 88.42$) was not significant at the .05 level of probability. Neither was there a significant interaction effect due to particular combinations of practice with the repeated measures for verbal items.

Data for the test of verbal item repeated measures main effect for all subjects are presented in Table 22.

Table 22

**Multivariate Test of Combined Verbal Item Measures
for Repeated Measures Main Effect for All Subjects**

Multivariate $F = .58$ with 6, 25 df			
Verbal Items	Mean Square Between	Mean Square Within	Univariate F 1, 30 df
G - ITT	26.41	40.13	.66
P - ITT	7.55	140.42	.05
ECT	110.60	469.00	.24
ITT Rating	.36	2.26	.16
ECT Rating	1.43	2.71	.53
Verbal Rating	1.73	2.58	.67

A non-significant F statistic ($F = .58$, $df\ 6, 25$) was found as a result of the multivariate test. Neither was there any significant single item effect.

Data for the analysis of variance tests of all verbal item measures for practice groups main effect are reported in Table 23.

Table 23

Multivariate Test of Combined Verbal Item Measures
for All Practice Groups

Multivariate $F = 1.26$ with 28, 75.23 df			
Verbal Items	Mean Square Between	Mean Square Within	Univariate F 4, 30 df
G - ITT	163.40	72.90	2.24
P - ITT	570.61	300.01	1.90
ECT	512.82	975.06	.53
ITT Rating	9.46	2.77	3.41
ECT Rating	11.94	2.35	5.08**
Verbal Rating	8.10	2.87	2.82

**Significant at .008 level.

The multivariate F statistic ($F = 1.26$, df 48, 75.23) was not significant. The .05 level of error was partitioned for the six verbal items and each item was tested at the .008 level. In univariate tests for each item measure, one item was statistically significant. The rating for the effectiveness of encouragements to continue talking (ECT) was judged significant at the .008 probability level in a univariate test ($F = 5.08$, df 4, 30). The global test was consistent

with earlier results which overlooked the ECT item effect.

It is now time to return to the hypotheses for Study Two and interpret the results for the combined effect of practice over time.

Results of the Tests for
Hypotheses--Combined Effect of Practice

Multivariate and univariate analyses of variance were used in Study Two to test the effect of practice on interview skills. Univariate tests were used to test the total non-verbal and verbal scores. A repeated measures multivariate analysis of variance procedure was utilized to test the combined (across time) practice item data. In addition, univariate tests were provided for each non-verbal and verbal interview skill item. The .05 probability of a Type I error was used to test both multivariate and total score univariate statistics. The .05 level of error was partitioned for the five non-verbal measures (tested at the .01 level) and the six verbal item measures (tested at the .008 level).

Hypothesis 1. Hypothesis 1 was established to test the effect of the practice treatments on non-verbal interview skills. The combined total non-verbal measure for practice group main effect was significant ($F = 2.88$, $df\ 4, 30$). The multivariate test for combined non-verbal items for practice group main effect was not judged statistically significant, although the univariate test for the non-verbal attending

rating was significant at the .01 level ($F = 4.35$, $df\ 4, 30$). All tests for interaction between practice groups and repeated measures and for repeated measures main effect were not significant.

Thus, hypothesis 1 was partially supported. It stated:

Ss who receive differential practice treatments will exhibit different performance levels of non-verbal interview skills.

In addition to the general hypothesis, the order of the practice treatments was predicted. To test for the order of practice treatments, appropriate contrasts were calculated for the total non-verbal measure.

Contrasts. The significant main effect of practice for the combined non-verbal interview skills total measure was investigated by means of pairwise and complex Scheffé contrasts. Four pairwise contrasts and three complex contrasts were formed to study the differences in the total non-verbal interview skill measure for each of the practice treatments. Appropriate degrees of freedom and the .05 probability of a Type I error (α) were used.

Pairwise contrasts were established for each practice group in comparison with the control group. These four pairwise contrasts yielded two significant results. More non-verbal interview skills were evidenced as a result of the feedback and supervision (P_2) and the combination (P_4) practice treatments. Information relating to the pairwise contrasts was set up in Table 24.

Table 24
Weighted Scheffé Contrasts for Non-Verbal Total
Practice Groups Main Effect for Combined Practice Data

Contrast	Contrast Value	Mean Square Contrast	Mean Square Error	F Value 4,30 df
$\frac{P_1 + P_2 + P_3 + P_4}{4} - P_5$	143.44	2057.03	3736.25	5.51 *
$\frac{P_4 + P_3}{2} - \frac{P_1 + P_2}{2}$	-25.20	635.04	2989.42	.21
$\frac{P_1 + P_2}{2} - P_5$	156.04	24348.48	4483.08	5.43 *
$P_4 - P_5$	208.56	43497.27	2989.42	14.55 *
$P_3 - P_5$	53.12	2821.73	2989.42	.94
$P_2 - P_5$	260.37	67792.54	2989.42	22.68 *
$P_1 - P_5$	51.71	2673.92	2989.42	.89

*Significant beyond the .05 level. Critical value for 4, 30 df = 3.28.

Complex Scheffé contrasts were arranged to test the relationships of the practice groups as stated in the hypotheses ($P_4 + P_3 > P_2 + P_1$ and $P_2 + P_1 > P_5$). The complex contrast comparing all practice treatments to the control group was statistically significant ($F = 5.51$, df 4, 30). Also, the complex contrast comparing discrimination practice (P_1) and the supervision-feedback practice (P_2) to the control group (P_5) was judged significant ($F = 5.43$, df 4, 30). The third complex contrast reported in Table 24 supported one of the two sub-hypotheses regarding the ordering of the practice treatments.

Thus, all modes of practice contributed more than the control group to initial non-verbal interview skill performance. The supervisor feedback and combination practice modes were the stronger practice treatments. One sub-hypothesis which predicted the ordering of the practice treatments for non-verbal interview skills was supported. It stated:

Ss who receive feedback practice or discrimination practice treatments (P_2 and P_1) will exhibit superior non-verbal interview skills to those who receive the control practice treatment (P_5). ($P_2 + P_1 > P_5$)

Contrasts were also calculated in the same manner for the one non-verbal interview skill judged significant (non-verbal attending rating). Two pairwise Scheffé contrasts were significant. Combination practice ($F = 11.11$, df 4, 30) and discrimination practice ($F = 3.29$, df 4, 30)

were supported as being stronger than the control group for this one non-verbal item.

Hypothesis 2. Hypothesis 2 was structured to test the effect of the practice treatments on verbal interview skills. Neither the univariate tests of the total verbal score nor the multivariate tests were judged to be statistically significant. Although the multivariate test lacked significance, one item appeared to differ; the encouragements to continue talking (ECT) rating was found in a univariate test to be statistically significant ($F = 5.08$, df 4, 30) for the combined test for verbal items for all practice groups.

Again, pairwise and complex Scheffé contrasts were established for the one verbal interview skill item (ECT). Two pairwise contrasts were statistically significant when practice treatments were compared to the control group. As noted with the one non-verbal item, combination practice ($F = 14.68$, df 4, 30) and discrimination practice ($F = 4.36$, df 4, 30) were supported as being stronger than the control group for this one verbal item.

Hypothesis 2 was not supported. It stated:

Ss who receive differential practice treatments will exhibit different performance levels of verbal interview skills.

Study Three: Activation

As stated earlier the concept of activation appears pertinent to investigations in counselor education. As

counselor research explores possibilities for assessing what learning and practice treatments are best, for whom, and in what manner, the use of the Activation-Deactivation Check List would seem to be promising as a means of assessing the activation properties of treatments and subject performance. The Activation-Deactivation Adjective Check List (Appendix C), a paper and pencil measurement of psychophysiological levels of activation, provides a means of securing four factor scores reflecting different states of activation.

In Study Three, no formal hypotheses were proposed for the investigation of activation. However, several questions of interest for exploratory post hoc analysis were considered. The following areas of study were outlined:

1. Do activation factors differ for each of the practice treatments? (immediately following practice and after the delayed-post interview)
2. Do activation factors or levels change across all Ss from practice level to delayed-post measures?
3. What is the relationship of activation to the criterion measures of total non-verbal and verbal interview skills?

Data were collected to relate to these questions of interest.

Activation Level of Practice

Activation and involvement properties of each of the modes of practice employed were of primary interest. Data

relevant to this question are presented in Tables 25 and 26. The cell means for each of the four factors of activation for each practice group are included in the information for Table 25.

Cell means vary somewhat for the different modes of practice when each activation factor was observed. The lower cell means for the deactivation sleep factor were based on a smaller number of items used to calculate the score for this one factor (see Appendix C). Similar numbers of items were used in calculations for the other three factors--high activation, general activation, and general deactivation.

Multivariate and univariate analyses of variance techniques were utilized to test for differences in activation factors. Results of this test are reported in Table 26. No statistically significant results were found. The activation or involvement properties as assessed by the check list appear to be similar across the five practice groups. All levels of practice seem to be equally activating following the completion of the practice session.

Activation Level Following Delayed-Post Interview

Are activation levels different for each of the practice modes when assessments are made at the end of the interview skills training program? Data included in Tables 27 and 28 are provided to answer this question. Cell means for each of the four factors of activation for all practice groups as

Table 25
Cell Means for Activation-Deactivation Adjective Check List Factors
for All Practice Groups Immediately Following Practice Treatment

n = 34

Practice Groups (n = 7)	High Activation Factor	General Activation Factor	General Deactivation Factor	Deactivation Sleep Factor
Discrimination	15.71	17.14	15.29	6.43
Supervisor Feedback	13.00	15.57	16.71	6.57
Teach Another	10.71	19.86	16.71	3.86
Combination	16.14	18.00	13.57	6.00
Control+	14.33	15.33	14.50	7.00
Activation Factor Total All Subjects	69.89	85.90	76.78	29.86
+Missing data for one <u>S</u> in control group (n = 6)				

Table 26

Analysis of Variance for Activation Factors
for All Practice Treatments
Assessed Immediately Following Practice

Multivariate F = .67 with 16, 80.07 df			
Activation Factors	Mean Square Between	Mean Square Within	Univariate F 4, 29 df
High Activation	33.98	21.00	1.62
General Activation	23.34	44.23	.53
General Deactivation	13.13	19.09	.69
Deactivation Sleep	10.40	11.73	.89

Table 27
Cell Means for Activation-Deactivation Adjective Check List Factors
for All Practice Groups Following Delayed-Post Interview

n = 34

Practice Groups (n = 7)	High Activation Factor	General Activation Factor	General Deactivation Factor	Deactivation Sleep Factor
Discrimination	13.71	17.29	16.14	5.29
Supervisor Feedback	11.29	15.86	15.00	4.71
Teach Another	10.14	19.14	17.57	3.43
Combination	12.29	21.71	17.86	4.14
Control+	11.33	15.33	14.00	3.83
Activation Factor Total All Subjects	58.76	89.33	80.57	21.40
+Missing data for one <u>S</u> in control group (n = 6)				

Table 28

Analysis of Variance for Activation Factors
for All Practice Treatments
Following the Delayed-Post Interview

Multivariate F = .59 with 16, 80.07 df			
Activation Factors	Mean Square Between	Mean Square Within	Univariate F 4, 29 df
High Activation	10.89	38.14	.29
General Activation	20.98	37.69	.56
General Deactivation	34.87	33.80	1.03
Deactivation Sleep	6.66	12.11	.55

assessed at the end of the interview training program are included in Table 27. There were variations in the means that can be observed for each of the practice modes on the four levels of activation. When visual contrasts are made with the cell means following practice (Table 25 and Table 27), a consistent decrease in high activation factor scores and deactivation sleep factor scores is detected from immediate post to delayed-post observations. Very slight changes in the general activation and general deactivation levels are noticed when cell means are compared across both times.

Multivariate and univariate analyses of variance techniques were selected to test for differences by practice groups for activation levels at the end of the interview training program. Results for this test are included in Table 28. No statistically significant differences were noted. Activation levels appear to be similar for practice groups at the end of the interview skills training program.

Activation Changes for Subjects Across Time

Another area of inquiry was raised concerning individual subject changes in activation across time from practice to the delayed-post interview. Cell means for all subjects are reported in the data for Table 29.

Table 29
Activation Factor Cell Means for All Ss⁺

Activation Factors	Immediate-Post Assessment Following Practice n = 35	Delayed-Post Assessment Following Last Interview n = 37
High Activation	14.03	11.73
General Activation	17.03	17.76
General Deactivation	14.71	16.11
Deactivation Sleep	6.83	4.51

+All available data included from the total of 38 Ss.

To test for differences in cell means a multivariate analysis of variance technique was used. Results of this test are included in the information for Table 30. Statistically significant results were reported for changes in all subjects' activation factors from immediate to delayed-post interview times. The fourth activation factor, described as the sleep factor, contributed most to this finding. Although not statistically significant, the high activation factor score also appeared to add to the significant results reported in Table 30. The adjective check list would seem to be sensitive to group changes in individual subjects' levels of activation.

Relationship of Activation to Interview Skill Performance

The final line of inquiry in this exploration of activation level relates the concept of activation to interview

Table 30

Analysis of Variance for Activation Factors
for Changes in Subjects from Practice
Through Delayed-Post Interview Times

Multivariate F = 3.36 with 4, 26 df*			
Activation Factors	Mean Square Between	Mean Square Within	Univariate F 1, 29 df
High Activation	165.44	16.91	4.34
General Activation	16.94	35.79	.45
General Deactivation	21.44	16.74	.63
Deactivation Sleep	92.24	5.73	7.62 **

*Significant beyond the .05 level

**Significant beyond the .0125 level

skill performance. This analysis was limited to the total non-verbal and verbal measures. Only activation factors as assessed immediately following practice and prior to entering the second interview were correlated to interview skills. Correlations were not included for the second set of activation data since activation level was assessed after all tasks in the interview training program were completed. This relationship of activation level to final interview performance would not seem to be the most meaningful comparison for the above reason.

Data indicating the relationship of activation level to non-verbal and verbal interview performance are included in Table 31.

Table 31

Correlation of Activation Factors
to Immediate Practice Assessment

n = 35

Total Interview Skills	High Activation Factor	General Activation Factor	General Deactivation Factor	Deactivation Sleep Factor
Non-Verbal	.00	-.21	.06	-.04
Verbal	-.09	.29*	-.01	-.36*

*Significant at the .05 level (Edwards, 1960, p. 362).

Two significant relationships appeared in terms of verbal interview skill performance. General activation level was

positively correlated to good verbal interview performance ($r = .29$); and the deactivation sleep activation factor was negatively correlated with verbal interview performance ($r = -.36$). Although the data are not directly comparable, it is interesting to note that the general activation factor correlated quite differently with non-verbal and verbal skills. A significant relationship existed between verbal skills and general activation and a distinctly negative (non-significant) relationship existed between non-verbal interview performance and the general activation factor.

In conclusion, the concept of activation looks to be an interesting one that may provide some understandings about the learning sequences and treatments used in counselor training programs. In addition, the relationship of general activation and deactivation sleep factors to individual subject differences on performance may provide a specific means of assessing by activation factor scores the effect of training programs and the involvement or impact of these programs on individual subjects.

CHAPTER IV

SUMMARY, DISCUSSION, AND IMPLICATIONS

Summary

This research examined the effects of model, practice, and activation on the attainment and retention of initial interview skills in a training program for dental health paraprofessionals. To assess the results of the video modeling and differentiated practice procedures used in the interview skills training program, three companion studies were formulated. The companion studies were intended to provide comparative measures of both the effect of modeling via videotape and the efficiency of different types of practice in the mastery and generalization of initial non-verbal and verbal interview skills.

Specifically, the objectives of this research were:

1. Study One: To assess the effect of a specific example of modeling vs. no modeling in the performance of non-verbal and verbal interview skills.

2. Study Two: To compare differential practice treatments in the mastery and retention of both verbal and non-verbal interview skills.

3. Study Three: To investigate differences in the level of activation of the practice treatments and differences in activation level at the end of the interview performance.

To meet the objectives of the research, a training program was developed with the intent of making systematic comparisons of the outcomes of the video modeling plus cues and differentiated practice procedures used in teaching initial non-verbal and verbal interview skills.

Study One contrasted the effect of the modeling plus cues treatment with no treatment to test the power of the training model on both non-verbal and verbal interview skill performance. The basic design of this study was an experimental "post-test only" design recommended by Campbell and Stanley (1963). Subjects were randomly assigned to the modeling treatment (M_1) or the no model group (M_2). The model treatment was administered via videotape in a group setting. Group interaction was not included in the model treatment; subjects simply viewed the video presentation on initial interview skills. After interview performance data were collected, and prior to the practice treatments, the no model group (M_2) viewed the identical model videotape so that all subjects were equivalent before the practice phase of the research was administered.

During the practice phase, Study Two, subjects were randomly assigned to the five practice treatments: discrimination, feedback and supervisor, teach another,

combination, and control. All practice treatments were administered individually. Immediately following the practice session, each subject completed a second interview which provided data for the comparative evaluation of the practice treatments. Three weeks following the treatment administration, a delayed-post measure was collected to assess the retention of interview skills across time. The basic design for Study Two was a $2 \times 13 \times 5$ repeated measures design: that is, the design contained 2 times, 13 interview skills, and 5 levels of practice with Ss nested with practice but crossed with measures and times. Each cell contained an equal number of subjects ($n = 7$; total $n = 35$).

