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TRAINING PSYCHIATRIC NURSING STAFF
IN SOCIAL APPROVAL SKILLS

by

Gordon Charles Marcus Wallace

B.A., Simon Fraser University, 1977

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF

THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS (EDUCATION)

in the Faculty

of

Education

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Abstract

The effective implementation of a social learning approach in the treatment of psychiatric in-patients is primarily dependent on the technical expertise of the nursing staff who comprise the majority of the patient's social environment. The need for an effective training program for nursing staff in the understanding and use of behavior therapy skills is of paramount importance. Recent literature on skill acquisition emphasizes the importance of skill description, skill modeling, behavioral rehearsal of the skill, and performance feedback. This study compared the in-vivo effects of such a training format with a traditional method focusing primarily on skill discussion.

Participants were 18 nursing staff on day and evening shifts in two wards of a social learning program in a large mental health facility. Random assignment of participants to either an experimental training group or a control (discussion) group was followed by brief training (maximum one hour) in Verbal and Nonverbal Social Approval skills. Dependent measures included post and five-week follow-up written skill comprehension quizzes; and pre, post, and four-week follow-up in-vivo observations of nurse/patient interactions to record demonstrated use of the social approval skills.

Results of the written quiz scores for both Verbal and Nonverbal Social Approval indicated significant differences for the trials factor (post > follow-up) but no between group differences. In-vivo observation results on the Verbal Social Approval data indicated

significant main effects for wards (ward B > ward A), treatments (experimental > control) and trials (post > pre; follow-up > pre).

In-vivo results on the Nonverbal Social Approval data reveal a significant main effect for treatments (experimental > control), and trials (post > pre; follow-up > pre) with a significant interaction effect for treatments by trials (the experimental group showing the greatest increases at post and follow-up evaluation points).

While this study did validate a brief but effective training format, it was unable to delineate the salient components of the experimental training method. Design difficulties are discussed with suggestions for future research indicated. Applied benefits of the experimental skill training format for behavioral programs in psychiatric institutions are also highlighted.

Dedication

With sincere appreciation to a special friend and mentor,
Bill Halyk.

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Chapter I

Statement of Problem and Review of Related Literature

The precise implementation of behavioral therapy programs in psychiatric settings is primarily dependent on the technical expertise of those staff members who constitute the majority of the patients' social environment (Hersen & Bellack, 1978). Irrespective of the particular setting in which a behavioral program is introduced (psychiatric hospital, mental health center, general hospital, etc.), the aforementioned staff literally has "life and death" powers over its success or failure.

This is especially disconcerting since the majority of nurses employed in behavioral treatment facilities have been trained to behave within the traditional role of the nursing profession (LeBow, 1973) with little or no formal exposure to behavior therapy methods. Throughout their training and during the course of traditional clinical practice, nurses have been taught that a "good nurse" responds positively to all patient communications, irrespective of whether reinforcement of this communication is ultimately of benefit to the patient.

Bellack and Hersen (1977) examined the status of patient/staff interactions in chronic-care institutions with respect to the extremely low staff/patient ratios found in large psychiatric hospitals. They note that in this system, nursing assistants/health care workers tend to have the greatest number of interactions with patients during typical days. Ironically,

The nursing assistant is, for the most part, the least well trained, schooled, or motivated to function in a therapeutic manner with the patient. It is little wonder, then, that nursing assistants tend to ignore positive behavior emitted by the patient while systematically attending to their negative behavior (p. 265)

To further exemplify this concern, clinical studies on unprogrammed reinforcement of patient's behaviors in psychiatric institutions (Buehler, Patterson & Furniss, 1966; Gelfand, Gelfand & Lobson, 1967; Trudel, Boisvert, Maruca & Leroux, 1974) have also shown that unadaptive behaviors are frequently reinforced by staff untrained in behavioral technology and that adaptive ones are extinguished.

For example, Gelfand et al. (1967) in a 'classic' study found that nurses untrained in behavioral skills reinforced appropriate behavior 68% of the time, whereas nursing assistants did so only 48% of the time. On the other hand, with respect to inappropriate behavior, nurses rewarded it 39% of the time and nursing assistants 30% of the time. Gelfand et al. also observed a very high positive correlation between severity of disturbance and inappropriateness of responses to patient's behavior. They concluded that the more severely psychotic the patient, the more likely it is that his prosocial behavior will be ignored and his bizarre behavior rewarded.

As an aside, one of the most interesting findings that emerges from this study is that, on the whole, other psychiatric patients were rather good natural 'behavioral engineers'. They were relatively reinforcing of appropriate behaviors (56% of the time) and most effective in ignoring inappropriate behavior (79% of the time).

Trudel et al. (1974), in a partial replication of the Gelfand et al. investigation, compared the unprogrammed reinforcement of patients' responses in wards with and without a behavioral orientation. On the token economy ward, behavioral training lasted for six months and involved classroom discussion of operant principles as well as viewing two films on the application of such principles. In addition, before the experiment was actually carried out, token economy staff had accumulated two years of experience in behavioral technology.

While the researchers found that those staff on the behavioral ward were definitely more socially reinforcing of appropriate behaviors than control ward staff, they were unable to discern a difference in the treatment of inappropriate behaviors; that is, both behavioral and control ward staff reinforced such unwanted behavior an equal proportion of the time (19% and 17%, respectively). This finding is not at all encouraging as it is a well known tenet of operant principles that intermittent reinforcement is most resistive to extinction.

What becomes readily apparent from the above literature is that staff untrained in behavioral methodology, by analysis of their interactions with patients, are simply not likely to effect behavioral change within an operant conditioning paradigm. What is even more disconcerting is that staff previously trained in behavioral techniques (Trudel et al., 1974) often do not act as effective behavioral engineers.