The third phase, Study Three, of this investigation provided for the exploration of the activation properties of practice treatments, the relationship of activation to the attainment of interview skills, and subject differences in activation. Activation was defined as the degree of arousal or alertness as measured by the four factors of the Activation-Deactivation Adjective Check List. Data were collected twice: immediately after practice and prior to the second interview, and after the final delayed-post interview.

The criterion measures used in this study were formulated to examine both non-verbal and verbal interview skills. The same dependent variables comprising frequency and duration observations and global ratings were included in each

companion study. Interview data in the form of seven-minute videotaped interviews were collected on three occasions: after modeling, after practice, and three weeks following practice. Videotaped interview skill performance data were subsequently rated by three independent judges for the criterion measures. Reliability estimates were calculated for the mean judges' ratings on each interview skill measure for each set of interview data collected at the three different times. Reliability estimates ranged from .98 to .55. Also, reliability estimates were obtained for the total non-verbal and verbal scores at each of the three data collection times.

It was hypothesized that subjects who received the model would exhibit superior non-verbal and verbal interview skills to those who did not receive model instruction. It was also hypothesized that subjects receiving differential practice treatments would exhibit different performance levels of non-verbal and verbal skills. Further, in regard to the hypothesized effects concerning the practice treatments, the practice treatment groups were predicted to order themselves in terms of performance of interview skills as follows:

- a. Combination or teach practice superior to feedback or discrimination practice
- b. Feedback and discrimination practice superior to control group.

No formal hypotheses were proposed for the investigation of activation; questions were developed for post hoc analysis.

The data were analyzed for Study One with multivariate and univariate analyses of variance. Data for Study Two were analyzed with repeated measures multivariate analysis of variance for the combined (across time) practice results. The initial interview data were investigated as a covariate for the practice study results, but when the covariate results failed to improve the analysis, this procedure was dropped.

A statistically significant ($\alpha = .05$) effect was found for verbal interview skills due to presenting the model treatment. Significant effects were found for the multivariate test of all verbal items ($\alpha = .05$), for the total verbal score ($\alpha = .05$), and for the univariate test for the verbal invitations to talk (P-ITT, $\alpha = .05$). Thus, the model videotape treatment did make a difference in the acquisition of initial verbal interview skills. Results for the non-verbal variables were not significant.

For the combined practice data (across time), a statistically significant ($\alpha = .05$) result was found for the total non-verbal measure. This result was not supported by the multivariate test for all non-verbal items; however, one item (non-verbal attending rating) was judged significant on the univariate test ($\alpha = .05$). Results for the verbal variables were basically not significant. Although the

multivariate test for all verbal items failed to be statistically significant, one item (ECT rating) achieved statistical significance ($\alpha = .05$). Contrasts calculated for the non-verbal total results reflected the significance of all practice treatments compared to the control group. The feedback-supervision and combination practice treatments were the stronger treatments.

Post hoc analysis of the activation data yielded significant correlations for the general activation and deactivation sleep factors with verbal interview skill performance. The verbal total measure was positively correlated ($r = .29$) with general activation and negatively correlated ($r = -.36$) with the deactivation sleep factor. In addition, multivariate analysis of variance results for changes in all subjects' levels of activation from practice to delayed-post assessment times were statistically significant ($\alpha = .05$). The concept of activation appears to be an interesting one that may provide some understandings about learning sequences and treatments.

Limitations

Before pursuing the positive conclusions and implications of this investigation, it is appropriate to review some of its limitations in order to qualify inferences and to suggest possible refinements for future research.

In Study One, the "post-test only design" (Campbell & Stanley, 1963) controls well for variables which might

confound the experimental treatment effects. A possible threat to external validity was the reactive effect of the experimental arrangements which might preclude generalization about the treatment effects upon persons being exposed to the training program in non-experimental settings. The presentation of the model plus cues treatment was incorporated in an ordinary manner like other class learning experiences, but the announcement concerning the "experimental nature" of the experience may have created expectations and attitudes that are not identical to persons in non-experimental settings. Expectations on the part of the dental faculty that each subject would participate and the subjects' awareness of faculty expectations may have affected the students' involvement and participation.

In the preparation of the model videotape treatment materials, a variety of student peer models were selected from the second-year senior hygienists. Although there was no intentional selection bias, it was possible that certain models viewed in the treatment might have been acquaintances of the subjects and therefore could have limited external validity. The model materials were carefully delineated (see Chapter II) to allow the reader to assess how comparable the "models" in the model treatment are to those to which he might wish to generalize.

An additional factor limiting the validity of the model treatment might have been the length of the presentation and

the amount of material introduced at one time. There was reason to believe (Ivey, 1971, p. 148-149) the number of initial skills presented was appropriate for a beginning group seeking interview training. However, the length and interview skills included in the model treatment need to be remembered in reviewing the results of this study. Strictly speaking, the results of this model treatment cannot be generalized beyond the specific modeling materials developed for this investigation.

A random sample of dental paraprofessionals was not possible. Again, the results cannot be generalized beyond the sample in this study. The sample and sampling procedure were outlined in Chapter II. All subjects who were members of the class participated; this allows for broader generalization than if a number refused to participate. Overall, the sample was considered representative of dental hygienists pursuing associate degree programs in community colleges. Another sample limitation was the number of subjects. As occurs so frequently in preliminary investigations such as this, a larger number of ss would have been preferred.

In Study Two, some of the same limitations cited previously were relevant. Limitations of the sample population were similar; a larger number of ss within each cell would have been preferred for the practice treatments. Again, the experimental nature of this investigation may have created expectations and attitudes that would not be identical to others in non-experimental settings.

Also, treatments were assigned to different settings including small offices, conference rooms, and labs. Since equal facilities were not available, the researcher did not control for this extraneous variable, and it remains as a possible source of systematic error. Future research might control the setting in order to be assured that the treatment effect was not the result of the specific attributes of the setting.

The practice personnel used in three treatments-- feedback-supervisor, teach another, and combination practice-- were not the same. These are possible confounding variables. Though the researcher attempted to establish the equivalence of practice personnel on the basis of the standardization of the content and their similar experiences, the use of the same individuals across the practice treatments remains the best assurance that the treatment effect was not the result of the specific attributes of the individual involved in the practice session.

The limited number of faculty available for the feedback-supervision practice sessions and that portion of the combination practice involving feedback raises a question regarding the validity of the assumption that the replications were independent. All available supervisory personnel were assigned to an equivalent number of 50-minute and 15-minute practice sessions. Thus, the researcher attempted to establish the equivalence of the feedback and

supervision experience on the basis of equal assignment, training, and standardization of the practice content. However, the use of a different individual supervisor for each subject remains the best assurance of independence.

Efforts were made to control for equivalent practice treatments by structuring the time and activities for each practice. However, practice treatments were administered in different individual settings and this might raise questions of equivalence. Detailed materials are provided in the appendix for each practice treatment.

In essence, results of the practice treatments cannot be generalized beyond the specific practice materials and procedures generated for this investigation. A limitation of the practice treatments may be that each practice session was only 50 minutes. Chapter II and the appendix materials provide the reader with the information to assess how comparable the practice treatments are to those to which he might wish to generalize.

Also, the specific dental hygiene paraprofessional training program and the specific patient interview setting are delineated for the reader to evaluate how comparable the characteristics of the interview skills program in this study are to others.

Ideally, the delayed-post assessment would have been the actual clinic interview setting. This was impossible because of the physical arrangements (one large room with

20 dental stations) that existed. Even though the setting was representative for the dental hygienists' clinical interview, the characteristics of the dental sample should be reviewed carefully before the reader generalizes to other practicum settings and training programs.

The rating material and criteria used appeared to be reliable. The application of the criteria and observational discrimination by the judges seemed to be easier to make for the frequency and duration counts than for the global ratings. The use of the Esterline Angus Event Recorder appeared to assist the judges in recording frequency and duration data. The judges were described so that the reader can assess their comparability to other populations of raters.

Limitations inherent in the use of ratings need to be discussed. "The use of ratings rests on the assumption that the human observer is a good instrument of quantitative observation, that he is capable of some degree of precision and some degree of objectivity (Guilford, 1954, p. 278)." While confidence is placed in quantitative human judgments, the weaknesses resulting from the many sources of personal bias in those judgments should be acknowledged. Guilford (1954) has discussed in some detail the sources of rater errors. These sources may be summarized and briefly described as follows (Guilford, 1954): (a) error of leniency--the tendency for a rater to rate too high or too low for whatever reasons; (b) error of central tendency--judges

hesitate to make extreme judgments and tend to displace individuals in the direction of the mean of the total group; (c) halo effect--a tendency to direct the rating of any trait towards the general impression of the subject rated and to that extent to make the ratings of some traits less valid; also, to introduce a spurious amount of positive correlation between traits that are rated; (d) logical error--judges are likely to give similar ratings for traits that seem logically related in the minds of the judges; (e) contrast error--a tendency for a rater to rate others in the opposite direction from himself in a trait; (f) proximity error--spurious correlation is introduced, adjacent traits on a rating form tend to intercorrelate higher than remote ones, the degree of actual similarity being presumably equal.

One of the better methods for improving ratings is to train raters carefully. As cited in Chapter II, the training sessions for all judges were planned in detail. A step-by-step program was used to provide information, demonstration, practice, and discussion. Steps were repeated as necessary to provide appropriate experience with the rating materials until both judges and the researcher were in agreement. The problems of rating bias and constant errors of judgment are possible limitations of the present research.

Finally, a limitation of this research is the lack of information to establish a level of "meaningful significance" (Thoresen, 1969). Educational-economic research needs to be conducted in order to establish the cost-efficiency of producing videotape models vs. other in vivo modeling procedures. Cost data would also be desired for each of the practice modes to determine if the results of the feedback-supervisor practice warrants this more expensive practice procedure.

Discussion and Implications

The discussion and implications of this set of companion studies must be interpreted in terms of the population, procedures, materials, treatments, and criterion measures included in this investigation. The range of generalization in terms of these factors is to be determined by the reader.

Subject Variable

One interest of this research was the use of dental hygienists' initial interview performance as a covariate to increase precision of the practice data. Low correlations were found indicating that the use of initial performance data as a covariate for the immediate effect of practice was not helpful in gaining a more powerful significance test. Because the unadjusted and the analysis of covariance adjusted means did not differ meaningfully, the covariance procedure was dropped in order to simplify the analysis

and interpretation of the results. Several possibilities exist to explain these low correlations. The dental paraprofessional group had some previous experience and emphasis in greeting people and relating to others in the dental clinic. Therefore, the range of initial individual differences may not have been as extreme as found in other subject groups. Also, the initial interview performance for one half of the subjects followed the model experience so that it would have been affected by the model treatment. In this sense it was not entirely a measure of initial individual differences. Of general interest to those exploring initial differences as a covariate would be the finding that the two interview skill items that appeared to be the strongest covariates were the gesture rating and the encouragements to continue talking (ECT) observation. There is a need for future research to identify possible predictors of training outcomes.

Future research should examine many different subject characteristics and subject learning styles. For example, it would be helpful to know what subjects learn best from videotape presentations and what subjects learn best from practice experiences. Subject profiles detailing the personality characteristics, learning styles, interpersonal competencies, and modes and ways of processing information would be useful in prescribing the learning and training sequences for individuals and unique subject groups.

In terms of subjective impressions, the more shy, quiet and introverted subjects seemed to appreciate the specifics of the interview skill training program. These subjects seemed to feel they could more easily approach an interview comfortably and effectively at the end of the training sequence. On the other hand, a few extremely extroverted subjects who had learned to rely on their personal charm found the concrete criteria of skill performance a bit more uncomfortable. Future research might select these variables for more intensive study not only in terms of individual change, but also in terms of the type of training program or sequence that might be more effective for different individuals.

Another general characteristic of the subjects involved in this research was the cohesiveness of a group that works closely and often daily with each other and with their faculty. Continued interaction in lab and lecture class experiences, and the familiarity with evaluation and expected feedback in clinic supervision provide a kind of unique subject group. This kind of group may be found in health occupations and counselor training programs. Research may be needed with populations where this type of cohesion and interaction are not present.

All of these subject and population qualities present interesting ideas and potential for future investigations.

Dependent Variables

The reliability of the mean judges' ratings (Chapter II) suggests that raters can use the initial interview skill categories to make consistent observational and global ratings from videotaped interview data. As might be expected, observational items can be discriminated more reliably than the global or more subjective non-verbal and verbal interview skill items. The use of the Esterline Angus Event Recorder enhances data collection as it allows judgments to be recorded with mechanical and technical ease so that a judge can attend more intently to the interview. A variety of studies may be replicated or generated to establish the usefulness of this method of data collection.

The present investigation incorporated both observational and global ratings based on the assumption that each type of data contributed necessary information relevant to interview skill performance. Additional research might pursue this line of inquiry as well as extending the assessment of interview skill outcomes to those individuals being interviewed. When specific observational criteria like eye contact are used, the qualitative aspect may be overlooked. A review of the data collected in this study added to the researcher's assumption that both kinds of data are essential. For example, a judge viewing videotapes may rate a subject as using eye contact and directly facing another, but not be able to respond to the quality of the non-verbal skill

in terms of the communication of warmth, listening, and interest instead of a stare, blank look, or disconcerting expression. The effectiveness of a subject's interview repertoire needs to include both quantitative and qualitative responses. The assessment of performance ought to include the total nature of effective performance. Future research might seek to add dimensions of the appropriateness of use of different skills. This suggests that more efforts are needed to identify the kinds, qualities, and classes of subject responses which will either facilitate or retard the interviewing or counseling process. Researching the possible consequences of different responses at different stages in the interviewing or counseling process seems to be called for in future studies.

Another qualitative distinction that was included in the verbal interview skills was a rating of both closed or poor attempts to offer an invitation to talk in contrast to a good, open, invitation to talk. As judges rated a verbal response as an invitation to talk, they distinguished the characteristics of the invitation (P-ITT or G-ITT) and then assessed the global effectiveness of the invitations offered. Results of the model treatment indicated significant results (Chapter III) in the verbal interview skills. The data indicated that the limited exposure to the model increased the number of invitations attempted, but because of the limited time the invitations were not of good quality.

Subjects may grasp the idea of the verbal interview skill of offering invitations, but need other training experiences to achieve mastery of the skill. Further research might establish the levels of achievement that might be attained with different amounts of training time and with different training practice procedures. Another area for research might entail efforts to determine which variables, non-verbal and verbal, appear to affect the outcomes of interviews with different types of patients or clients. Whether non-verbal or verbal variables are more critical, and to what degree, might be raised with different types of patient or client types and values.

Undoubtedly, the length of interview time and the interview segment selected for assessment may affect the variables studied. In this investigation the length of the interviews, seven minutes, might have affected the dependent variables. Some subjects were more effective initially, and perhaps would have achieved more effective global ratings if their interview had lasted only five minutes. In general, some subjects seemed to be unable to maintain the initial level of interview skill performance. Other research might center on the effect of the length of the interview or the segments selected for evaluation of subject performance.

Finally, the introduction of the concept of activation (Study Three) was an attempt to isolate a specific variable that could be quickly and easily assessed that would provide a possibility for understanding the nature and properties of training program treatments and the characteristics of individual subject's involvement or response. Activation, as assessed by the Activation-Deactivation Adjective Check List, would seem to provide an encouraging possibility for research. If differing activation levels are correlated with performance of different types and classes of skills as the findings of this study suggest, then this opens questions about preferred modes of training. Treatments and training materials that achieve different levels of the general activation factor may be developed to provide more efficient mastery of verbal skills. Understandings of the activation properties and characteristics of effective trainee and counselor performance for different kinds of interview skills and response classes might suggest further research problems where the activation variables could assist in determining what treatments are effective in what ways for whom.

Treatment Effects

The data for Study One indicate that dental paraprofessionals can be trained through videotape modeling to use initial verbal interview skills. Reasons for the lack of effect on non-verbal interview skills may stem from the

more developed level of skill already present in the subjects or may relate to the need for other treatments to affect non-verbal skills. Other researchers (Ivey, Normington, Miller, Morrill, & Haase, 1968; Haase & DiMattia, 1970) have noted changes in verbal skills with varied results in the non-verbal skill area. Continued research on model and practice variables with other skill and response categories (such as responding, summarizing, confronting, empathic, interpretative, and clarification) may provide additional understanding of the interrelationship of verbal and non-verbal interview skills.

This study supports the effectiveness of a modeling plus cues videotaped presentation that includes both positive and negative examples of the initial interview skills. Other refinements in the modeling treatment might be recommended in contrasting the effects of good or positive models, negative models, both types of examples, along with comparisons of models alone, cues alone, and models and cues. As cited earlier in this discussion, research is needed on the effectiveness of modeling and other training procedures that might enhance the appropriate use and timing of when to use the interview skills.

A review of the model findings (Study One, Chapter III), also suggests that although the model treatment resulted in changes in verbal skills, encouragements to continue talking as an initial skill were not affected as strongly as

invitations to talk. Two reasons may be helpful in gaining an understanding of this result. First, with both non-verbal skills and invitations to talk being presented first in the model videotape, subjects may have worked to master these skills first and overlooked encouragements. Secondly, encouragement to continue talking (ECT) was presented as a verbal skill, but analysis of the results might raise questions regarding the nature of ECT. This item appeared to differ from the other verbal items in the multivariate test for the combined practice data (Table 22). This finding, and the subjective opinions of the judges as they were rating, would lead the researcher to view encouragements to continue talking as being a skill containing equal verbal and non-verbal qualities. Verbal encouragements without the non-verbal element (head nods, encouraging expression, and physical attending) lack the qualitative effectiveness needed in this interview skill. Additional inquiry might seek to support or refute this view.