Trudel et al. conclude that one solution to this problem situation rests in determining more effective methods to teach institutional staff members the techniques of behavior therapy. Indeed if an effective

behavioral technologist is one who is able to systematically and consistently reinforce instances of positive behavior while ignoring instances of negative behavior, then the above discussion clearly demonstrates the necessity for an improved training format.

Related Literature

An extensive literature has been written outlining a variety of schemes for training psychiatric paraprofessionals and professionals in behavioral technology (e.g. Bellack & Franks, 1975; Johnson, Katz & Gelfand, 1972; Liberman, King & Lerisi, 1976; Patterson, Cooke & Liberman, 1972; Wodarski, 1976). However, while these papers do present interesting suggestions for the training of psychiatric personnel, the data presented are at the clinical-descriptive level. Thus, it is not possible to derive firm conclusions as to the efficacy of the techniques presented on the basis of such descriptions. It was possible, however, to locate two empirical studies in which specific strategies have been evaluated with respect to staff training and it is these studies that will receive an in-depth examination.

Gardner (1972). Gardner (1972) presents empirical findings in a study comparing the effectiveness of two instructional methods (role playing and lecture format) for teaching behavior modification skills to institutional attendants. Pre and posttest measures were obtained for two major outcome variables: (1) knowledge of behavior modification principles as indicated by the Behavior Modification Test (Gardner, Brust, & Watson, 1970) which consists of 229 true-false test items;

and (2) ratings of ability to apply behavior modification techniques. This variable was assessed by the Training Proficiency Scale (Gardner, et al., 1970) which is a 30 item, five-point rating scale administered by observing attendants training other attendants in a role playing situation.

Ratings on the Training Proficiency Scale were reported to correlate significantly ($r=.98$) with independent judgement of overall training ability by two experienced behavior modification trainers. Ratings of training ability in a role-playing situation were reported to approximate ($r=.87$) ratings of training ability in sessions with retarded children (Gardner et al., 1970), but the glaring void of information as to the collection of this latter data leads one to question the findings.

The educational program in Gardner's study consisted of two major phases: role playing and lecture. Role playing consisted of six one-hour sessions in which the trainer modelled the skill to be learned followed by the attendants working in pairs to role play the skill. Performance feedback was given by the trainer. The lecture format consisted of eight one-hour sessions designed to present major behavior modification principles in every day language.

The attendants (20 females) were matched in pairs on a number of demographic variables and then randomly assigned to one of the two groups (role playing and lecture) in counterbalanced order. Each attendant was evaluated with both measures at three different evaluation points: pre-treatment, following the initial treatment phase, and post-treatment.

Analysis of the Training Proficiency Scale data revealed that there were significant differences between the treatment groups, evaluation points, and between the groups over time. Multiple t-tests revealed that there were no significant differences between the two groups on the pre- or post-treatment test. However, the role playing group exceeded the lecture group after phase one training, indicating that role playing contributed more to training proficiency skills.

The Behavior Modification Test data indicated no overall significant differences between the treatment groups, but there were significant differences over the evaluation trials and there was a significant interaction between treatment and trials. Multiple t-tests revealed that the lecture group exceeded the role playing group following phase one, indicating the superiority of this format in teaching the principles of behavior modification.

Gardner's conclusion that a role playing format is more relevant to the training of proficiency skills while the lecture teaching scheme is more relevant to the acquisition of knowledge, is consistent with his findings, IF one accepts the Training Proficiency Scale as a reliable and valid instrument for measuring performance ability. As cited earlier, his lack of documentation in the acquisition of this crucial psychometric data leaves one unable to accept his concluding implications.

Paul, McInnis and Mariotto (1973). Paul et al., (1973) overcome Gardner's instrumentation problems with the development of an objective in-vivo performance measure, the Staff-Resident Interaction

Chronograph. Interactions on this instrument are recorded within each one-minute period in appropriate cells of a 5 x 21 matrix, in which the five columns indicate classes of resident behavior and the 21 rows indicate classes of staff behavior. Classes of staff behavior are defined to include the nature of staff activity, nonverbal manner and action, and verbal content.

The psychometric data for this instrument were derived from Paul et al.'s (1973) study of objective performance outcomes associated with two approaches to training mental health workers in milieu and social-learning programs. Two groups (N=28) of nonprofessional trainees received lengthy training in the conduct of two highly specified institutional programs. The first group was trained in a sequential/professional mode in which academic instruction involved classroom reading, lectures, large and small group discussions, films and role playing.

Trainees in the second group, the integrated/technical one, experienced observation of ongoing programs with staff and residents, integrated with meetings with an instructor for a 1½ to 2 hour lecture-discussion focusing upon assigned readings. Upon completion of the academic training period, all trainees were required to pass a test on principles and procedures of the treatment programs before being given on-the-job training.

For the first group, on-the-job training was handled completely by the professional staff; for the second group, on-the-job training was handled by experienced technicians from the ranks of earlier trainees. On-the-job training followed common procedures for both

groups; trainees were each assigned a training form which listed functional activity periods within the two treatment programs. For each duty, the trainee first observed the instructor perform the activity on a minimum of three occasions, followed by a discussion session concerning the specific interactions and events which occurred. The trainee then performed the activity under supervision on a minimum of six occasions, until errorless performance was demonstrated. Total supervision of that activity was then reduced to 30% - 50% monitoring of trainee performance. Finally, after adequate performance was regularly demonstrated under partial supervision, a formal check-out was required for the specific activity. Errorless performance on the check-out resulted in certification of the trainee to perform the activity on the particular unit without supervision.

Although all trainees progressed at different rates, Paul et al. report that by the end of the sixth week of on-the-job training, all were performing duties with residents under supervision, with the majority of duties being monitored at the 30%-50% level. By the end of the eighteenth week of this training, all trainees were operating independently, without specific instructor monitoring.