As partially supported in the findings of this investigation, the practice procedures appear to enhance non-verbal performance. The different kinds of practice appear to have identical qualities and strengths for initial mastery. However, the feedback-supervision and combination practice appeared to be stronger practice modes for the retention of skills across time. Further research on the differentiated nature of the practice procedures used in this research is recommended.

Efforts were made in this set of companion studies to provide the good examples of each type of practice. Based on the experience gained in the preparation of materials and the implementation of the practice sessions, the researcher could recommend other refinements. Discrimination practice could be established so that each subject after making a discrimination rating had information to check for comparison. A larger number of more complex examples might have been desirable to increase the discriminations required.

The control group was provided with dental oriented materials not related to interview skills. However, the content gained in the control session may have enabled the subjects to feel more at ease in interviewing because they had information and content that could have been included in their interview. In this sense, a control practice group that had no exposure to the model and no practice activity at all would have been more desirable. Under this circumstance, the practice outcomes might have been more substantial.

Conclusion

In the discussion and implications of this research, the central themes have been (a) the training of dental health paraprofessionals and others by counselors, (b) the modeling and practice procedures used to develop and implement a training program, and (c) the comparative assessment over time of the skills developed in training. The role of

the counselor as educator, trainer, and consultant was extended to create the programs, train the faculty who also participated in the interview skills training sequence, and implement and evaluate the training of students. An emphasis was also placed on the exploration of the concept of activation as a specific means of identifying one possibility for determining the effect of treatments and procedures. Basically, this interest stemmed from the need to find means of specifying what works with whom and in what way.

In the past, counselor educators have been criticized for the artificial and theoretical dichotomies used in counseling research. Introducing meaning and rigor into research and practice has been the focus of three major directions in counseling education. Krumboltz suggested the test of relevance--recommending that answers to questions of what makes a difference in counselor practice are critical (Whiteley, 1969, p. 191). Ivey, in stressing microcounseling procedures, pointed out the need to identify particular, specific skills (Ivey, 1971). Carkhuff (1969a, 1969b) spelled out the importance of training others and of training as a preferred mode of treatment.

This investigation attempted to demonstrate a practical, comparative study of training procedures that might be appropriate to counselor trainees and many other groups. Further research in modeling and practice procedures would

increase effectiveness in the training of different classes of skills with a variety of populations with more emphasis on the skills and conditions necessary to live and work creatively, productively, and effectively.

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APPENDICES

APPENDIX A

INITIAL INTERVIEW SKILLS

Background Information for the Dental Hygienist

APPENDIX A

INITIAL INTERVIEW SKILLS

Background Information for the Dental Hygienist

An important aspect of establishing a relationship with a patient is being aware of, and responsive to, the communications of that individual and communicating this attentiveness. The communication of attentiveness is a potent reinforcer in your interaction with a patient. Attention plays an essential role in establishing a relationship and in motivating your patient. Skinner in Science and Human Behavior (1953, p. 78) discusses attention as follows:

The attention of people is reinforcing because it is a necessary condition for other reinforcements for them. In general, only people who are attending to us reinforce our behavior.

Thus, attention or attending behaviors communicated to your patient are a means of establishing relationships, being responsive, motivating and reinforcing.

Individuals give attention to one another by a variety of means. Attending behaviors can be both non-verbal and verbal. In essence, attending behaviors can be defined as simple listening. When you communicate attentiveness to a patient, they might describe the experience as--"She really listens to what I say...She seems to be interested in me." When you attend to another, your verbal and non-verbal behaviors consistently communicate very clearly that you are listening.

How do we learn to communicate simple listening or attentiveness? Rarely do we define what specific behaviors are involved in listening. Too often interviewer trainers or instructors say, "listen," without spelling out what the act of listening really is. Yet, all successful interviewers, dental hygienists, teachers, nurses, and counselors use basic attending skills and "communicate" that they listen. Good listeners give evidence through their verbal and non-verbal responses that communication is not only welcome, but

received and responded to in a manner that encourages more. In this way attending or listening behaviors are common to good listeners.

Specifically, good attending behavior gives evidence of listening by:

1. Maintaining some type of consistent eye contact,
2. Being physically relaxed with natural posture and movements--our body directly facing the other person, our facial expression inviting and encouraging,
3. Opening the interview with invitations to talk,
4. Encouraging the patient to continue talking.

Both non-verbal and verbal elements of our attending behaviors are necessary to communicate and give evidence of listening.

Think about the times when you have felt someone listened to you. Were you aware of the specific behaviors they engaged in that communicated "attending" or "listening"? Can you recall a moment when you felt someone listened? Think about the non-verbal and verbal behavioral skills the good listener practices. Attending behaviors not only make us feel like we are being listened to, but they can be specifically defined, observed, learned, and practiced.

Summary

Attention and the accompanying constructs of attending behavior provide a comprehensive framework of skills for the beginning interviewer. Professionals of varying orientations and areas of expertise may be distinguished by the issues of content and feeling to which they attend and thus reinforce. In other words, all effective professionals use attending skills in relating to people, but professionals in different fields may "attend" to different feelings or content as their tasks and situations vary. As such, attending behaviors do not suggest that one type of interviewing is more effective than another. Attending behaviors simply illustrate an important or essential denominator used in a variety of interviewing approaches.

Non-Verbal Attending Behaviors

Good attending behavior demonstrates to patients that you respect them as persons and that you are interested in what they say. By utilizing attending behavior to enhance the patient's self-respect and to establish a secure atmosphere, the dental hygienist facilitates free expression from the patient. Attending behavior can be used to motivate your patient.

The following are two non-verbal types of activities which best characterize good attending behavior:

1. The dental hygienist should initiate and maintain eye contact with the patient. However, eye contact can be overdone. A varied use of eye contact is most effective, as staring fixedly or with undue intensity usually makes a patient uneasy. If you are going to listen to someone, look at them.
2. The dental hygienist should be physically relaxed with natural facial expression, posture, and movements--directly facing the other person. If you are comfortable, you are better able to listen to the person with whom you are talking. Also, if you are relaxed physically, your posture and movements will be natural, thus enhancing your own sense of well-being. This sense of comfortableness better enables you to attend to and to communicate with the patient.

Of equal importance is the necessity to directly place your body in a position that faces the other person. The rotation or placement of your body signals to another non-verbally that you are indeed "attending".

Facial expression can be of especial importance to the dental hygienist. Throughout the patient's visit, his keen sense of awareness may make him doubly aware of your facial expressiveness.

Verbal Attending Behaviors

The following descriptions illustrate two verbal types of activities that characterize good attending by focusing on the patient and structuring your comments to provide opportunities for the patient to be involved.

1. OPENING THE INTERVIEW WITH INVITATIONS TO TALK

The initial task of the dental hygienist is to find out how the patient sees his situation. Most useful in determining this is the technique of providing limited structure through the use of an open invitation to talk.

An open invitation to talk may be best understood when compared with a closed approach to interviewing. For example,

Open: Could you tell me how you care for your teeth?

or How do you feel about using dental floss?

Closed: Do you brush your teeth each morning?

Do you have dental floss?

It may be observed that the open comments provide room for the patient to express his real self without the imposed categories of the dental hygienist. An open comment allows the patient an opportunity to explore himself with the support of the hygienist. A closed invitation to talk, on the other hand, often emphasizes factual content as opposed to feelings, demonstrates a lack of interest in what the patient has to say, and frequently attacks or puts the patient in his place. Closed questions can usually be answered with a yes or no.

Crucial to open-ended questions is the concept of who is to lead the interview. While the dental hygienist does ask questions while using this skill, the questions are centered around concerns of the patient rather than around concerns of the dental hygienist for the patient. Questions should be designed to help the patient clarify his own problems, rather than provide information only for the dental hygienist. A typical problem with closed questions is that

the dental hygienist leads the patient to topics of interest to the hygienist alone. Too often a hygienist projects her own theoretical orientation onto the information she is trying to gather and imposes artificial structure too early. If the dental hygienist relies on closed questions to structure her interview, she is often forced to concentrate so hard on thinking up the next question that she fails to listen to and attend to the patient.

Open invitations to talk are extremely useful in a number of different situations. The following are some examples:

a. They help begin an interview.

How have things gone since the last time we talked together?

Tell me how you care for your teeth?

b. They help get the patient to elaborate on a point.

Could you tell me more about that?

How do you feel when you skip brushing?

c. They help elicit examples of specific behavior so that the dental hygienist is better able to understand what the patient is describing.

Will you give me a specific example?

Can you show me how you use a toothbrush?

d. They help focus the patient's attention on his feelings.

What are you feeling as you're telling me this?

How did you feel then?

Go through the examples above again, study them carefully, write some possible closed-ended questions in each case above in the spaces on the attached sheets. Then change your closed questions to open questions.

In summary, the purpose of this verbal skill is to assist you in initiating an open invitation so that the patient can maximize his verbal involvement. In essence, a good invitation to talk allows the patient to gain a lot of mileage--not just a one word yes-no response.

Basically there are two types of verbal responses the patient can give: (a) mileage responses, and (b) yes-no responses. So the good open invitation to talk on your part elicits more information from the patient. When you allow the patient the opportunity to respond with mileage responses and fewer yes-no types of answers, he becomes involved and feels that you are attending to him verbally.

Here is another important way to distinguish the quality of the open invitation to talk that you offer. If you begin with the following words--is, are, was, were, does, did, has, and have--you usually ask for the patient to respond with simple "yes" and "no" answers. For example, all of the following questions can be answered with a "yes" or "no": Imagine how you would respond to each example.

1. Is there something with which I can help you?
2. Was it painful?
3. Are you interested in returning in six months?
4. Were you concerned with what the dentist might think?
5. Does that feel comfortable?
6. Did you call for an appointment?
7. Has it bothered you in the last week?
8. Have you determined where the tooth hurts?

A better way to word the previous examples allows for the patient to respond in other than "yes-no" varieties. By beginning the open invitation differently--How, I wonder, What, When, Tell me, Where--the patient is asked to respond in a manner that permits a lot of information from his point of view. Consider the following possibilities and imagine the kind of response you would give to each example:

1. How can I help you?
2. I wonder how painful it was.
3. How interested are you in returning in six months?
4. What concern did you have with your dentist's thoughts?
5. How does that feel? Can you describe how that feels?
6. When did you call for an appointment?
7. Tell me, when was the last time it bothered you?
8. Where does it hurt?

It seems obvious that whether the hygienist is aware of her invitation to talk or not, she can in fact limit or encourage the patient through the kind of invitation she offers. Too often we limit without knowing or realizing. Once mastered, once the dental hygienist can choose to use this skill, she can in fact verbally attend to the patient or if necessary limit the amount of information and involvement of the patient. The hygienist needs to master the verbal skill of offering open invitations to talk so that she can elicit mileage rather than "yes-no" responses from patients.

2. ENCOURAGING THE PATIENT TO CONTINUE TALKING

Once the patient has been helped by the dental hygienist's attention and open-ended questions to begin telling his story, the dental hygienist's task is to facilitate his continuing to talk. The hygienist really needs to say very little in order to encourage a patient to continue talking, elaborating, and explaining.

Simple "um-hmm's," repetitions of one or two words from what he just said, one-word questions, such as "Then?" are often sufficient. The word "minimal" refers both to how much the dental hygienist says, which can be very little, and to the amount of direction or intervention she imposes on the content and flow of the interview.

This technique presupposes that the dental hygienist has tuned in to what the patient is discussing. Minimal encouragement to talk would follow directly from what the patient has just said. When used correctly, the patient, although maintaining control of the interview in that he is talking about what he wants to discuss, is forced to elaborate, explain, and to take an in-depth look at his problem.

Often the dental hygienist will want and need to talk more and to more actively direct or focus the content of what the patient is saying. Minimal response elicits more detail from the patient as comfortable communication continues. Whether a minimal response follows an open question or a very specific question, this type of reply leads to a patient's continuing to talk.

More examples of the type of comments described by the title "minimal encouragement to talk" are the following:

- a. "Oh?" "So?" "Then?" "And?"
- b. The repetition of one or two key words.

- c. "Tell me more."
- d. "How did you feel about that?"
- e. "Give me an example."
- f. "What does that mean to you?"
- g. "Umm-hummm."

Too many dental hygienists are unaware of the power and importance of minimal encouragement. As such, they are unaware of how they may unconsciously influence the direction of interviewing and instructing sessions. If a dental hygienist understands minimal encouragement responses there will be more exploration and self-awareness on the part of the patient.

APPENDIX B

BASIC MICROCOUNSELING MODEL

APPENDIX B

BASIC MICROCOUNSELING MODEL

While many variations are possible, most research and methodology in microcounseling has been conducted in a situation in which the trainee goes through the following progressive steps:

1. The trainee receives instructions to enter a room where he will interview a client. Depending on the situation, the topic may or may not be defined. Similar instructions are given to the volunteer client, with the exception that he is told he is about to be interviewed.
2. A five-minute diagnostic session (with the trainee interviewing the client) is then videotaped.
3. The client leaves the room and completes an evaluation form or may be interviewed by a second supervisor. These data are then available for the supervisory session with the trainee.
4. The trainee reads a written manual describing the specific skill to be learned in this session. The supervisor talks with him about the session and about the manual.
5. Video models of an expert demonstrating the specific skill are shown. There may be a positive and a negative model of the skill.
6. The trainee is shown his initial interview and discusses this with his supervisor. He is asked to identify examples where he engaged in or failed to apply the specific skill in question.
7. The supervisor and trainee review the skill together and plan for the next counseling session.
8. The trainee reinterviews the same client for five minutes.

9. Feedback and evaluation on the final session are made available to the trainee.

Many alternatives and additions to this basic framework are possible. Perhaps most important among them is the recycling of the entire process; here, the trainee at step nine simply repeats steps three through eight, thus obtaining extra practice and reinforcement of the skill in question. The nine-step training process, including two five-minute interviews, takes approximately one hour; recycling the process brings training to a two-hour period, a time which seems to be maximum for participation. If the skill is not learned at this point, trainees are asked to return for further sessions. (Ivey, 1971, pp. 6-7.)

APPENDIX C

ACTIVATION-DEACTIVATION ADJECTIVE

CHECK LIST

APPENDIX C

MAJOR FACTORS OF THE ACTIVATION-DEACTIVATION ADJECTIVE CHECK LIST (AD-ACL)

Thayer, Robert E. Measurement of activation through self-report. Psychological Reports, 1967, 20, 663-678.

The following activation dimensions have been used in a number of studies. The adjectives are listed in the order of their loadings in the above factor-analytic study.

General Activation

lively
active
full of pep
energetic
peppy
vigorous
activated

High Activation

clutched up
jittery
stirred up
fearful
intense

General Deactivation

at rest
still
leisurely
quiescent
quiet
calm
placid

Deactivation-Sleep

sleepy
tired
drowsy

Each adjective is scored on a 4-point scale (4 = definitely feel, through 1 = definitely do not feel). Factor scores are summations or means of adjective scores within the factor.¹ While the above groups of adjectives have been used in various studies, more or less adjectives could be used depending upon the demands of individual studies (see factor matrix, Pp. 666-667; Thayer, 1967).

¹ Scoring templates may be easily made from cardboard sheets cut to the dimensions of the AD-ACL. After holes have been cut corresponding to the factor adjectives, the appropriate scores may be placed above the four response alternatives.

Name _____ Date and Time _____
 (Please include A.M. or P.M.)

Each of the words on the next sheet describes feelings or mood.
 Please use the list to describe your feelings at this moment.

If the word definitely describes how you feel at the moment you read it, circle the double check (✓✓) to the right of the word. For example, if the word is, relaxed, and you are definitely feeling relaxed at the moment, circle the double ✓✓ as follows: relaxed (✓✓) ✓ ? no.
This means you definitely feel relaxed at the moment.

If the word only slightly applies to your feelings at the moment, circle the single check as follows: relaxed ✓✓ (✓) ? no.
This means you feel slightly relaxed at the moment.

If the word is not clear to you or you cannot decide whether or not it applies to your feelings at the moment, circle the question mark as follows: relaxed ✓✓ ✓ (?) no.
This means you cannot decide whether you are relaxed or not.

If you clearly decide the word does not apply to your feelings at the moment, circle the no as follows: relaxed ✓✓ ✓ ? (no).
This means you are definitely not relaxed at the moment.

Work rapidly. Your first reaction is best. Work down the first column, then go on to the next. Please mark all words. This should take only a few minutes.

-Now please turn the page and begin working-

(✓) ✓ ? no : definitely feel
 ✓ ✓ (✓) ? no : feel slightly
 ✓ ✓ ✓ (✓) no : cannot decide
 ✓ ✓ ✓ ? (no) : definitely do not feel

carefree	✓✓	✓	?	no	aroused	✓✓	✓	?	no
serious	✓✓	✓	?	no	fearful	✓✓	✓	?	no
peppy	✓✓	✓	?	no	lively	✓✓	✓	?	no
pleased	✓✓	✓	?	no	still	✓✓	✓	?	no
placid	✓✓	✓	?	no	self-centered	✓✓	✓	?	no
leisurely	✓✓	✓	?	no	wide-awake	✓✓	✓	?	no
sleepy	✓✓	✓	?	no	skeptical	✓✓	✓	?	no
jittery	✓✓	✓	?	no	activated	✓✓	✓	?	no
intense	✓✓	✓	?	no	sad	✓✓	✓	?	no
grouchy	✓✓	✓	?	no	full-of-pep	✓✓	✓	?	no
energetic	✓✓	✓	?	no	affectionate	✓✓	✓	?	no
egotistic	✓✓	✓	?	no	quiet	✓✓	✓	?	no
calm	✓✓	✓	?	no	concentrating	✓✓	✓	?	no
suspicious	✓✓	✓	?	no	sluggish	✓✓	✓	?	no
tired	✓✓	✓	?	no	overjoyed	✓✓	✓	?	no
regretful	✓✓	✓	?	no	quick	✓✓	✓	?	no
stirred-up	✓✓	✓	?	no	nonchalant	✓✓	✓	?	no
warm-hearted	✓✓	✓	?	no	quiescent	✓✓	✓	?	no
vigorous	✓✓	✓	?	no	clutched-up	✓✓	✓	?	no
engaged-in-thought	✓✓	✓	?	no	wakeful	✓✓	✓	?	no
at rest	✓✓	✓	?	no	rebellious	✓✓	✓	?	no
elated	✓✓	✓	?	no	active	✓✓	✓	?	no
drowsy	✓✓	✓	?	no	blue	✓✓	✓	?	no
witty	✓✓	✓	?	no	defiant	✓✓	✓	?	no
anxious	✓✓	✓	?	no	tense	✓✓	✓	?	no

June 18, 1973

Dr. Robert Thayer
Department of Psychology
California State University
Long Beach, Calif. 90840

Dear Dr. Thayer:

Thank you for your assistance with the Activation-Deactivation Adjective Check List. I have included the check list as a measure in my dissertation. My study is concerned with the effects of modeling and differentiated practice in the attainment and retention of interview skills.

Of special interest to me were the activation properties of the practice treatments and possible changes in activation at different phases in the learning sequence. Two administrations of the check list were included--one immediately following the five levels of practice treatment, and one following a delayed-post measure of interview performance. Scores tabulated for the high activation factor included the adjectives anxious and tense. Tabulations for the sleep factor were calculated in two ways: a three-item group (drowsy, sleepy, tired) and a six-item group (drowsy, sleepy, tired, sluggish, and wide-awake and wakeful, inversely scored). Both calculations of the sleep factor render the same significant results. In both cases there were differences in activation from practice treatment to the post measure of performance. There were no differences in activation for the different practice treatments. All treatments were designed to be as involving as possible.

Could you give me your opinion on reporting check list results. Is it preferable to use only three items for the sleep factor score, or would you suggest the six-item score? Are there any new factor studies that provide additional information?

If information regarding anxious and tense adjectives in the high activation factor are available, I would very much like to have any new findings or references.

Looking forward to hearing from you.

Sincerely,

Nancy Tyler

enclosure

nt

CALIFORNIA STATE UNIVERSITY LONG BEACH

June 29, 1973

Ms. Nancy A. Tyler
5265 Maple Brook Lane
Flint, Michigan 48016

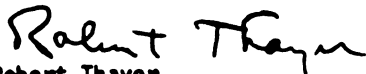
Dear Ms. Tyler:

I believe I sent you a copy of Appendix B (Factor Analytic Studies) of the NIMH Terminal Project Report; if not let me know, and I will send it.

Though other adjectives sometimes load on D-S in various analyses, sleepy, tired, and drowsy invariably appear. Therefore, I would stick with those three.

I am currently reanalyzing data from an AD ACL containing tense and anxious, and I will send you the results when they become available.

Sincerely,


Robert Thayer
Associate Professor, Psychology

jm

LONG BEACH CALIFORNIA 90840
THE CALIFORNIA STATE UNIVERSITY AND COLLEGES

APPENDIX D

VISUAL AIDS

APPENDIX D

VISUAL AIDS

Used In Model Videotape And Teach Another Practice

NON-VERBAL BEHAVIORS

1. Eye Contact -- Consistent
2. Physically Relaxed Posture
3. Natural Facial Expression
4. Directly Face The Other Person

1

VERBAL BEHAVIORS

1. Opening The Interview And
Invitations To Talk
2. Encouraging The Patient To
Continue Talking

2

INVITATIONS TO TALK Open Vs. Closed Questions

Open

- | | |
|--|--|
| 1. Person Is Important | 1. Facts & Details Are Important |
| 2. Patient Has Chance To Tell About Self | 2. Patient Has No Chance To Explore Self |
| 3. Emphasizes Feelings | 3. Emphasizes Facts |
| 4. Demonstrates Interest In Patients | 4. Often Puts Patient In His Place--Or Rejects Patient |

3

**DISTINGUISH THE QUALITY OF
THE INVITATION TO TALK**

Obtain Mileage Responses Vs. Yes/No Responses

Begin with:	Avoid:
How.. Where.. What.. I Wonder.. When.. Tell Me..	Is.. Does.. Are.. Did.. Was.. Has.. Were.. Have..

5

MINIMAL ENCOURAGEMENT TO TALK

Examples:

- a. "Oh?" "So?" "Then?" "And?"
- b. The repetition of one or two key words.
- c. "Tell me more."
- d. "How do you feel about that?"
- e. "Give me an example."
- f. "What does that mean to you?"
- g. "Umm-hmmm."

6

APPENDIX E

MODEL VIDEOTAPE CONTENT

APPENDIX E

MODEL VIDEOTAPE CONTENT

Approximate Time	Description of Content
2 minutes	Introduction by Director & Staff of Dental Hygiene Program
2 minutes	Background Information on Attending Behaviors
2 minutes	Identification of Non-verbal Interview Skills
2 minutes	Good & Poor Examples of Eye Contact, 1 min. each
1 minute	Emphasize & Explain other non-verbal skills
2 minutes	Good & Poor Examples of other non-verbal skills
1 minute	Review of All Non-verbal interview skills
3 minutes	Additional Good Models of all non-verbal Interview Skills (combined example)
2 minutes	Introduction of Verbal Interview Skills (ITT and ECT)
2 minutes	Open & Closed characteristics of ITT
3 minutes	Six 30-second examples of good & poor ITT's
2 minutes	Review of ITT's
1 minute	Situations (4) where ITT's can be used
2 minutes	Four 30-second examples of situations using good ITT's
2 minutes	Two one-minute examples of ITT's
2 minutes	Two minutes of summary examples (ITT's)
2 minutes	Review & Summary of ITT as verbal skill
2 minutes	Faculty discussion of quality of ITT's
3 minutes	Presentation of Encouragements as the second initial verbal interview skill
2 minutes	Two 1-minute model examples of ECT's
3 minutes	Three 1-minute good examples of ECT's
1 minute	Review of ECT as a verbal skill
4 minutes	Summary Review of all the Initial Non-verbal and Verbal Initial Interview Skills

APPENDIX F

INSTRUCTIONS FOR ASSISTANTS

MODEL, PRACTICE, AND VIDEO MONITOR TECHNICIAN

APPENDIX F

INTERVIEW SKILLS TRAINING PROGRAM

Instructions for Model Tape Assistant

General Instructions

1. Greet the Ss as they arrive to view the model film.
2. Check the name of the S on the list provided as the S reports.
3. Ask the S to take a seat in the room.

Materials

1. Master Schedule List for Model tape.
2. Pencil.

Other Instructions

1. Arrive early.
2. See that there are twenty chairs available.
3. Check that the room arrangement is adequate.
4. Check operation of videotape monitor. See that both monitors are ready; load the videotape on the recorder unit so that it is ready to play.

INTERVIEW SKILLS TRAINING PROGRAM**Instructions for Practice Assistant****General Instructions**

1. Greet the Ss as they arrive for their practice session.
2. Check the name of the S on the list provided. Note type of practice.
3. Give the proper practice envelope, as directed on master list, to each S.
4. Provide S with pencils.
5. Direct the S to their practice room. Tell the S they are to turn in materials envelope to you at the end of their practice session.

Materials

1. Master Practice Schedule List
2. Envelopes
3. Videotapes
4. Pencils
5. Stopwatches
6. Posters
7. TV Monitors
8. Tape Cassette Sets and players

Other Instructions

1. In time between practice sessions, prepare the next set of materials so that you will be prepared for the Ss arriving.
2. Double check to see that appropriate videotape copies are included in each Ss envelope as the master list code requires.
3. Stopwatches, posters, TV monitors, and tape cassette players will be stationed in the practice rooms and remain there during all practice sessions.
4. You will check the tape cassette sets out to Ss assigned to Practice 5 on your master list.

INTERVIEW SKILLS TRAINING PROGRAM

Instructions for Practice Video Monitor Technician

1. Assist in setting up TV monitors in each of the appropriate practice rooms. Check to see that the set is operational and positioned for viewing.
2. During the discrimination practice sessions be available as assigned to operate the monitor, rewind the tape, and correct any mechanical difficulties if they occur.
3. You are not to speak to the S. Simply operate the equipment as the S directs when she is ready to view the tape.

APPENDIX G

ANNOUNCEMENT TO CLASS OF TRAINEES

APPENDIX G

ANNOUNCEMENT TO CLASS OF TRAINEES

You are about to be introduced to a basic skill training program that is considered to be important in your work with patients. A variety of instruction and practice experiences will be planned in this learning sequence. All activities should result in your being more confident and successful in communicating with your patients in the clinic. Mastery of the skills presented in training should also result in your being able to elicit better cooperation and motivation from the patient you are working with in the clinic.

During this series of learning activities we will be conducting a research study to determine how instruction can be made more effective. All information will be coded for research and, therefore, will be confidential. The results will in no way effect your grade, but will be helpful in determining more efficient means of training dental hygienists in the people-relating skills needed in their day-to-day work with patients.

An important element of this training experience will be the use of television in instruction. For this reason we want you to be familiar with the equipment and the way in which the equipment is set up. We want you to be as comfortable with the presence of the TV equipment as you are with the dental chair and tools that you use--regard it as an important learning tool that will be useful to you. When you conduct an interview with your patient as you usually do, we want you to continue to work, basically ignoring the use of the TV camera and recorder.

In summary, your best efforts will assist in helping you learn skills applicable to your clinic patient relationships and also provide information on more efficient and effective means of instructing dental hygienists.

Next week, starting Monday, we will begin the Interview Skills Training Program. Each of you will have an individualized schedule noting (a) your code number for research purposes, and (b) the days, times, and room numbers for the activities scheduled. If there is any difficulty that arises, please leave a message with Mrs. Brooks at the clinic. She also has your schedule if you need to consult with her.

Please arrive at the clinic and be ready to check in at Room 416 approximately five minutes ahead of the appointment time. The assistants there will be expecting you.

APPENDIX H

SUBJECT ASSIGNMENT FORMS

APPENDIX H

SUBJECT ASSIGNMENT FORMS

Code # _____	Day	Room	Time	Activity
Name _____	Monday	_____	9-10a.m.	_____
Week 1 Schedule: March 26-30	(Tue.or	<u>Clinic</u>		
	Thurs.)	<u>416</u>	_____	TV
		<u>C.C.</u>		
	Friday	<u>1</u>	11-12a.m.	_____

Code # _____	Day	Room	Time	Activity
Name _____	(Tue.or	_____		Practice
Week 2 Schedule: April 2-6	Thurs.)	<u>Clinic</u>	_____	<u>(50 min.)</u>
		<u>Clinic</u>	Following	
	<u>same</u>	<u>416</u>	<u>practice</u>	TV

Reminder: Please be prompt. Your practice must start on time so that you are finished before the next person arrives.

Check in with the assistant in the hall by Room 416 to pick up practice materials. Then go to your scheduled practice room.

APPENDIX I

GENERAL INSTRUCTIONS FOR PRACTICE SESSIONS

APPENDIX I

GENERAL INSTRUCTIONS FOR PRACTICE SESSIONS

General Instructions: The following 50-minute practice period contains activities designed to assist in the mastery of interview skills. Put forth your best effort in each practice activity.

1. Everything needed for your practice session is provided in the envelope and practice room.
2. Go to the practice room for which you have been scheduled. Open your materials envelope and begin your practice.
3. Carefully follow the instructions outlined in the materials.
4. When you have finished your practice, place everything you received back in the materials envelope and return the envelope to the assistant waiting in the hall (across from room 416).

APPENDIX J

DISCRIMINATION PRACTICE WRITTEN MATERIALS

APPENDIX J

DISCRIMINATION PRACTICE

This practice session is designed to help you discriminate both verbal and non-verbal interview skills as observed on TV. Before you can master interview skills you must first be able to discriminate what you see or observe. Discrimination practice helps observers (a) become more keenly aware of the presence of a particular skill; (b) focus on the degree to which a skill is present. Again, the two ways to discriminate are (a) to become aware of whether or not the interviewing behavior of interest can be observed; (b) to note the degree to which the interviewing behavior exists. This discrimination practice will give experience in applying these two criteria.

Discrimination means to make a distinction, to separate one from another, to distinguish, or to differentiate. In learning new skills it is important to separate, choose, and distinguish. Every day with many activities we discriminate and make distinctions. We taste different foods and notice if they are sweet or sour. We look outside and can tell if it is light or dark, day or night. Some discriminations are so obvious to us that we don't stop to think that we are applying a discrimination skill when we note differences.

Other discriminations are more complex or more difficult. Think about the discriminations we make with color. We know different colors, we learn to label them. From simple yellow, red, blue, and green, the automobile advertiser makes us more aware of sunburst yellow, fire-engine red, powder blue, and British racing green. Various shades and distinctions of color are usually learned. However, some of us who are color blind may be unable to make some discriminations. Although physiological and inherited characteristics may limit some discriminations for a few, most discriminating ability is the result of our learning and our practice.

Think about some of the discriminations you have probably practiced since you enrolled in the dental hygiene program. The color of gums, stains on teeth, the shape and size of teeth are important in making some of the distinctions necessary in dentistry. Perhaps, we could think of many of these learned distinctions as non-verbal discriminations. We can observe and discriminate or separate just by what we notice.

Although the discrimination may be more complex, we often judge non-verbal looks and decide if a man may be interested in us or not. We learn to read facial expressions and tone of voice to complement what we observe so that we can better discriminate. Perhaps, with your parents or close friends, with husbands, we become better discriminators of what they mean. Sometimes we have learned it is just as

important to know what people say as well as what they don't say. Have you had the experience of having a report passed on to you second hand, and asked, "But, how did she say it?"-- an effort on your part to discriminate the more accurate meaning of words. We all have experience in making complex discriminations. Most of this experience is learned over years of practice.

It may be important to emphasize that we all have learned to make discriminations. Some are simple; some are complex. Through practice we increase our skill in making discriminations and often this leads us to the mastery of the skill involved. Therefore, this practice session will focus on discriminations we can practice in noting interview skills. Hopefully, this will provide an excellent means of mastering interview skills.

Code _____

PRACTICE INSTRUCTIONS CHECKLIST

Follow instructions carefully. Each instruction is outlined step by step. Read the instruction. Read instructions again as necessary. When you have completed a step, check (✓) it in the blank provided. Continue to the next instruction.

Times are indicated for each step. There should be ample time. The approximate times provided are guides so that you will be able to complete the practice session on schedule.

For your own use, make any notes on the practice instructions checklist that may be helpful to you.

Approximate Time Guide	Check ✓ When Complete	Step	Instructions
3 min.	_____	1.0	First read the remainder of this practice instructions checklist.
	_____	1.1	Your practice involves discrimination activities--practice in discriminating whether interview skills are being used or not.
	_____	1.2	Look over all the materials in your envelope. Scan them so that you can obtain an idea of what needs to be completed during your practice session.
3 min.	_____	2.0	Read the paper on Discrimination Practice.
20 min.	_____	3.0	Scan the Discrimination Practice Rating Form.
	_____	3.1	The tape should be set for you on the TV playback unit. Signal the assistant when you are ready to begin. Tell the assistant when you want to stop the tape.
	_____	3.2	Observe the TV tape so that you can rate each example of interview skill performance.

Code _____

Practice instructions checklist, p. 2.

Approximate Time Guide	Check ✓ When Complete	Step	Instructions
16 min.	_____	3.3	At the end of Example 6, the assistant will rewind the tape to the beginning. Rate the first examples again as indicated on your rating form.
	_____	3.4	Now, rate the verbal skills. These discriminations involve open and closed invitations to talk. These are short examples--watch carefully.
	_____	3.5	Continue to Part D. where you discriminate and tally: (a) the number of invitations to talk, (b) decide whether they are open or closed as you tally, (c) count the number of minimal encouragements used to continue the patient talking, (d) tally the number of other comments made by the interviewer.
	_____	3.6	Rewind the tape so that it will be ready for the next viewer.
4 min.	_____	4.0	Summarize in your own words the strengths and weaknesses you observed as you watched the interviewers.
4 min.	_____	5.0	Complete the adjective check list provided. Follow directions on the check list to describe your feeling or mood.
	_____	5.1	Place all materials used during the practice session back in the envelope.
	_____	6.0	Go turn in all materials to the assistant waiting in the hall at Room 416.