For the purposes of this study, two six-week periods were evaluated by the Staff-Resident Interaction Chronograph instrument; the first corresponding to the seventh through twelfth week of on-the-job training and the second from the nineteenth through twenty-fourth week. A total of 1,881 10-minute staff-resident observations were coded, which gives an average of 67.2 observations for each trainee. Individual cell reliabili-

ties on the Chronograph ranged from average intraclass coefficients of $r=.93$ to $r=1.00$, with the overall average reliability of the instrument being greater than $r=.99$.

Before data analysis was undertaken, a Change Agent Goodness score, which combined amount of interaction with rate and extent of "programmatic errors" (as defined by the treatment manuals, which unfortunately, I was not able to obtain), was derived from the Staff-Resident Interaction Chronograph data in such a way that goodness of performance would have the same meaning on both treatment units over different shifts and activities, and over different levels of resident activity. Three way analysis of variance revealed significant main effects for training groups, and for treatment programs without significant interactions, and no significant main effect for evaluation period. Examination of means indicated that the second group of trainees (who received the integrated/technical mode of training) performed significantly better in both treatment groups at the same point in training than the first group (the sequential/professional method). In a later paper, Paul and McInnis (1974) reported that with this identical group of trainees, the sequential/professional group scored significantly higher on an academic test of principles and procedures immediately following the period of academic training.

Paul et al. (1973) therefore conclude that increased focus by professional staff in academic instruction results in greater understanding of principles and procedures; however, the integration of clinical observation with academic content, followed by practicum training

results in a more rapid acquisition and performance of on-the-job duties.

While this investigation did overcome Gardner's instrumentation problem, the design of the study did not allow for the identification of the important specific components of the training approach. The authors suggested, though, that the implementation of modelling and role-playing techniques rather than a totally didactic presentation is indicated, but they do caution that one must await studies designed to test those components before rendering final judgement.

Another major concern with Paul et al.'s training format is simply one of logistics. The present staffing situation in most large mental health facilities just will not allow for the hiring of full time training personnel or for time allotment to staff training in the understanding and application of social learning principles. This situation is typical of behavioral programs housed within predominantly medical model facilities (Hersen & Bellack, 1978), but is compounded by the realization that funds for hospital operating costs in many locations are presently undergoing severe cutbacks. Taking into account the present economic situation and governmental fiscal priorities, this personnel concern does not appear to be of a transient nature. This therefore re-emphasizes the need for a brief but nevertheless efficacious method of in-service staff training.

Micro-teaching

One area of instructional research not previously applied to the teaching of behavioral techniques in institutional settings, but that might prove fruitful in this regard, is that known as micro-teaching

(Allen & Ryan, 1969) or micro-counselling (Ivey, Normington, Miller, Morrill, & Haase, 1968; Ivey, 1971).

This format is similar to Gardner's role-playing teaching method in that the micro-format includes written manuals describing the skill to be taught in behavioral terms, videotaped models of the skill, and videotaped rehearsal of the skill by trainees which are immediately reviewed and evaluated by the trainer. The technique is micro in several respects: the trainee learns only one skill per session; the skill is precisely defined in operational terms; the videotape models are only 3 to 5 minutes in length; and the behavioral rehearsals of the skill are only 5 to 10 minutes long.

Sufficient data has been gathered on the micro-paradigm to attest to its viability as an effective teaching strategy: skills such as counsellor's attending behavior (Ivey et al., 1968), interviewing behavior (Moreland, Ivey & Phillips, 1973), empathic reflection (Toukmanian & Rennie, 1975), personal goal development (Peters, Cormier & Cormier, 1978), and decision-making counselling techniques (Wallace, Horan, Baker & Hudson, 1975) provide significant findings for the efficacy of such formats.

These empirical findings point strongly to the role of modeling, behavioral rehearsal, and performance feedback in the effective instruction of therapeutic techniques, and also demonstrated that therapeutic skills can be taught in a very short period of time. It should be noted, however, that in a similar manner to the Gardner study, the majority of the micro-format research has relied on role-playing situations as sources

for dependent variable measures, with only one study (Moreland et al., 1973) using an in-vivo dependent measure. Another concern with this body of research is the lack of follow-up data collection: the standard procedure appears to only include a pre and posttest measure with follow-up skill retention left uninvestigated.

Purposes and Hypotheses

It becomes obvious from the reviewed literature that the need for a brief but effective training format for psychiatric nursing staff in the implementation of behavioral therapy programs is of the utmost importance -- without properly trained staff, such a therapeutic approach becomes utterly impotent.

It is possible, however to synthesize important features from the reviewed literature to propose such a brief in-service training format which at least promises to be effective. Specifically, one could isolate the salient components of a training package (see Gardner, 1972) and present these components in a brief training format (similar to the micro-format literature), also evaluating the in-vivo applications of nursing skills at post and follow-up evaluation points (see Paul et al. 1973).

In other words, this investigation will attempt to utilize a micro-teaching format of skill description, modeling of the skill, behavioral rehearsal of the skill and performance feedback, in a brief (maximum one hour) format to teach psychiatric nursing staff specific therapeutic skills. It is imperative to validate the efficacy of such a training

module and thus in-vivo observations of staff/patient interactions will be recorded to demonstrate the resultant effects.

Specific skills selected for training concerned the effective transmission of pleasure and approval to patients for individual therapeutic progress. These skills may be called Social Approval Skills, conceptualized here as those behaviors explicitly emitted in an interpersonal interaction to convey the expression of approval, pleasure, or esteem. Such skills are viewed as similar to those known as social reinforcement skills (Bandura, 1969), except that the functional nature of the social approval skill is not being investigated and hence cannot be accurately referred to as reinforcement.