Code _____

SUMMARIZE YOUR GENERAL IMPRESSIONS OF THIS PRACTICE SESSION:

Code _____

DISCRIMINATION RATINGS

General Instructions: Observe each example of behavior presented on the TV monitor. After you have observed the example, turn the video recorder off and make your discriminations. After making your notes and ratings, turn on the recorder and watch the next example.

Section I. Non-verbal Interview Skills.

Part A.

Example 1: Simply note if each interview skill is present or not. Write in "yes" or "no."

- _____ a. Eye contact
- _____ b. Physically relaxed posture
- _____ c. Natural facial expression
- _____ d. Directly facing the other person

Example 2: Simply note if each interview skill is present or not. Write in "yes" or "no."

- _____ a. Eye contact
- _____ b. Physically relaxed posture
- _____ c. Natural facial expression
- _____ d. Directly facing the other person

Example 3: Simply note if each interview skill is present or not. Write in "yes" or "no."

- _____ a. Eye contact
- _____ b. Physically relaxed posture
- _____ c. Natural facial expression
- _____ d. Directly facing the other person

Part B.

Example 4: Simply note if each interview skill is present or not. Write in "yes" or "no."

- _____ a. Eye contact
- _____ b. Physically relaxed posture
- _____ c. Natural facial expression
- _____ d. Directly facing the other person

Example 5: Simply note if each interview skill is present or not. Write in "yes" or "no."

- _____ a. Eye contact
- _____ b. Physically relaxed posture
- _____ c. Natural facial expression
- _____ d. Directly facing the other person

Code_____ Discrimination Ratings, p. 2

Example 6: Simply note if each interview skill is present or not. Write in "yes" or "no."

- _____ a. Eye contact
- _____ b. Physically relaxed posture
- _____ c. Natural facial expression
- _____ d. Directly facing the other person

Section II. Non-verbal Interview Skills

Example 1: Circle the appropriate number describing the interviewer's eye contact. In your own words tell why you made this discrimination.
 5 = very good Reason for eye contact rating:
 4 = good
 3 = fair
 2 = poor
 1 = very poor

Example 2: Circle the appropriate number describing the interviewer's eye contact. In your own words tell why you made this discrimination.
 5 = very good Reason for eye contact rating:
 4 = good
 3 = fair
 2 = poor
 1 = very poor

Example 3: Circle the appropriate number describing the interviewer's eye contact. Tell why you made this discrimination.
 5 = very good Reason for eye contact rating:
 4 = good
 3 = fair
 2 = poor
 1 = very poor

Example 4: Circle the appropriate number describing the interviewer's physical posture, natural gestures, and facial expression. State the reason for your rating in your own words.
 5 = very good Reason for rating:
 4 = good
 3 = fair
 2 = poor
 1 = very poor

Code _____ Discrimination Ratings, p. 3

Example 5: Circle the appropriate number describing the interviewer's physical posture, natural gestures, and facial expression. State the reason for your rating in your own words.

5 = very good Reason for rating:

4 = good

3 = fair

2 = poor

1 = very poor

Example 6: Circle the appropriate number describing the interviewer's physical posture, natural gestures, and facial expression. State the reason for your rating in your own words.

5 = very good Reason for rating:

4 = good

3 = fair

2 = poor

1 = very poor

Section III. Verbal Interview Skills Part C.

Example 13: Rate the interviewer's invitation to talk as open or closed.

Open _____ Closed _____

Example 14: Rate the interviewer's invitation to talk as open or closed.

Open _____ Closed _____

Example 15. Rate the interviewer's invitation to talk as open or closed.

Open _____ Closed _____

Example 16. Rate the interviewer's invitation to talk as open or closed.

Open _____ Closed _____

Example 17: Rate the interviewer's invitation to talk as open or closed.

Open _____ Closed _____

Example 18: Rate the interviewer's invitation to talk as open or closed.

Open _____ Closed _____

Code _____ Discrimination Ratings, p. 4

Part D.

Example 19: Rate the invitation to talk as open or closed. If more than one invitation is offered, place a tally mark in the box to illustrate. (For 1 open invitation and one closed invitation, the tally would look like this... Open

 Closed

)

Open

 Closed

Example 20: Tally every invitation as open or closed.

Open

 Closed

Example 21: Tally in the boxes provided the number of open and closed invitations to talk and the number of minimal encouragements to continue talking offered by the interviewer.

	Open	Closed
Number of invitations		
Number of minimal encouragements		

Example 22: Tally in the boxes provided the number of open and closed invitations to talk and the number of minimal encouragements to continue talking offered by the interviewer. Tally any other kinds of comments in the bottom box.

	Open	Closed
Number of invitations		
Number of minimal encouragements		
Other comments		

Example 23: Tally in the boxes provided the number of open and closed invitations to talk and the number of minimal encouragements to continue talking offered by the interviewer. Tally any other kinds of comments in the bottom box.

	Open	Closed
Number of invitations		
Number of minimal encouragements		
Other comments		

Code _____ Discrimination Ratings, p. 5

Example 24: Tally in the boxes provided the number of open and closed invitations to talk and the number of minimal encouragements to continue talking offered by the interviewer. Tally any other kinds of comments in the bottom box.

	Open	Closed
Number of invitations		
Number of minimal encouragements		
Other comments		

Example 25: Tally in the boxes provided the number of open and closed invitations to talk and the number of minimal encouragements to continue talking offered by the interviewer. Tally any other kinds of comments in the bottom box.

	Open	Closed
Number of invitations		
Number of minimal encouragements		
Other comments		

Example 26: Tally in the boxes provided the number of open and closed invitations to talk and the number of minimal encouragements to continue talking offered by the interviewer. Tally any other kinds of comments in the bottom box.

	Open	Closed
Number of invitations		
Number of minimal encouragements		
Other comments		

APPENDIX K

FEEDBACK AND SUPERVISOR PRACTICE

WRITTEN MATERIALS

APPENDIX K

FEEDBACK AND SUPERVISOR PRACTICE WRITTEN MATERIALS

Code _____

PRACTICE INSTRUCTIONS CHECKLIST

Follow instructions carefully. Each instruction is outlined step by step. Read the instruction. Read instructions again as necessary. When you have completed a step, check (✓) it in the blank provided. Continue to the next instructions.

Times are indicated for each step. There should be ample time. The approximate times provided are guides so that you will be able to complete the practice session on schedule.

For your own use, make any notes on the practice instructions checklist that may be helpful to you.

Approximate Time Guide	Check✓ When Complete	<u>Step</u>	<u>Instructions</u>
2 minutes		1.0 1.1 1.2	First read through the remainder of the practice instructions checklist. Look over all the materials in your envelope. Scan them so that you can obtain an idea of what needs to be completed during your practice session. Then, organize the written materials from the envelope so that you are ready to use them as needed.
2 minutes		2.0	Your practice session involves: a. observing your performance from your first interview. b. analyzing and discussing what you would like to change in your next interview. c. receiving comments and suggestions from a dental supervisor.

Code _____ Practice Instructions Checklist, p. 2.

Approximate Time Guide	Check ☒ When Complete	<u>Step</u>	<u>Instructions</u>
			d. reviewing the suggestions and comments so that you are prepared for your next interview.
	_____	2.1	Supervisor places the videotape on the TV playback unit so that it is ready to be viewed.
	_____	2.2	Hygienist reads through the instructions for viewing so that she knows how to keep the log and what the procedure will be for viewing.
	_____	2.3	Make sure that you can view the monitor well. Keep your log sheet available so you can make notes comfortably when you stop for this purpose. Relax.
16 minutes	_____	3.0	Refer to Instructions for Viewing. Complete the first observation as outlined on the Instructions for Viewing. Both hygienist and supervisor should have Viewing Log forms ready. The supervisor should use the stop watch to divide observing times into segments.
16 minutes	_____	4.0	Refer to Instructions for Viewing. Complete the second observation as outlined on the Instructions for Viewing.
10 minutes	_____	5.0	Refer to Instructions for Viewing. Complete the third observation as outlined on the Instructions for Viewing.

Code _____ Practice Instructions Checklist, p. 3.

Approximate Time Guide	Check ✓ When Complete	Step	Instructions
1 minute	_____	6.0	Supervisor discusses the importance of using skills in the interview. REMEMBER THE INTERVIEW SKILLS YOU WISH TO CHANGE AND CONTINUE USING CAN BE PRACTICED IN EVERY INTERVIEW IN THE CLINIC.
3 minutes	_____ _____ _____	7.0 7.1 7.2	Hygienist completes the adjective check list provided. Follow directions on the check list to describe your feeling or mood. Supervisor rewinds tape while hygienist finishes checklist. All materials used during the practice session are returned to the envelope.
		8.0	Go turn in all materials to the assistant waiting in the hall at Room 416.

Code _____

INSTRUCTIONS FOR VIEWING

I. FIRST OBSERVATION. Supervisor times the segments. 16 min.

<u>Time</u>	<u>Activity</u>
2 min...	Observe tape for two minutes.
1 min...	Make notes in Viewing Log.
2 min...	Discuss behaviors hygienist wants to change. Identify better means of using interview skills.
2 min...	Observe tape for two minutes.
1 min...	Make notes in Viewing Log.
2 min...	Discuss behaviors hygienist wants to change. Identify better means of using interview skills.
3 min...	Observe last segment of performance for 3 minutes.
1 min...	Make notes in Viewing Log.
2 min...	Discuss behaviors hygienist wants to change. Identify better means of using interview skills. Rewind tape during this discussion.

II. SECOND OBSERVATION. Supervisor times the segments. 16 min.

<u>Time</u>	<u>Activity</u>
2 min...	Observe tape for two minutes.
1 min...	Make notes in Viewing Log.
2 min...	Discuss behaviors the supervisor presents. Identify better means of using interview skills.
2 min...	Observe tape for two minutes.
1 min...	Make notes in Viewing Log.
2 min...	Discuss behaviors the supervisor presents. Identify better means of using interview skills.
3 min...	Observe tape for three minutes.
1 min...	Make notes in Viewing Log.
2 min...	Discuss behaviors the supervisor presents. Identify better means of using interview skills. Rewind tape during this discussion.

III. THIRD OBSERVATION. Hygienist reviews supervisor's feedback. 10 min.

2 min...	Observe tape for two minutes.
1 min...	Hygienist gives verbal report of feedback. Supervisor keeps log.
2 min...	Observe tape for two minutes.
1 min...	Hygienist gives verbal report of feedback. Supervisor keeps log.
3 min...	Observe tape for three minutes.
1 min...	Hygienist gives verbal report of feedback. Supervisor keeps log.

Code _____ Person _____
(Hygienist or Supervisor)

VIEWING LOG

Write in the interview behaviors identified.

I. First Observation. After viewing each segment, the hygienist should identify or describe one behavior in each segment she would like to change.

I.A.First (2-minute) segment:

I.B.Second (2-minute) segment:

I.C.Third (3-minute) segment:

II. Second Observation. After viewing each segment, the supervisor will identify appropriate and positive interview skills and give evaluative feedback to the hygienist.

II.A.First (2 minute) segment:

II.B.Second (2-minute) segment:

II.C.Third (3 minute) segment:

III. Third Observation. After viewing each segment the hygienist will identify to the supervisor the behaviors previously noted by the supervisor in the second observation. The hygienist can report these verbally; she does not refer to the log. The supervisor will have the log available for this observation.

III.A.First (2-minute) segment:

III.B.Second (2-minute) segment:

III.C.Third (3-minute) segment:

APPENDIX L

TEACH ANOTHER PRACTICE WRITTEN MATERIALS

APPENDIX L

TEACH ANOTHER PRACTICE WRITTEN MATERIALS

Code _____

PRACTICE INSTRUCTIONS CHECKLIST

Follow instructions carefully. Each instruction is outlined step by step. Read the instruction. Read instructions again as necessary. When you have completed a step, check (✓) it in the blank provided. Continue to the next instruction.

Times are indicated for each step. Use the time allowed for each step. The times provided are guides so that you will be able to complete the practice session on schedule. A stop watch is available to assist in timing.

For your own use, make any notes on the practice instructions checklist that may be helpful to you.

Approximate Time Guide	Check ✓ When Complete	Step	Instructions
3 minutes	_____	1.0	First read the remainder of this Practice Instruction Checklist.
	_____	1.1	Look over all the materials in your envelope. Scan them so that you can obtain an idea of what needs to be completed during your practice session.
	_____	1.2	Check the set of posters provided in your practice room. You may use these as an outline in any manner that helps you explain the interview skills.
	_____	1.3	Now, organize the materials so that you are ready to use them as needed.
1 minute	_____	2.0	Your practice session involves: a. individualized tutoring.

Code _____ Practice instructions checklist, p. 2.

Approximate Time Guide	Check✓ When Complete	Step	Instructions
1 minute		2.0	continued: b. explaining the interview skills to another individual. c. demonstrating the interview skills to another individual. d. answering any questions that are asked by the individual you are training. e. assisting in every way you can so that the other individual can identify, label, and use the interview skills.
	_____	2.1	Your practice session follows a well understood principle--"If you wish to learn something, to master it, teach it to someone else." Being actively involved in teaching another these interview skills should help you master them. Keep this in mind as you practice.
	_____	2.2	Refer to the Teaching Guide. Use the posters and summary guides as it suggests. Check off each activity on the Teaching Guide. Study the guide before you begin.
41 minutes	_____	3.0	Turn to the Teaching Guide and complete each activity.
4 minutes	_____	4.0	Give your trainee the test to complete. This will help you judge how well she mastered what you were teaching.
	_____	4.1	Put the posters back in order in the corner of the room so that they will be ready for the next practice session.
	_____	4.2	Fill in the adjective check list. Describe your feeling or mood as directed.
	_____	4.3	Put all written materials in your envelope.

Code _____ Practice instructions checklist, p. 3.

5.0 Go turn in all materials to the
assistant waiting in the hall
at Room 416.

Code _____

41 minutes

TEACHING GUIDE

Step 3.0

2 minutes I. INTRODUCTION. (Refer to Summary Guide 1)

<u>Time</u>	<u>Activity</u>
-------------	-----------------

2 min.....	Explain the idea or concept of attending behavior. Ask the trainee to tell you what the idea means in her own words. Explain to the trainee that the interview skills she is about to learn are specific examples of attending behaviors. Explain that some skills are verbal and some are non-verbal.
------------	--

10 minutes II. TEACHING NON-VERBAL INTERVIEW SKILLS
(Use Poster 1)

<u>Time</u>	<u>Activity</u>
-------------	-----------------

1 min.....	Present the four non-verbal skills to the trainee. Explain the importance of skill 1--eye contact.
1 min.....	Demonstrate poor, then good examples of eye contact.
1 min.....	Ask the trainee to be an interviewer and demonstrate that she can use good eye contact.
1 min.....	Explain the importance of skill 2 and 3-- physically relaxed posture and natural facial expression.
1 min.....	Demonstrate poor, then good examples of posture and facial expression.
1 min.....	Explain the importance of skill 4--directly facing the other person.
1 min.....	Demonstrate poor, then good examples of directly facing the other during interviewing.
1 min.....	Ask the trainee to be the interviewer and demon- strate <u>all</u> the non-verbal skills.
2 min.....	Check to see if the trainee has any questions. Name the 4 skills again for the trainee. Ask the trainee to identify each of the 4 skills from memory. Repeat.

20 minutes III. TEACHING INVITATIONS TO TALK
(Use Posters 2,3,4,5; Summary 2, and 3.)

<u>Time</u>	<u>Activity</u>
-------------	-----------------

7 min.....	1 min...Introduce both verbal skills. (Poster 2) Explain and stress the importance of invitations to talk in finding out how the person being interviewed sees his situation.
------------	---

Code _____ Teaching guide, p. 2.

20 minutes III. TEACHING INVITATIONS TO TALK, continued.

<u>Time</u>	<u>Activity</u>
	1 min...Tell the trainee how the characteristics of an invitation to talk are different. (Poster 3) The trainee needs to understand the effect of an open vs. closed invitation so she knows <u>why</u> this skill is important.
	3 min...Read each example invitation provided on the written guide. (Refer to Summary 2) Have the trainee respond to each example. Discuss.
	2 min...Using the topic of college classes, demonstrate how to use open invitations to talk to enable the trainee to tell you about her college classes.
13 min.....	2 min...Discuss the use of open invitations after your demonstration interview. Re-emphasize Poster 3.
	1 min...Explain and tell about the variety of situations where the use of an invitation to talk is appropriate. (Poster 4)
	2 min...Illustrate the situations by presenting the examples in Summary Guide 3. Have the trainee respond to each example and then discuss the example.
	1 min...Explain how we can distinguish the quality of an invitation to talk. (Poster 5)
	5 min...Ask the trainee to be the interviewer and make up three examples that illustrate invitations to talk that probably would elicit yes-no responses. As the trainee gives an example, respond to the example as if you were the person being interviewed. Ask the trainee to give three examples that illustrate invitations to talk that probably would elicit mileage responses. Respond to each example as if you were the person being interviewed.
	2 min...Check to see if the trainee has any questions about using invitations to talk. Ask the trainee to summarize this skill in her own words.

Code _____ Teaching guide, p. 3.