No definitive list of the components of social approval or social reinforcement could be located although many writers do allude to this phenomenon; for example "statements of 'good' or 'fine' ... nodding of the head" (Sheckart & Bass, 1976); "verbal approval, agreement, interest, attention, smiling and laughing" (Buehler, Patterson & Furness, 1966); "mmm [coupled with nodding of the head]" (Truax, 1966). Therefore, the following categories incorporate those components felt by the author and his colleagues (at a large psychiatric hospital and Simon Fraser University) to contain face validity and to have direct relevance to the execution of the individual patient programs. It is by no means presented as an exhaustive classification but rather as a sufficient basis for meaningful content with the experimental training formats:

Verbal components of social approval

a) Greeting: Word or statement acknowledging the presence of a

person's name.

- b) Receipt of task information: Polite statement indicating acceptance of the completed task or acceptance of information that the task has been completed
- c) Praise: Words which imply an expression of approval or commendation.
- d) Descriptive praise statements: Praise words with informational feedback explaining or justifying why the approval is being given in specific relation to the patient's actions.
- e) Stating an interest: To express an interest by statements or questions in regards to some aspect of the patient's realm of experience.

Nonverbal components of social approval

- a) Facial Cues: 1) Smile, defined as a facial expression showing approval, pleasure, affection, friendliness, etc., and characterized by an upward curving of the corners of the mouth.
 - 2) Eye contact, defined as a relaxed but intent gaze focused towards the patient.
- b) Gestures: 1) Affirmative nodding of the head to indicate approval,
 - 2) Motioning of the hands to emphasize the positive nature of a response. Examples range from a touch on the shoulder or arm, to a short, pointed motion of the hand to positively emphasize a response.
- c) Body orientation: The use of posture to express approval with positive body orientation being the attempt to close the distance between the staff and the patient.

As alluded to earlier, this study is an attempt to determine if the training components of skill description, modeling of the skill, behavioral rehearsal of the skill plus performance feedback, presented in a brief (maximum one hour) format will be sufficient to effectively teach behavioral techniques to psychiatric nursing personnel. In order to gauge their efficacy, this experimental training format will be compared to a more standard one; that being similar to the traditional approach to teaching psychiatric personnel new techniques which has typically involved lectures, classroom discussion, coupled with reading assignments, films and some on-the-job training (LeBow, 1973).

To simplify this study, both the experimental and the control groups will experience identical exposure to the skill description and to the modelling of the skill; however, after this, the experimental participants will engage in behavioral rehearsal of the skill plus receive performance feedback from the trainer, while the control group members will only engage in a discussion of the skill just presented.

In order to assess knowledge of the material taught, all participants will answer a short quiz immediately after the training session and, to test for retention of the material, at a five-week follow-up. It is expected that there will be no difference in scores between the experimental and the control group.

To assess practical implementation of the material taught, in-vivo observations will be made at pre, post, and 4-week follow-up evaluation periods. It is expected that the experimental group will demonstrate a greater in-vivo use of the skill than the control group at post and follow-up intervals.

Chapter II

Method

Participants

The participants in this study were 21 members of the nursing staff from two wards comprising the day and evening shifts of a social learning program in a large psychiatric hospital in metropolitan Vancouver, B. C. Each staff member was approached individually and asked to participate in a study to investigate teaching strategies designed to enhance their behavioral skills. They were told that their decision to participate would have no effect on their employment situation. All staff members who were approached volunteered to participate, but complete post and follow-up data is missing on three participants due to roster changes which required them to work night shift.

The remaining 18 participants consist of 13 registered psychiatric nurses and 5 health care workers, with a mean of 7.6 years (range .7 to 25 years) experience in the psychiatric health care profession and a mean of 1.9 years (range .3 to 6 years) in the social learning program. There were 13 females and 5 males in the sample with a mean age of 32 years (range 23 to 58 years).

Each participant was randomly assigned to one of two treatment conditions, Behavioral Rehearsal or Discussion, with the only stipulation on assignment being that they would be present on the specific days that the treatment would be administered. This latter stipulation necessitated the re-assignment of only two participants.

Design

The study is a 2 x 2 x 3 factorial design with two hospital wards, two treatment groups and three evaluation points constituting the conditions. The experimental training phase of the study was accomplished over a two week period immediately after the completion of the pretest data collection (see Table 1).

Table 1

Timetable of Study

Week 1	Pre in-vivo observations
Week 2	Training week #1: Verbal Social Approval Skill
Week 3	Training week #2: Nonverbal Social Approval Skill
Week 4	Post in-vivo observations; Post written quiz
Week 7	Four-week follow-up in-vivo observations
Week 8	Five-week follow-up written quiz

The 18 participants were equally divided into wards which were balanced across treatment conditions. The treatment condition groups were broken down into smaller units of four or five participants meeting for one hour during each of the two training weeks; thus, there were a total of four small groups during each training week. Total training time for any one individual was a maximum of two hours.

Training Sessions

Each of the groups was instructed by the Director of the social learning program, a psychologist with 6 years experience in the teaching of behavioral skills to nursing personnel. In each session the instructor briefly explained what the format and agenda of the next hour would be and then would immediately show a brief videotape (nine minutes for the verbal social approval skill [see Appendix A] and ten minutes for the non-verbal social approval skill [see Appendix B]). The videotapes employed a psychologist from the social learning program describing the components of the skill to be learned, interspersed with models depicting how each component could be delivered. At the end of each tape, three short vignettes modeling the delivery of the total skill in simulated staff/patient interactions (both parts role played by Psychology Department staff) were shown. The content of the video vignettes was varied to encompass different locations, times of the day, and patient behaviors.

Training sessions for behavioral research condition. Immediately upon completion of the videotape, each participant in this treatment group role played the skill just presented. Pre-defined scenarios of staff/patient interactions (see Appendix C) were presented to the participants with another group member acting as the patient upon whom the social approval was to be bestowed. A maximum of five minutes was allotted to each person. This five minutes included behavioral rehearsal plus performance feedback from the instructor and other group members. Within the five minute period, each participant completed a minimum of two and a maximum of three role-play situations. I unobstru-

sively observed the groups to ensure that each participant experienced similar exposure to the treatment.