5 minutes IV. TEACHING MINIMAL ENCOURAGEMENTS TO TALK
(Use Poster 6)

<u>Time</u>	<u>Activity</u>
1 min.....	Present the second verbal skill--minimal encouragements to talk. Be sure to point out how this follows and is based on a good invitation to talk.
2 min.....	Demonstrate the use of minimal encourages by initiating an interview on the topic of what college courses or employment the trainee plans for next fall.
2 min.....	Discuss your interview. Label for the trainee the kinds of minimal encouragements to talk that you used. Review the poster for other examples.

4 minutes V. REVIEW (Use all posters)

- 2 min.....Review all the posters as a summary of the skills you presented.
Ask the trainee if there are any questions.
Thank the trainee for her involvement in the practice session.
- 2 min.....Have the trainee review the interview skills in her own words.

Go back to Step 4.0 on the Practice Instructions Checklist.

SUMMARY GUIDE 1

ATTENDING BEHAVIORS

An important aspect of establishing a relationship is being aware of, and responsive to, the communications of that individual and communicating this attentiveness. The communication of attentiveness is a potent reinforcer in your interaction with a patient. Attention plays an essential role in establishing a relationship and in motivating your patient.

Individuals give attention to one another by a variety of means. Attending behaviors can be both non-verbal and verbal. In essence, attending behaviors can be defined as simple listening. When you communicate attentiveness to a patient, they might describe the experience as--"She really listens to what I say...She seems to be interested in me." When you attend to another, your verbal and non-verbal behaviors consistently communicate very clearly that you are listening.

Think about the times when you have felt someone listened to you. Were you aware of the specific behaviors they engaged in that communicated "attending" or "listening"? Can you recall a moment when you felt someone listened? Attending behaviors not only make us feel like we are being listened to, but they can be specifically defined, observed, learned, and practiced.

Attention and the accompanying constructs of attending behavior provide a comprehensive framework of skills for the beginning interviewer. All effective professionals use attending skills in relating to people, but professionals in different fields may "attend" to different feelings or content as their tasks and situations vary.

SUMMARY GUIDE 2

INVITATIONS TO TALK

Read each example of an invitation to talk, and have the interview trainee respond to each one.

The following invitations to talk can probably be responded to with a "yes" or "no"--usually this is the kind of response they might obtain. Have the trainee imagine they are a patient and respond to the following:

1. Is there something with which I can help you?
2. Was it painful?
3. Are you interested in returning in six months?
4. Were you concerned with what the dentist might think?
5. Does that feel comfortable?
6. Did you call for an appointment?
7. Has it bothered you in the last week?
8. Have you determined where the tooth hurts?

A better way to word the previous examples allows for the person to respond in other than "yes-no" varieties. By beginning the open invitation with different words, the patient is asked to respond in a manner that permits a lot of information to be obtained. Have the trainee consider the following possibilities and imagine the kind of response a patient would give. Have the interview trainee answer the following questions.

1. How can I help you?
2. I wonder how painful it was.
3. How interested are you in returning in six months?
4. What concern did you have with your dentist's thoughts?

5. How does that feel? Can you describe how that feels?
6. When did you call for an appointment?
7. Tell me, when was the last time it bothered you?
8. Where does it hurt?

Discuss the responses obtained with each set of invitations.

SUMMARY GUIDE 3

INVITATIONS TO TALK ARE USEFUL IN DIFFERENT SITUATIONS

Open invitations to talk are extremely useful in a number of different situations. The following are some examples. Try them out.

1. To begin an interview.

How have things gone since the last time we talked together?

Tell me how you care for your teeth.

2. To get the patient to elaborate on a point.

Could you tell me more about that?

How do you feel when you skip brushing?

3. To elicit examples of specific behavior.

Will you give me a specific example?

Can you show me how you use a toothbrush?

4. To focus attention on feelings.

What are you feeling as you're telling me this?

How did you feel then?

Code _____

INTERVIEW SKILLS INFORMATION TEST

Instructions for the trainee: You have just received individualized instruction in interview skills. Please complete the following items.

1. There were two different kinds of skills you learned--
_____ and _____ interview skills.
2. Give examples of non-verbal interview skills:
3. Why is it desirable to use an open invitation to talk?
4. Please make up one example of an open invitation to talk.
5. When do you use a minimal encouragement to talk.
6. Give two examples of minimal encouragements to talk.
7. What was the most meaningful thing you learned about interview skills?
.
8. Do you think you could try out these interview skills based on what you learned in this last hour?

APPENDIX M

COMBINATION PRACTICE WRITTEN MATERIALS

APPENDIX M

COMBINATION PRACTICE WRITTEN MATERIALS

Code _____

PRACTICE INSTRUCTIONS CHECKLIST

Follow instructions carefully. Each instruction is outlined step by step. Read the instruction. Read instructions again as necessary. When you have completed a step, check (✓) it in the blank provided. Continue to the next instruction.

Times are indicated for each step. There should be ample time. The approximate times provided are guides so that you will be able to complete the practice session on schedule.

For your own use, make any notes on the practice instructions checklist that may be helpful to you.

Approximate Time Guide	Check ✓ When Complete	<u>Step</u>	<u>Instructions</u>
3 minutes	_____	1.0	First read the remainder of this practice instructions checklist.
	_____	1.1	Your practice session involves a combination of the following activities: (a) Practice in discriminating whether interview skills are being used or not. (b) Observing your performance from your first interview. Analyzing and discussing what you would like to change in your next interview. Receiving comments and suggestions from a dental supervisor. Reviewing the suggestions and comments so that you are prepared for your next interview.

Code _____ Practice instructions checklist, p. 2.

Approximate Time Guide	Check✓ When Complete	<u>Step</u>	<u>Instructions</u>
		1.1 continued:	(c) Individualized tutoring. Explaining the interview skills to another individual. Demonstrating the interview skills to another individual. Answering any questions that are asked by the individual that you are training. Assisting in every way you can so that the other individual can identify, label, and use the interview skills.
	_____	1.2	Scan the materials you have in your envelope. Everything you need should be available in the envelope and the practice room. (a) Discrimination practice involves written materials and a TV tape. (b) A TV tape and log forms are provided so that you can observe your performance and make notes. When you are ready for this activity a supervisor will be waiting at the practice room door to assist you. (c) Teaching another practice follows a well understood principle--"If you wish to learn something, to master it, teach it to someone else." Being actively involved in teaching another these interview skills should help you master them. Keep this in mind as you practice.

Code _____ Practice instructions checklist, p. 3.

Approximate Time Guide Check When Complete Step Instructions

		1.2 continued: (c) A trainee will be waiting at the door when you are ready for this activity. Posters are available in the practice room. Check them now; they should assist you in the instructing session.
13 minutes	_____	2.0 Read the written materials regarding discrimination skill practice.
	_____	2.1 Using the discrimination practice rating form watch the examples on the TV monitor and make your ratings.
	_____	2.2 After the last example, rewind the tape.
	_____	2.3 Go to the door and meet your supervisor.
16 minutes	_____	3.0 Refer to the Instructions for Viewing form. Use it as your checklist for this activity.
14 minutes	_____	4.0 Refer to the Teacher's Guide. Use it as your checklist for this activity.
4 minutes	_____	5.0 Put the posters back in order in the corner of the room so that they will be ready for the next practice session.
	_____	5.1 Fill in the adjective check list. Describe your feeling or mood as directed.
	_____	5.2 Put all materials in your envelope.
		6.0 Go turn in all materials to the assistant waiting in the hall at Room 416.

Code _____

DISCRIMINATION PRACTICE

This practice session is designed to help you discriminate both verbal and non-verbal interview skills as observed on TV. Before you can master interview skills you must first be able to discriminate what you see or observe. Discrimination practice helps observers (a) become more keenly aware of the presence of a particular skill; (b) focus on the degree to which a skill is present. Again, the two ways to discriminate are (a) to become aware of whether or not the interviewing behavior of interest can be observed; (b) to note the degree to which the interviewing behavior exists. This discrimination practice will give experience in applying these two criteria.

Discrimination means to make a distinction, to separate one from another, to distinguish, or to differentiate. In learning new skills it is important to separate, choose, and distinguish. Every day with many activities we discriminate and make distinctions. We taste different foods and notice if they are sweet or sour. We look outside and can tell if it is light or dark, day or night. Some discriminations are so obvious to us that we don't stop to think that we are applying a discrimination skill when we note differences.

Other discriminations are more complex or more difficult. Think about the discriminations we make with color. We know different colors, we learn to label them. From simple yellow, red, blue, and green, the automobile advertiser makes us aware of sunburst yellow, fire-engine red, powder blue, and British racing green. Various shades and distinctions of color are usually learned. However, some of us who are color blind may be unable to make some discriminations. Although physiological and inherited characteristics may limit some discriminations for a few, most discriminating ability is the result of our learning and our practice.

Think about some of the discriminations you have probably practiced since you enrolled in the dental hygiene program. The color of gums, stains on teeth, the shape and size of teeth are important in making some of the distinctions necessary in dentistry. Perhaps, we could think of many of these learned distinctions as non-verbal discriminations. We can observe and discriminate or separate just by what we notice.

Discrimination Practice, p. 2.

Although the discrimination may be more complex, we often judge non-verbal looks and decide if a man may be interested in us or not. We learn to read facial expressions and tone of voice to complement what we observe so that we can better discriminate. Perhaps, with your parents or close friends, with husbands, we become better discriminators of what they mean. Sometimes we have learned it is just as important to know what people say as well as what they don't say. Have you had the experience of having a report passed on to you second hand, and asked, "But, how did she say it?" An effort on your part to discriminate the more accurate meaning of words. We all have experience in making complex discriminations. Most of this experience is learned over years of practice.

It may be important to emphasize that we all have learned to make discriminations. Some are simple; some are complex. Through practice we increase our skill in making discriminations and often this leads us to the mastery of the skill involved. Therefore, this practice session will focus on discriminations we can practice in noting interview skills. Hopefully, this will provide an excellent means of mastering interview skills.

Code _____

DISCRIMINATION RATINGS

General Instructions: Observe each example of behavior presented on the TV monitor. After you have observed the example, turn the video recorder off and make your discriminations. After making your notes and ratings, turn on the recorder and watch the next example.

Section I. Non-verbal Interview Skills.
Part A.

Example 1: Simply note if each interview skill is present or not. Write in "yes" or "no."

- _____ a. Eye contact
- _____ b. Physically relaxed posture
- _____ c. Natural facial expression
- _____ d. Directly facing the other person

Example 2: Simply note if each interview skill is present or not. Write in "yes" or "no."

- _____ a. Eye contact
- _____ b. Physically relaxed posture
- _____ c. Natural facial expression
- _____ d. Directly facing the other person

Example 3: Simply note if each interview skill is present or not. Write in "yes" or "no."

- _____ a. Eye contact
- _____ b. Physically relaxed posture
- _____ c. Natural facial expression
- _____ d. Directly facing the other person

Part B.

Example 4: Circle the appropriate number describing the interviewer's eye contact. In your own words tell why you made this discrimination.

5 = very good Reason for eye contact rating:
 4 = good
 3 = fair
 2 = poor
 1 = very poor

Example 5: Circle the appropriate number describing the interviewer's eye contact. In your own words tell why you made this discrimination.

5 = very good Reason for eye contact rating:
 4 = good
 3 = fair
 2 = poor
 1 = very poor

Code _____ Discrimination Ratings, p. 2.

Example 6: Circle the appropriate number describing the interviewer's physical posture, natural gestures, and facial expression. State the reason for your rating in your own words.

5 = very good Reason for rating:
 4 = good
 3 = fair
 2 = poor
 1 = very poor

Section II. Verbal Interview Skills.
Part C.

Example 16: Rate the interviewer's invitation to talk as open or closed. Open _____ Closed _____

Example 17: Rate the interviewer's invitation to talk as open or closed. Open _____ Closed _____

Example 18: Rate the interviewer's invitation to talk as open or closed. Open _____ Closed _____

Section III. Part D.

Example 22: Tally in the boxes provided the number of open and closed invitations to talk and the number of minimal encouragements to continue talking offered by the interviewer. Tally any other kinds of comments in the bottom box.

	Open	Closed
Number of invitations		
Number of minimal encouragements		
Other comments		

Example 23: Tally in the boxes provided the number of open and closed invitations to talk and the number of minimal encouragements to continue talking offered by the interviewer. Tally any other kinds of comments in the bottom box.

	Open	Closed
Number of invitations		
Number of minimal encouragements		
Other comments		

Code _____ Discrimination Ratings, p. 3.

Example 24: Same instructions.

Number of invitations

Number of minimal
encouragements

Other comments

Open	Closed

Code _____

INSTRUCTIONS FOR VIEWING

I. First Observation. Supervisor times segments.

<u>Time</u>	<u>Activity</u>
2 min.....	Observe tape for 2 minutes.
1 min.....	Make notes in Viewing Log.
2 min.....	Discuss behaviors hygienist wants to change. Identify better means of using interview skills.

II. Second Observation. Supervisor times segments.

<u>Time</u>	<u>Activity</u>
2 min.....	Observe the next two minutes on the tape.
1 min.....	Make notes in Viewing Log.
2 min.....	Discuss the behaviors the supervisor presents. Identify better means of using interview skills.

III. Third Observation. Supervisor times segments.

<u>Time</u>	<u>Activity</u>
3 min.....	Observe the last three minutes on the tape.
1 min.....	Make notes in Viewing Log. (Rewind tape during the time you make notes.)
2 min.....	The hygienist should first be able to repeat the supervisor's comments from the second observation before discussing the third observation. The hygienist should compare this segment to the comments given by the supervisor at the end of the second observation. Then, discuss and identify any other interview behaviors that might improve interview skills.

Code _____ Person _____
(Hygienist or Supervisor)

VIEWING LOG

Write in the interview behaviors identified.

- I. First Observation. The hygienist should identify at least one behavior she would like to change.

- II. Second Observation. The supervisor will identify appropriate and positive interview skills and give evaluative feedback to the hygienist.

- III. Third Observation. The hygienist should first review the comments made by the supervisor in the second observation. Then, the hygienist should compare this segment of performance to identify any other interview behaviors that might improve her interview skills.

Code _____

TEACHING GUIDE

<u>Time</u>	<u>Activity</u>
1 min.....	Present the four non-verbal skills to the trainee. (Use Poster 1)
4 min.....	Demonstrate poor and good examples of each of the non-verbal interview behaviors for the trainee.
1 min.....	Ask the trainee to be the interviewer and to demonstrate for you <u>all</u> of the non-verbal skills. Suggest a topic relating to college classes for the next fall semester.
1 min.....	Introduce both verbal interview skills (Use Poster 2). Explain the importance of each skill.
2 min.....	Explain the importance and characteristics of the invitation to talk (Use Poster 3). Illustrate the situations where an invitation to talk can be used (Poster 4). Explain how we can distinguish the quality of an invitation to talk (Poster 5).
3 min.....	Using Summary Guide 2 and the examples given, demonstrate the verbal skills. Offer an invitation to talk (use the second set of examples) and then follow the trainee's response with a minimal encouragement to continue talking. Practice with as many examples as you can during the three minutes.
1 min.....	Discuss with the trainee the use of minimal encouragements to talk (Poster 6). Describe how you used these when you were practicing with the example of Summary Guide 2.
1 min.....	Review and respond to the trainee's questions. Have the trainee summarize and tell you in her own words what interview skills were presented and why they are useful.

Code _____

SUMMARY GUIDE 2

INVITATIONS TO TALK

Read each example of an invitation to talk, and have the interview trainee respond to each one.

The following invitations to talk can probably be responded to with a "yes" or "no"--usually this is the kind of response they might obtain. Have the trainee imagine they are a patient and respond to the following:

1. Is there something with which I can help you?
2. Was it painful?
3. Are you interested in returning in six months?
4. Were you concerned with what the dentist might think?
5. Does that feel comfortable?
6. Did you call for an appointment?
7. Has it bothered you in the last week?
8. Have you determined where the tooth hurts?

A better way to word the previous examples allows for the person to respond in other than "yes-no" varieties. By beginning the open invitation with different words, the patient is asked to respond in a manner that permits a lot of information to be obtained. Have the trainee consider the following possibilities and imagine the kind of response a patient would give. Have the interview trainee answer the following questions.

1. How can I help you?
2. I wonder how painful it was.
3. How interested are you in returning in six months?
4. What concern did you have with your dentist's thoughts?
5. How does that feel? Can you describe how that feels?
6. When did you call for an appointment?
7. Tell me, when was the last time it bothered you?
8. Where does it hurt?

Discuss the responses obtained with each set of invitations.

APPENDIX N

CONTROL GROUP PRACTICE WRITTEN MATERIALS

APPENDIX N

CONTROL GROUP PRACTICE WRITTEN MATERIALS

Code _____

PRACTICE INSTRUCTIONS CHECKLIST

Follow instructions carefully. Each instruction is outlined step by step. Read the instruction. Read instructions again as necessary. When you have completed a step, check (✓) it in the blank provided. Continue to the next instruction.

Times are indicated for each step. There should be ample time. The approximate times provided are guides so that you will be able to complete the practice session on schedule.

For your own use, make any notes on the practice instructions checklist that may be helpful to you.