Training sessions for discussion condition. Immediately upon completion of the videotape, the instructor engaged the participants in a discussion of the material just presented. The instructor was cautioned not to allow any verbal or behavioral attempts on the part of the participants to practice any specific examples of the skill. Also, probing questions such as 'Can you identify specific patients that you have encountered that have responded (and conversely, not responded) to verbal (or nonverbal) social approval?', and 'In your own experience, what components have you personally found reinforcing?', guided this treatment to a discussion format amongst the participants. The probing procedures ensured that the instructor's verbal participation was limited to a mean of 15.5% of the allotted time (range from 12% to 17%), and thus could not be misinterpreted as additional lecture time. I again unobtrusively observed the groups to ensure that they received the proper discussion time and to also record the quantity and quality of the instructor's verbal interactions with each group. The total time allotted for each group's discussion was yoked to the total time allotted for the preceding behavioral rehearsal group (see Table 2).

Instruments

Two outcome variables were used in this investigation.

Knowledge. Knowledge of the components of social approval was assessed by a paper and pencil quiz at post and five-week follow-up

Table 2

Discussion Time Yoked to Preceding Behavioral Rehearsal
Time During Training Phase

Week #1: Verbal Social Approval Skill

Day 1	Day 2	Day 3	Day 4
Behavioral Rehearsal Group 4 members x 5 minutes= 20 mins.	Discussion Group=20 minutes 4 members	Behavioral Rehearsal Group 5 members x 5 minutes= 25 mins.	Discussion Group=25 minutes 5 members

Week #2: Nonverbal Social Approval Skill

Day 1	Day 2	Day 3	Day 4
Behavioral Rehearsal Group 5 members x 5 minutes= 25 mins.	Discussion Group=25 minutes 5 members	Behavioral Rehearsal Group 4 members x 5 minutes= 20 mins.	Discussion Group=20 minutes 4 members

intervals. This test described a typical ward situation in which a patient had accomplished a required task and therefore should receive social approval. The participants were asked to generate examples of social approval that would be appropriate in this situation and that would also encompass the different components of the skill as taught in their training sessions. Parallel forms of the quiz were constructed not only for the two skills taught, but also for the post- and follow-up situations (see Appendix D).

The scoring of the quiz was done by a graduate student in education who was blind to the assignment of staff to treatment conditions. Quiz points were given for correct examples of the skill and for those examples generated from the different component categories of the skill. Thus if five answers were asked for, the total possible points awarded would be ten. Exact interrater percentage agreement (undertaken with the scorer and myself) was calculated on a sample (n=10) of the completed quizzes. The percentage was determined by counting the number of agreements, dividing the total number of possible agreements and multiplying this result by 100. This method yielded scores at post and follow-up evaluation points for verbal social approval of 92% and 98%; scores for nonverbal social approval at these same evaluation points were 94% and 94% respectively.

Behavioral observation. Demonstration of each participant's performance of the skills was measured by in-vivo observations of behavior at pre, post, and 4-week evaluation periods.

Two coders (a graduate student in education [not the same person

that scored the quiz] and a clerical staff member from the social learning program) were trained to observe and record the frequency of occurrence of appropriately demonstrated components of each of the skills being taught. Training of the coders took place two days before pretest behavior was coded and involved lecture and videotaped models of the skills to be coded. Total training time required in this initial training was four hours with booster sessions of approximately one and a half to two hours introduced immediately prior to the post and follow-up coding sessions.

Before the implementation of each evaluation phase, interrater reliability was assessed by having coders view videotaped vignettes of staff/patient interactions and to record the frequency of components of social approval as demonstrated by the staff member on the observation instrument (Appendix E). Since it was expected that there would be a vast range in the amount of social approval dispensed by the staff members on the wards, the reliability videotaped vignettes reflected such a varied pattern.

Various statistics have been proposed as methods for calculating interrater agreement scores with the issue recently being vigorously debated in the Journal of Applied Behavior Analysis (Baer, 1977; Hartmann, 1977; Hopkins & Hermann, 1977; Kratochwill & Wetzel, 1977; Yelton, Wildman & Erickson, 1977). The major concern expressed by these researchers is that conventional percentage agreement statistics are susceptible to misinterpretation when a relatively high or low number of intervals is scored. This can be considered to be due to the

probability of chance agreements being high. Harris and Lahey (1978) present a formula that combines separate measures of occurrence and nonoccurrence percentages of agreement, with weight assigned to each measure, varying according to the observed rate of behavior. The formula for weighted agreement is:

$$WA = (OxU) + (NxS) \times 100$$

where

O is the occurrence agreement score, i.e., the number of occurrence agreements, divided by (the number of occurrence agreements + the number of occurrence disagreements);

U is the mean proportion of unscored intervals, i.e., (the proportion of intervals not scored by Observer 1 + proportion of intervals not scored by Observer 2) divided by 2;

N is the nonoccurrence agreement score, i.e., the number of nonoccurrence agreements divided by (the number of nonoccurrence agreements + the number of nonoccurrence disagreements);

S is the mean proportion of scored intervals, i.e., (the proportion of intervals scored by Observer 1 + proportion of intervals scored by Observer 2) divided by two.

This formula, which is a modification of the one proposed by Clements (1976), appears to reduce distortions due to chance agreements encountered with very high or low observed rates of behavior while main-

taining the conceptual and mathematical simplicity of the conventional percentage agreement method.

As the in-vivo coding situation in this study encompassed both high and low rates of targeted behavior, Harris and Lahey's (1978) statistical formula was used. The reliability tests had both coders score 8 videotaped vignettes of staff/patient interactions and record the frequency of each component as demonstrated. There were three different sets of 8 vignettes and overall interrater agreement between the two coders was 84%, 94%, and 94% for pretest, posttest and follow-up respectively. Agreement scores for each component of the coded social approval are shown in Table 3.

Table 3

Interrater Agreement Scores for Each Component
of Social Approval

Components	Pre-	Post-	Follow-up
Greeting	100%	100%	94%
Receipt of task	91%	93%	100%
Praise	100%	96%	97%
Descriptive Praise	88%	93%	89%
Stating an interest	59%	---	---
Smile	72%	87%	87%
Eye contact	46%	---	---
Head Nods	100%	96%	100%
Hand gestures	100%	93%	100%
Body orientation	88%	92%	90%

Two categories of social approval (i.e. stating an interest, and eye contact) yielded low interobserver agreement scores and thus are not included as dependent variables during the evaluation phase of the study.

The in-vivo coding took place near the portable nursing station situated in the large day room of each of the wards, for three days during each evaluation phase. Participants were told that the coders were investigating specific patient behaviors and would be observing interactions that the patients had with staff. Participants were also told that further knowledge as to the targeted behaviors would probably influence their interactions and thereby contaminate the results.

Coders were blind as to the training that participants received and were instructed to code only those interactions in which a patient approached the nursing station to report completion of a programmed task. Regardless of any primary reinforcers contingent on the completion of the task, it is expected that social approval will be delivered by the nursing staff at this time. A minimum of three interactions with patients (range 3 to 7) were recorded for each participant during each of the evaluation periods with the total number of interactions coded being 219.

The number of interactions coded with individual patients ranged from 2 to 16. So as to eliminate the possibility that interactions with individual patients may have biased the quality and the quantity of social approval elicited, the charge nurse on each of the two wards rated the patients on a four point scale as to their "social inter-

action desirability." Pearson correlations between the number of interactions per patient and their social desirability, yielded scores of .17 and -.09 for ward A and ward B patients, respectively. Therefore, the likelihood of patient idiosyncracies contaminating the data appears low.

Chapter III

ResultsWritten Quiz Performance

Verbal social approval. Table 4 presents the means and standard deviations for the verbal social approval skill quiz scores for all groups at post and five-week follow-up evaluation periods.

Table 4

Means and Standard Deviations of Verbal Social Approval Skill Quiz Scores at Post and 5 Week Follow-up

Group	Posttest		Follow-up	
	M	S.D.	M	S.D.
Ward A	16.33	1.80	14.33	1.50
Ward B	16.44	1.13	15.22	2.16
Behavior Rehearsal	16.00	1.22	14.88	2.14
x Ward A	16.20	1.70	14.55	1.29
x Ward B	15.80	.83	15.20	2.77
Discussion	16.77	1.64	14.66	1.65
x Ward A	16.40	2.07	14.12	1.78
x Ward B	17.15	.95	15.25	1.50
Total	16.38	1.46	14.77	1.86

Note: Maximum score = 20.

The data were submitted to 2 (Wards) x 2 (Treatments) x 2 (Trials) analysis of variance with repeated measures on the last factor. The

Results of the analyses are presented in Table 5, which reveals a statistically significant effect for the trials factor.

Table 5

Analysis of Variance with Repeated Measures on the Trials
Factors for Verbal Social Approval Quiz Scores

Source	df	MS	F
Between subjects	17		
Wards	1	2.5681	<1.0
Treatments	1	1.0125	<1.0
Wards x Treatments	1	1.5125	<1.0
Error	14	4.2482	
Within subjects	18		
Trials	1	23.8347	12.1894*
Wards x Trials	1	1.0125	.5178
Treatments x Trials	1	1.9014	.9724
Wards x Treatments x Trials	1	.5014	.2564
Error	14	1.9554	

* $p < .005$

Inspection of the means indicates that written quiz performance decreased from the posttest to the follow-up period for both groups in both settings.

Nonverbal social approval. The means and standard deviations for the nonverbal social approval skill quiz scores for all groups at post and follow-up evaluation periods are presented in Table 6.

Table 6

Means and Standard Deviations of Nonverbal Social Approval

Skill Quiz Score at Posttest and 5 Week Follow-up

Group	Posttest		Follow-up	
	M	S.D.	M	S.D.
Ward A	11.11	1.05	10.55	1.01
Ward B	11.44	.88	10.55	1.01
Behavioral Rehearsal	11.66	.70	10.22	.66
x Ward A	11.50	1.00	10.00	.81
x Ward B	11.80	.44	10.40	.54
Discussion	10.88	1.05	10.88	1.16
x Ward A	10.80	1.09	11.00	1.00
x Ward B	11.00	1.15	10.75	1.50
Total	11.27	.96	10.55	.98

Note: Maximum score = 12.

The data were submitted to a 2 (Wards) x 2 (Treatments) x 2 (Trials) analysis of variance with repeated measures on the trials factor. The results, as presented in Table 7, reveal a significant effect for the trials factor.

Table 7

Analysis of Variance with Repeated Measures on the Trial
Factors for Nonverbal Social Approval Quiz Scores

Source	df	MS	F
Between subjects	17		
Wards	1	.2347	.2593
Treatments	1	.0125	.0138
Wards x Treatments	1	.3125	.3452
Error	14	.9054	
Within subjects	18		
Trials	1	4.8347	4.8783*
Wards x Trials	1	.0681	.0687
Treatments x Trials	1	4.5125	4.5532
Wards x Treatments x Trials	1	.1681	.1696
Error	14	.9911	

* $p < .05$

Inspection of the means indicates that written quiz performance decreased from the posttest to the follow-up period.

In-Vivo Behavior Performance

Before further analyses were undertaken, the in-vivo performance data were converted to a standardized source which could be compared across wards x treatments x trials. This was necessary since the length and number of interactions differed across individuals and groups.