Approximate Time Guide	Check ✓ When Complete	Step	Instructions
3 minutes	_____	1.0	First read the remainder of this Practice Instruction Checklist.
	_____	1.1	Look over all the materials in your envelope. Scan them so that you can obtain an idea of what needs to be completed during your practice session.
	_____	1.2	Then, organize the written materials from the envelope so that you are ready to use them as needed.
2 minutes	_____	2.0	Your practice session involves: a. listening to three tape cassettes. b. observing the pictured materials accompanying each cassette, and c. completing the written evaluation and questions for each of the three tapes.

Code _____ Practice instructions checklist, p. 2.

Approximate Time Guide	Check ☒ When Complete	Step	Instructions
	_____	2.1	Your three cassettes are provided in the box. Remove your three cassette packages from the box. Each package looks like a small notebook. Line them up like three books on a shelf and notice their titles and numbers.
	_____	2.2	Record the following information: Set number on my box of cassettes: _____ Numbers and titles of my 3 cassettes (List in numerical order...1,4,6 or 2,3,5): Tape # _____ Title _____ Tape # _____ Title _____ Tape # _____ Title _____ You are to listen to each of the three tapes in the numerical order just listed. Go ahead to step 3.
22 minutes for both steps 3 & 4	_____	3.0	Take your first tape cassette package. Be sure you follow numerical order. Open the tape book. Read the front page. See that you have the evaluation form for the tape handy. Review the written evaluation form. Remove the tape and insert it in the tape cassette player.
	_____	3.1	Listen to the tape. Follow any instruction the tape cassette presents.
	_____	3.2	Stop the tape at the end. Push the rewind button on the tape cassette player. Let the tape rewind while you begin to complete the written evaluation form and the questions for that tape.

Code _____ Practice instructions checklist, p. 3.

Approximate Time Guide	Check ✓ When Complete	Step	Instructions
22 minutes continued	_____	3.3	Fill in the evaluation form. Answer the questions. Do not leave any question blank. Write or circle the best answers.
	_____	3.4	When your evaluation is completed and your questions answered, remove the cassette from the player and return it to the pocket in the tape book.
	_____	3.5	Make sure that you have all materials in their original con- dition--(rewind the tape, do not mark in the tape book)--so that they are ready for the next listener.
	_____	4.0	Take your second tape cassette package. Be sure you follow numerical order. Open the tape book. Read the front page. See that you have the evaluation form handy. Review the written evalua- tion form. Remove the tape and insert it in the tape cassette player.
	_____	4.1	Listen to the tape. Follow any instructions the tape cassette presents.
	_____	4.2	Stop the tape at the end. Push the rewind button on the tape cassette player. Let the tape rewind while you begin to complete the written evaluation form for that tape.
	_____	4.3	Fill in the evaluation form. Answer the questions on the other form. Do not leave any question blank.
	_____	4.4	When your evaluation is completed and your questions answered, remove the cassette from the player and return it to the pocket in the tape book.

Code _____ Practice instructions checklist, p. 4.

Approximate Time Guide	Check ☒ When Complete	Step	Instructions
	_____	4.5	Make sure you have all materials in their original condition so that they are ready for the next listener.
16 minutes	_____	5.0	Take your third and last tape cassette package. Open the tape book. Read the front page. See that you have the last evaluation form handy. Review the form. If other materials remain, place them where you can refer to them. Remove the cassette and insert it in the tape cassette player.
	_____	5.1	Listen to the tape. Follow any instructions the tape cassette presents.
	_____	5.2	Stop the tape at the end. Push the rewind button on the tape cassette player. Let the tape rewind while you begin to complete the written evaluation form and the questions for that tape.
	_____	5.3	Fill in the evaluation form. Answer the questions. Do not leave any question blank. Write in or circle your best answers.
	_____	5.4	When your evaluation is completed and your questions answered, remove the cassette from the player and return it to the pocket in the tape book.
	_____	5.5	Make sure that you have all materials in their original condition. Everything should be ready for the next listener.

Code _____ Practice instructions checklist, p. 5.

Approximate Time Guide	Check✓ When Complete	Step	Instructions
3 minutes	_____	6.0	Think for three minutes about the content in all three tapes. Do you think there are appropriate types of information that can be used to make you more effective when you talk with patients?
	_____	6.1	Summarize your general impressions of this practice session on the form provided. Be candid and honest.
4 minutes	_____	7.0	Place all three of the tape cassette packages back in the box so that they are ready to be returned to the assistant.
	_____	7.1	Complete the adjective check list. Describe your feeling or mood as directed.
	_____	7.2	Put all written materials in your envelope.
		8.0	Go turn in all materials to the assistant waiting in the hall at Room 416.

Code _____

SET 1: QUESTIONS FOR TAPES 1, 4, AND 6

Answer these questions to indicate how well you understood the materials presented on the tape cassettes.

A. Tape 1, The Subject Is Plaque. Circle Answer

1. Bacterial plaque, unchecked, leads to dental disease. True False
2. Bone disintegrates in the final stages of periodontal disease. True False
3. Write in your answer. Where does plaque accumulate?

B. Tape 4, Brush! Brush! Brush!

4. Pits and grooves of the back teeth are especially hard to brush. True False
5. When brushing, you should flex the bristles of the brush. True False
6. Write in your answer. What is the "critical zone?"

C. Tape 6, Snack Sense

7. Food labels are stressed as an important source of information. True False
8. Everyone should restrict sticky foods to meal time. True False
9. Describe what the term "trigger foods" means.

Code _____

SET 2: QUESTIONS FOR TAPES 2, 3, AND 5

Answer these questions to indicate how well you understood the materials presented on the tape cassettes.

A. Tape 2, Clean Up Your Smile. Circle Answer

1. There are three acceptable ways of brushing. True False
2. Mouthwashes are necessary to clean up your smile. True False
3. Discuss. What is the relationship of the brush to the brushing method?

B. Tape 3, Floss! Floss! Floss!

4. The tape describes the loop method of flossing. True False
5. Fifteen inches of floss are recommended. True False
6. Describe the method recommended for flossing.

C. Tape 5, Food Sense.

7. The average citizen consumes 115 pounds of sugar yearly. True False
8. The best rule to follow is: Avoid trigger foods between meals. True False
9. Give some examples of Trigger Foods.

Code _____

EVALUATION FORM FOR TAPE CASSETTE NUMBER ____ TITLE _____

Circle the appropriate favorability rating to indicate your opinion for statements one through three. Write a few words or a sentence to explain your opinions and ratings.

1. The content in this tape cassette is adequate for use with adult patients. They could listen and complete the cassette on their own without assistance from a dental hygienist.
- 5 very favorable
 4 favorable
 3 somewhat favorable
 2 unfavorable
 1 very unfavorable

Reasons why:

2. The content in this tape cassette is adequate for use with children (ages 5 through 12). They could listen and complete the cassette on their own without assistance from a hygienist.
- 5 very favorable
 4 favorable
 3 somewhat favorable
 2 unfavorable
 1 very unfavorable

Reasons why:

3. The content in this tape cassette is adequate for use with dental hygienists just beginning training (first week of the first semester in training).
- 5 very favorable
 4 favorable
 3 somewhat favorable
 2 unfavorable
 1 very unfavorable

Reasons why:

4. What additional information should this tape contain?
5. What information or content should be deleted or changed?

Code _____

SUMMARIZE YOUR GENERAL IMPRESSIONS OF THIS PRACTICE SESSION

*Tape cassettes for control group practice were developed by the Preventive Dentistry Section, Dental Health Center, 14th Avenue and Lake Street, San Francisco, California 94118. The set is entitled SAVE, Self-learning Audio Visual Education on Dental Plaque Diseases.

APPENDIX O

SUPERVISOR'S INSTRUCTIONS FOR PRACTICE SESSIONS

APPENDIX O

SUPERVISOR'S INSTRUCTIONS FOR PRACTICE SESSIONS

1. All materials will be brought to the practice room by the subject in her envelope or be available in the room (TV equipment).
2. A stop watch is necessary for the practice session. The supervisor should time the segments on the tape being observed. Each student interview contains 7 minutes of interview performance; the segments are divided into 2 minutes, 2 minutes, and 3 minutes.
3. For the combination practice sessions, the subjects will come to the door when they are ready for your assistance. If practice started on the hour exactly as scheduled, this should come at 16 minutes after the hour. Your involvement is scheduled for 16 minutes of tape observation, making notes in a "Viewing Log" and discussing with the student the specific interview behaviors involved.
4. Please do all you can to help the student relax and feel positive about their first interview performance and the practice session when they view it. It may help to compare the first interview performance to their experiences of the first time in clinic.
5. For the feedback practice where you are involved for the hour (50 minutes), the following information may be helpful. When you first enter the room allow the subject a chance to read through the "Practice Instructions Checklist". While they complete the first portion of instructions, please load the tape on the videotape recorder and get it ready for viewing if it is not ready to go. The first portion on the tape announces the subject number; double check this with the subject code number to insure that everything is in order. Set the digit counter at 000 so that the tape can be stopped on rewinding; this will prevent your needing to rethread the tape for the two times you rewind it. There is a form called Instructions for Viewing, when the student is ready follow the steps outlined on the form.

6. To guide you in the feedback given to each student, please follow these general rules of thumb, regardless of content.

1st Observation: Respond to each interview skill the student desires to change. Model or act out an improved example as soon as the behavior is identified, labeled, and discussed.

2nd Observation: After viewing each segment, give two positive comments and one suggestion for improvement.

3rd Observation: Have the student repeat the suggestions you have made for each segment, respond in a positive way..."that's good," "fine, I think you know..."

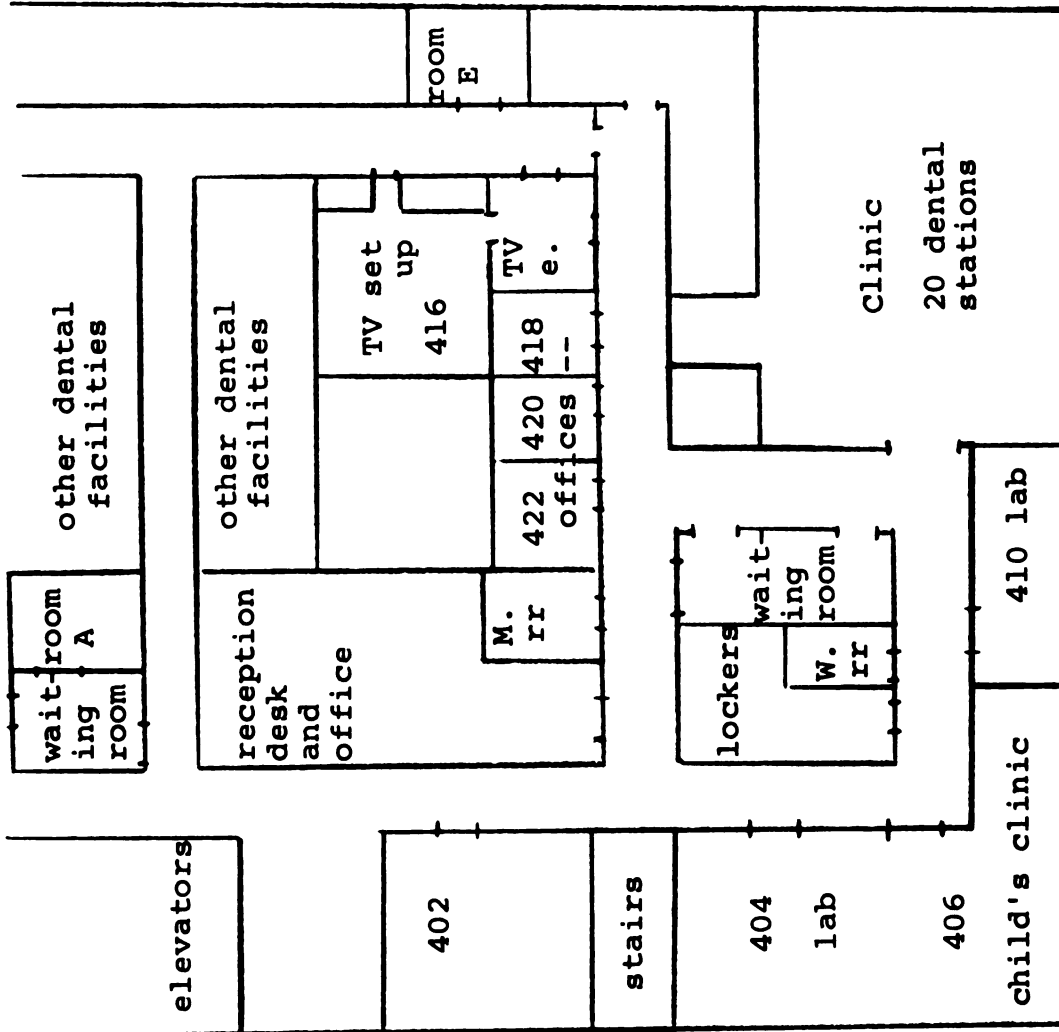
Finally, stress that they can practice these interview skills every day and when they work through the semester in the clinic.

APPENDIX P

PHYSICAL FACILITIES: DENTAL CLINIC FLOOR PLAN

APPENDIX P

PHYSICAL FACILITIES: DENTAL CLINIC FLOOR PLAN



DENTAL CLINIC FLOOR PLAN, 4th FLOOR, MOTT CLINIC

FACILITIES:

416: TV videotaping for subject interviews

Practice Offices(5) for individual administration of practice:

422: Director's Office

410: Lab

402: Conference Room

RoomA: Extra conference space

RoomE: Store room

Tve: TV equipment (recorder & monitor)

APPENDIX Q

NON-VERBAL AND VERBAL RATING SCALES

NONVERBAL RATING SCALES

A. BODY POSTURE

1	2	3	4
very poor	poor	good	very good
rigid, stiff posture, no body posture shifts or excessive posture shifts; seems to avoid facing other person	tense, restrained posture; hand, wrist movement, but limited body posture change	comfortable posture; but body doesn't pivot or rotate easily; somewhat artificial and formal movement	natural, easy, relaxed posture; total body movement and rotation appears easy; continuous and smooth body shifts and spontaneous involvement with props

B. GESTURE

1	2	3	4
very poor	poor	good	very good
little gesturing; no gestures, extremely limited gestures or exhibits excessive gesturing; seems frozen; lips move, but gestures missing even when expected	forced, constrained gestures; jerky, nervous gestures; tight hand and wrist movement, but lacks more global arm and head movement	sufficient, adequate gestures; some comfortable gestures, but limited in ability to emphasize through gestures	relaxed, natural, flowing gestures; consistent gesturing; plenty of movement appropriate to eye contact and body posture; can use head nods integrated with arm-hand movements

C. NONVERBAL ATTENDING BEHAVIOR (GLOBAL)

1	2	3	4
very poor	poor	good	very good
seems to avoid attending to the other; turns away from other frequently and prefers involvement elsewhere	aware of other, but has difficulty looking at other; tends to not face other directly; attention wanders	responsive, seems interested; somewhat lacking in head nod or body angle which limits the suggestion of listening behavior	develops nonverbal relationship quickly and spontaneously; communicates attentiveness; listening consistently regardless of behavior of other

VERBAL RATING SCALES

A. EFFECTIVE USE OF INVITATIONS TO TALK (ITT)

1	2	3	4
very poor	poor	good	very good
no or very little use of ITT: gets stuck, difficulty using invitations to introduce new topics; irrelevant content followed or encouraged	limited use & lacks variety of ITT; offers ITT but doesn't always listen or pursue response; poor quality ITT; sometimes offers irrelevant ITT; interrupts	adequate, sufficient ITT; relevant ITT, but misses some opportunities to capitalize on responses or offer new ITT	variety and quality of ITT: shows ample, effective use of ITT: invitations flow naturally; relevant topics and new content introduced thru ITT

B. EFFECTIVE USE OF ENCOURAGEMENTS TO CONTINUE TALKING (ECT)

1	2	3	4
very poor	poor	good	very good
no or very little use of ECT: lacks ability to encourage other; fills in air space with irrelevant talk and/or lengthly explanations regardless of other's interest	limited use and variety of ECT: seems to stumble into each ECT without planned use; sometimes encourages irrelevant content; interrupts	adequate, comfortable ECT: encourages & stays with relevant content; but could carry use of ECT further and provide greater quality & variety	variety and quality use of ECT: develops relevant content with ECT: uses ECT selectively, knowingly, purposefully

C. VERBAL ATTENDING (GLOBAL)

1	2	3	4
very poor	poor	good	very good
talks against or past other; lectures and explains but loses other in process; turns other off; runs out of soap, follows irrelevant directions to fill time; tone of voice condescending; lacks appropriate vocabulary	explanations instruct, but verbal conversation seems halty, jerky; sometimes verbal attention wanders; occasionally diverts other from appropriate content	adequate, explanations instruct and fit with ITT and ECT: stays with relevant content; may not always check to see other follows or understands; has verbal direction for interview	explanations and talk follow right with other; conversation flows from and with other's questions and comments; integrates verbal skills; checks to see voc. understood; adapts voc. to other

APPENDIX R

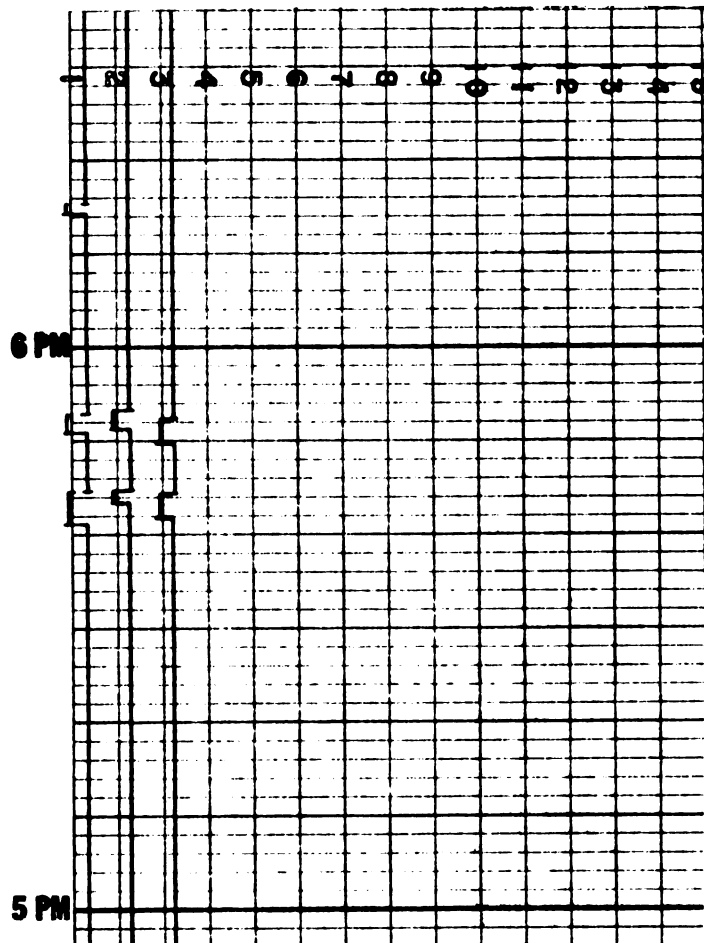
NON-VERBAL AND VERBAL EVENT RECORDER OUTPUT

APPENDIX R

EVENT RECORDER OUTPUT FOR NON-VERBAL ITEMS

A line for each judge was used to record the frequency and duration of eye contact. The number of breaks in eye contact were tallied from each line for the seven-minute interview interval. The frequency of breaks in eye contact was recorded as the score for each subject by each of the three judges. By computer this score was transformed by reversing the direction so that the minimum number of breaks reflected the higher and positive end of the continuum with maximum breaks resulting in lower scores ($y = 100 - x$). The total number of squares for the seven-minutes represented the duration of eye contact. One square equaled two seconds of eye contact duration. Total seconds of duration were used for each subject's score for this item.