The mean time length of all coded interactions was found to be 42 seconds, so the quantity of social approval components for each interaction was first reduced to social approval components per second before being multiplied by 42 to produce a standardized score of social approval components per 42 second interaction. As an example, let us consider a coded interaction that contained 9 components of social approval during a 152 second time interval. This first would be reduced to components per second ($9 \div 152 = .06$) and then multiplied by 42 ($.06 \times 42 = 2.52$) to become 2.52 components of social approval per 42 second interaction. A single score of in-vivo performance for each participant at pre, post, and follow-up trials was then produced by computing the mean of all the social approval components per 42 second interactions for each evaluation period.

Verbal social approval. The means and standard deviations for all groups on the in-vivo performance measure of the verbal social approval skill are presented in Table 8.

Table 8

Means and Standard Deviations for Components of Verbal Social Approval
per 42 Second Interaction

Group	Pretest		Posttest		Follow-up	
	M	S.D.	M	S.D.	M	S.D.
Ward A	1.32	1.33	2.68	2.02	2.70	2.47
Ward B	1.78	.88	4.46	2.50	4.30	1.61
Behavior Rehearsal	1.48	1.12	4.65	1.69	4.72	2.27
x Ward A	1.63	1.71	4.45	1.49	4.21	3.29
x Ward B	1.32	.50	4.85	2.00	5.22	1.24
Discussion	1.62	1.19	2.50	2.57	2.28	1.28
x Ward A	1.02	1.06	.97	.94	1.18	.73
x Ward B	2.73	.98	4.05	3.30	3.38	1.34
Total	1.55	1.12	3.57	2.39	3.50	2.19

Note: Numbers refer to frequency of components of verbal social approval demonstrated per 42 second interaction.

The data were submitted to a 2 (Wards) x 2 (Treatments) x 3 (Trials) analysis of variance with repeated measures on the last factor. The results of the analysis are presented in Table 9, which reveals significant main effects for wards, treatments, and trials.

Table 9

Analysis of Variance with Repeated Measures on the Trials
 Factors for Components of Verbal Social Approval per 42
 Second Interaction

Source	df	MS	F
Between subjects	17		
Wards	1	16.8850	5.2489*
Treatment	1	24.6130	7.6512*
Wards x Treatment	1	7.7453	2.4077
Error	14	3.2169	
Within subjects	36		
Trials	2	23.2799	8.3980**
Wards x Trials	2	1.4331	.5170
Treatment x Trials	2	8.1175	2.9283
Wards x Treatment x Trials	2	1.0409	.3755
Error	28	2.7721	

* $p < .05$

** $p < .005$

Visual inspection of the means indicates that for the ward data, Ward B had a greater increase than Ward A, while treatment data indicates that the behavioral rehearsal condition was superior to the discussion condition. Because the data includes unequal ns for groups and since the means are not independent (as a result of the repeated measures design) the Bonferroni t-test (Myers, 1979) was performed on the trials data to ascertain which differences between means contributed to the significant F ratios. The critical value of the Bonferroni t statistic for this data was 1.3157 which reveals that there were significant differences from pre to post, and from pre to follow-up evaluation points.

Nonverbal social approval. Table 10 presents the means and standard deviations for the in-vivo performance measure of the nonverbal social approval skill.

The data were submitted to a 2 (Wards) x 2 (Treatments) x 3 (Trials) analysis of variance with repeated measures on the trials factor. The results, as presented in Table 11, reveals a significant main effect for treatments, trials, and a significant interaction effect for treatment x trials.

Visual inspection of the treatment data shows that the behavioral rehearsal treatment condition was clearly superior to the discussion format in the demonstrated use of nonverbal social approval. To ascertain which levels of scores on the trials and treatment x trials data contributed to the significant F ratios, Bonferroni t-tests were performed. The critical value for the trials data was 1.0273, indicating

Table 10

Means and Standard Deviations for Components of Nonverbal Social
Approval per 42 Second Interaction

Group	Pretest		Posttest		Follow-up	
	M	S.D.	M	S.D.	M	S.D.
Ward A	.85	.64	2.90	1.65	2.56	1.68
Ward B	2.10	2.03	3.73	2.41	3.04	.96
Behavior Rehearsal	1.76	1.84	4.58	2.03	3.78	.82
x Ward A	.98	.69	3.54	1.88	3.88	.93
x Ward B	2.54	2.24	5.63	1.91	3.68	.82
Discussion	1.19	1.35	2.05	1.09	1.83	1.03
x Ward A	.75	.68	2.26	1.44	1.41	1.33
x Ward B	1.64	1.94	1.84	.11	2.25	.26
Total	1.48	1.59	3.32	2.05	2.81	1.35

Note: Numbers refer to frequency of components of nonverbal social approval demonstrated per 42 second interaction.

Table 11

Analysis of Variance with Repeated Measures on the Trials
 Factors for Components of Nonverbal Social Approval per
 42 Second Interaction

Source	df	MS	F
Between subjects	17		
Wards	1	6.0796	2.5148
Treatment	1	34.5363	14.2858**
Wards x Treatment	1	2.2204	.9185
Error	14	2.4175	
Within subjects	36		
Trials	2	15.5997	9.2304**
Wards x Trials	2	1.0094	.5972
Treatment x Trials	2	4.9043	2.9019*
Ward x Treatment x Trials	2	3.6633	2.1676
Error	28	1.6900	

* $p < .05$

** $p < .005$

that the posttest scores were significantly greater than the pre-scores, and that the follow-up scores were greater than the pre-test ones.

The critical value for the treatment x trials interaction was 1.6942 revealing two distinct clusters of scores (see Table 12).

Table 12

Means of Treatment x Trial Interaction Data

Beh. Reh. Post	Beh. Reh. Follow-up	Disc. Post	Disc. Follow-up	Beh. Reh. Pre	Disc. Pre
4.59	3.78	2.06	1.83	1.77	1.19

Figure 1 graphically illustrates this interaction effect.