Line 1, Judge 1
Line 2, Judge 2
Line 3, Judge 3

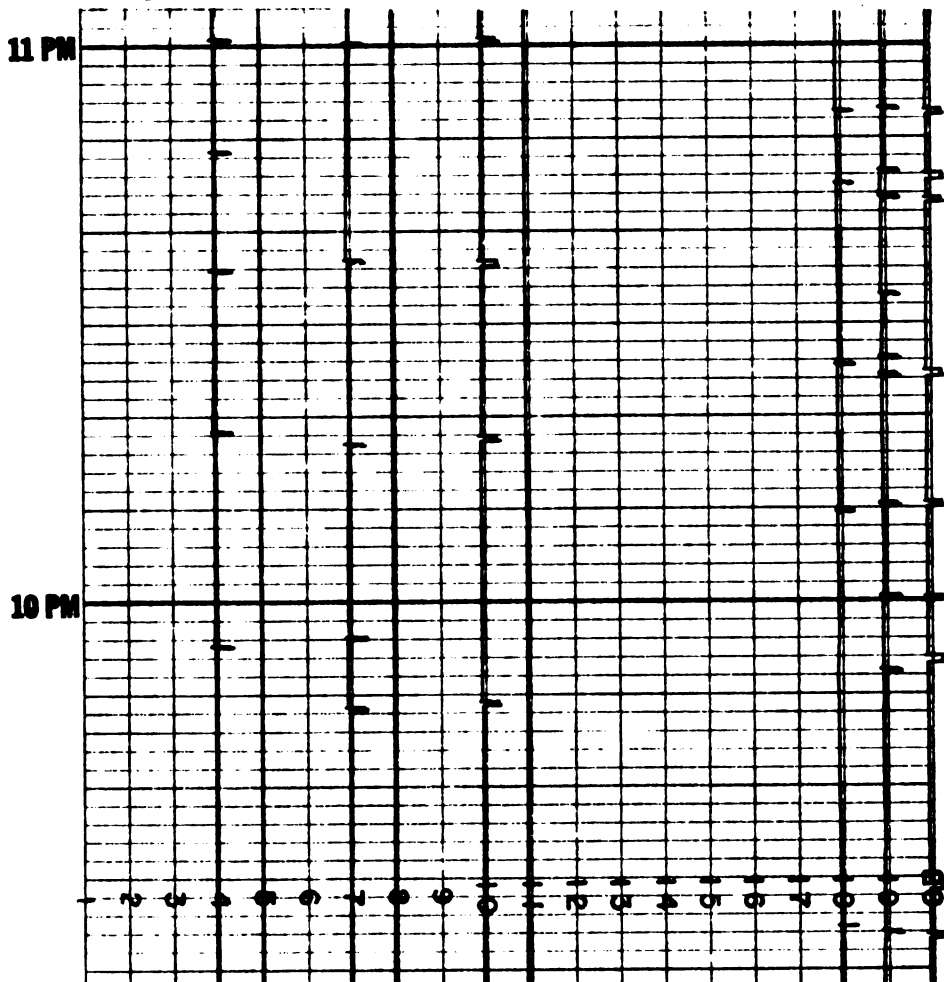


EVENT RECORDER OUTPUT FOR VERBAL ITEMS

Nine lines or channels were used for all the verbal interview skill items. The first set of lines were used to record invitations to talk (ITT). The first line in the set was used for each judge to record the frequency of good invitations (G-ITT) and the second line was used to record the frequency of poor invitations to talk (P-ITT). The last three lines were used to record encouragements to continue talking (ECT). Each mark indicated an invitation or an encouragement. The total frequency count was used as the score by each of the three judges for each subject.

Line 4, Judge 1 G-ITT
 Line 5, Judge 1 P-ITT
 Line 7, Judge 2 G-ITT
 Line 8, Judge 2 P-ITT
 Line 9, Judge 3 G-ITT
 Line 10, Judge 3 P-ITT

Line 18, Judge 1 ECT
 Line 19, Judge 2 ECT
 Line 20, Judge 3 ECT



APPENDIX S

INSTRUCTIONS FOR VIDEOTAPING INTERVIEWS

APPENDIX S

INSTRUCTIONS FOR VIDEOTAPING INTERVIEWS

Please conduct an initial interview with your patient as you usually do in the clinic. Meet your patient, greet them, and bring them to the interview room just as you would usually do. The dental chair in the interview room can be adjusted for patient comfort. It is not exactly the same as the model in the clinic, but similiar, so it can accommodate different patients.

Once you begin your interview you will be given seven minutes to talk with the patient. At the end of seven minutes the assistant will knock twice. End your interview after this point. Take a sentence or two as appropriate to close the interview. If the interview extends to ten minutes the assistant will knock again and enter so that the television camera can be turned off.

We want you to be as comfortable with the presence of the TV equipment as you are with the dental chair and tools that you use. Basically ignore the presence of the TV camera as you talk with your patient.

Patient Instructions

Please be yourself and participate for seven minutes to be interviewed as a patient attending the dental hygiene clinic for your first visit.

APPENDIX T

INSTRUCTIONS FOR INTERVIEW ASSISTANTS

APPENDIX T

INSTRUCTIONS FOR INTERVIEW ASSISTANTS

Instructions for Assistant: General Assistant

General Instructions

1. Take roll. Check name as subject reports
2. Ask subject to read the instructions for videotaping interviews.
3. Ask subject to meet and greet a patient from the waiting room and return to conduct their interview.
4. When subject returns note name of patient on master schedule. Each patient is to be involved only once.
5. Introduce subject to videotape assistant.
6. Keep a steady flow of subjects ready as they report so that little time is wasted between interviews.

Materials

1. Master Schedule List. (For reference if necessary)
2. Time log for videotaping.
3. Pencils.
4. Instructions for Videotaping Interviews.

INSTRUCTIONS FOR INTERVIEW ASSISTANTS

Instructions for Videotape Assistant and TechnicianGeneral Instructions

Videotape Technician:

1. Check subject's code against general assistant's and videotape assistant's master list.
2. See that sufficient tape is available for each subject before they begin to tape their interview.
3. Note recording machine digits on log.
4. Enter tape number, position on tape, and subject code on log.
5. Enter information on videotape label.
6. Record subject code on TV tape prior to interview.

Videotape Assistant:

7. Usher subject and patient in for their interview.
8. As they begin, clock the time using the stop watch.
9. At the end of 7 minutes knock twice.
10. If the interview extends to 10 minutes knock and enter so that the television set can be turned off.
11. Usher the subject and patient to exit door.

Specific Instructions (for Videotape Technician)

1. See that the interview set up is ready to go.
2. Check position of camera and chairs.
3. See that TV equipment is functioning properly; lighting appropriate, etc.
4. Monitor TV equipment functioning to maintain quality of taping.

Materials

1. Blank tape
2. TV camera and monitor.
3. Camera lights.
4. Labels for tapes
5. Master Schedule List
6. Videotape assistant's log
7. Stop watch
8. Pencils

Materials Suggestions (During videotaping)

1. Load tape.
2. Set counter at 0000.
3. Check video set up and record subject number.
"This is subject No. 1A."
4. Advance slightly.
5. Leave a few seconds between knock & turning off recorder.
Allow last sentence to be completed and subject to leave,
then turn off machine.
6. Continue in this manner.
7. Fill in label as you go.
8. When tape is completed. Advance fast forward and set
aside with label. Load a fresh tape. Don't try to
rewind until the entire mornings interviews are complete
or at break time. Time is of the essence to complete
all scheduled interviews. The most ideal method keeps
the interviews rolling with little or no time in between.
9. When tapes are rewound then place label inside the
container.

INTERVIEW SKILLS PERFORMANCE LOGS

Time Log for Videotaping

Day: _____
 Date: _____
 Times: _____
 Page: _____

Subject Code	Time to Report ✓	Patient Name	Time Interview Starts	Comments

VIDEOTAPE Assistant's Schedule and Log

Day: _____
 Date: _____
 Times: _____
 Page: _____

Subject Code	Videotape Records			Time 7 min./ ✓ overtime amount	General Comments
	No.of Tape	Rec. Digits Begin.	Position On Tape		

APPENDIX U

DENTAL HYGIENE STUDENT SURVEY

APPENDIX U

DENTAL HYGIENE STUDENT SURVEY

Name or Code Number

Directions: Please circle the appropriate numbers. Your comments will be appreciated. Your information will assist in evaluation of the interview skills training program and provide suggestions for the curriculum.

1. The TV tape illustrated the interview skills very well.

1	2	3	4	5
strongly agree	agree	neutral	disagree	strongly disagree

Comments:

2. The TV tape explained the interview skills very well.

1	2	3	4	5
strongly agree	agree	neutral	disagree	strongly disagree

Comments:

3. Experts other than dental hygiene students need to demonstrate the interview skills.

1	2	3	4	5
strongly agree	agree	neutral	disagree	strongly disagree

Comments:

4. The practice session helped me learn the interview skills.

1	2	3	4	5
strongly agree	agree	neutral	disagree	strongly disagree

Comments:

5. Written handouts (study guides) detailing interview skill content would be helpful.

1	2	3	4	5
strongly	agree	neutral	disagree	strongly
agree				disagree

Comments:

6. I would spend extra hours (free time) to view the tape illustrating interview skills additional times.

1	2	3	4	5
strongly	agree	neutral	disagree	strongly
agree				disagree

Comments:

7. Rate your third interview for your overall effectiveness in using interview skills.

1	2	3	4	5
very	effective	neutral	ineffective	very
effective				ineffective

Comments:

8. Rate your first interview for your overall effectiveness in using interview skills.

1	2	3	4	5
very	effective	neutral	ineffective	very
effective				ineffective

Comments:

9. Rate your second interview for your overall effectiveness in using interview skills.

1	2	3	4	5
very	effective	neutral	ineffective	very
effective				ineffective

Comments:

10. I would not like to continue learning other more advanced interview skills.

1	2	3	4	5
strongly	agree	neutral	disagree	strongly
agree				disagree

Comments:

11. Where do you suggest the interview training skills be placed in the curriculum?

1	2	3	4	5
First Semester Before Mid-Term	First Semester After Mid-Term	Second Semester Before Mid-Term	Second Semester After Mid-Term	Not At All

Comments:

12. Opportunities for use of interview skills arise during clinic work.

1	2	3	4	5
strongly agree	agree	neutral	disagree	strongly disagree

Comments:

13. When opportunities arise to use the interview skills in the clinic, I feel very uneasy using the skills.

1	2	3	4	5
strongly agree	agree	neutral	disagree	strongly disagree

Comments:

14. There was too much content in the demonstration TV tape.

1	2	3	4	5
strongly agree	agree	neutral	disagree	strongly disagree

Comments:

15. Did you review your first interview videotape? Yes__No__

If no, would you have liked to review your interview performance? Yes _____ No _____

Comments:

If yes, to what extent was reviewing your tape profitable?

1	2	3	4	5
very profitable	profitable	neutral	unprofitable	very unprofitable

Comments:

16. Describe the most valuable skill or concept that you learned from your interview experience.
17. Describe the most valuable skill or concept that you learned from your practice experience.
18. How do you feel about having your instructor view your interview performance?
19. What was the most disappointing part of this interview skills training program?
20. If this program were going to be reorganized, what one specific suggestion would you make.

APPENDIX V

INTERCORRELATIONS OF INTERVIEW SKILL ITEMS

Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13
EyeC	1.00												
Brks	.70	1.00											
Post	.38	.12	1.00										
Gest	.05	-.04	.66	1.00									
NVRa	.44	.32	.64	.55	1.00								
GITT	-.03	.12	-.25	-.15	-.23	1.00							
P-ITT	.27	.42	-.33	-.28	-.10	.62	1.00						
ECT	.42	.34	-.06	-.15	.32	.17	.42	1.00					
ITT Rating	.36	.30	.15	.06	.24	.45	.13	.36	1.00				
ECT Rating	.42	.30	.22	.09	.35	.21	.01	.59	.76	1.00			
Verbal Rating	.38	.30	.41	.34	.45	.18	-.15	.32	.81	.78	1.00		
Total Non-Verbal	.99	.76	.38	.07	.46	-.01	.29	.42	.37	.42	.39	1.00	
Total Verbal	.40	.44	-.18	-.20	.15	.59	.77	.86	.48	.52	.29	.42	1.00

Intercorrelations for Non-Verbal and Verbal Interview Skill Items

Model Assessment

Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13
EyeC	1.00												
Brks	.62	1.00											
Post	.30	.03	1.00										
Gest	.05	-.10	.74	1.00									
NVRA	.45	.15	.71	.59	1.00								
GITT	-.05	.03	.03	.01	.10	1.00							
PITT	-.01	-.01	.02	-.04	-.01	.45	1.00						
ECT	.17	.28	-.06	-.31	.07	.10	.31	1.00					
ITT Rating	-.01	.11	.20	.21	.24	.52	-.00	.14	1.00				
ECT Rating	.19	.23	.09	-.09	.24	.30	.31	.68	.45	1.00			
Verbal Rating	.10	.10	.43	.48	.47	.19	.10	.18	.75	.58	1.00		
Total Non-Verbal	.99	.72	.29	.06	.45	-.04	-.01	.19	.02	.21	.12	1.00	
Total Verbal	.10	.20	.01	-.19	.10	.51	.72	.84	.30	.72	.30	.12	1.00

Intercorrelations for Non-Verbal and Verbal Interview Skill Items

Immediate Post Practice Assessment

Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13
EyeC	1.00	Brks	Post	Gest	NVra	GITT	PITT	ECT	ITTRA	ECTRA	VRA	TotNV	TotV
1 Eye Contact	1.00												
2 Breaks	.71	1.00											
3 Posture	.10	.04	1.00										
4 Gesture	-.12	-.14	.75	1.00									
5 Non-Verbal Rating	.08	.12	.70	.64	1.00								
6 G-ITT	-.17	.09	-.50	-.46	-.40	1.00							
7 P-ITT	.14	.16	-.20	-.38	-.18	.55	1.00						
8 ECT	.28	.24	-.28	-.42	-.17	.04	.24	1.00					
9 ITT Rating	.02	.12	-.11	-.23	.17	.16	-.05	.28	1.00				
10 ECT Rating	.26	.28	-.28	-.30	-.04	.04	-.05	.60	.63	1.00			
11 Verbal Rating	.07	.03	.07	.08	.28	-.23	-.37	.26	.79	.71	1.00		
12 Total Non-Verbal	.99	.78	.12	-.10	.12	-.15	.14	.27	.04	.27	.07	1.00	
13 Total Verbal	.24	.27	-.38	-.55	-.24	.41	.63	.88	.32	.53	.12	.24	1.00

Intercorrelations for Non-Verbal and Verbal Interview Skill Items

Delayed-Post Practice Assessment

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