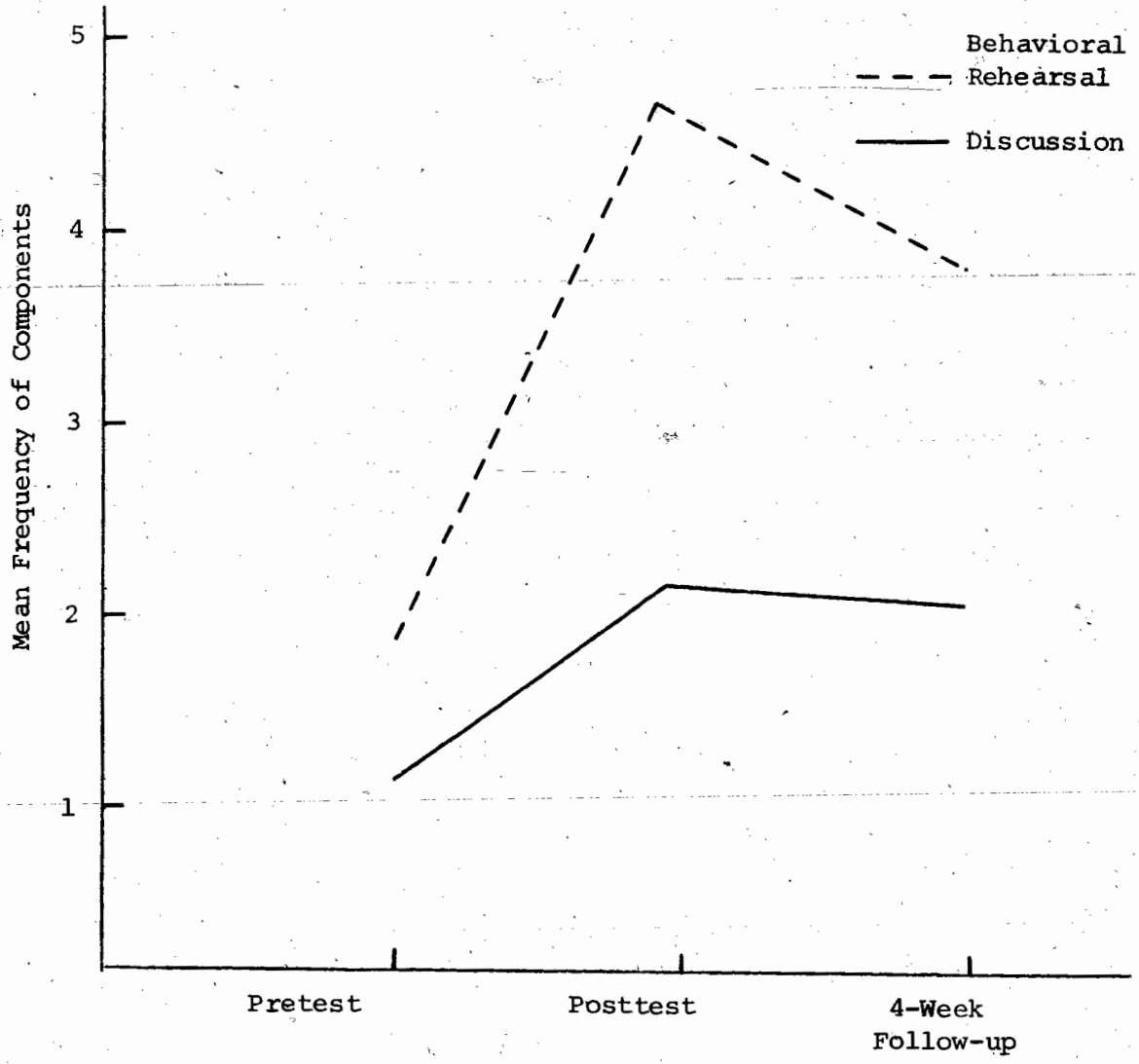


Figure 1. Interaction of Treatments x Trials for Non-verbal Social Approval In-Vivo Observation Data.

Chapter IV

Discussion and Conclusion

Discussion

As hypothesized, the treatment groups did not offer significantly from one another on the written quiz performance measure. Even though there was a significant change on both the verbal and nonverbal quiz measures from post to follow-up evaluation points, it is important to note that all groups retained above average retention of the material.

Inspection of the behavioral dependent measure data indicates that all groups show superior in-vivo performance of verbal and non-verbal social approval skills at post and follow-up periods from an initial pre-treatment level. It is also clear that the treatment conditions had a significant differential effect as demonstrated by the in-vivo measure: While both treatment groups exhibited increases in the amount of social approval from pre to posttest and a slight decrease from post to follow-up periods, the group taught by way of behavioral rehearsal and performance feedback demonstrated a significantly greater in-vivo use of the skill.

This finding takes on greater importance when one considers that neither treatment condition differed significantly from the other on the written quiz performance measure. Thus, while both treatment conditions have a similar ability to generate cognitive examples of verbal and nonverbal social approval components, only those trained by behavioral rehearsal and performance feedback demon-

strated such behavior in an in-vivo situation. Such a finding indicates that future studies investigating the efficacy of training formats should always include in-vivo assessments to insure that the training content is actually being performed.

This data concurs with Gardner's (1973) conclusion that increased exposure to modeling and behavioral rehearsal leads to greater use of the skill. This study, however, has demonstrated such a conclusion directly via in-vivo observations and thus provides imposing evidence for such a training module.

This study has also helped to validate the efficacy of a micro-teaching approach in which minimal training time brings about important in-vivo results (see Moreland et al., 1973). The fact that these resultant changes maintained over a four-week follow-up also adds credence to the usefulness of the micro-format.

While the data does harmonize with Paul et al.'s (1973) results as to which training format brought about the greater increase in the use of social approval skills, it unfortunately does not allow one to extricate the specific components of the training that brought about such changes. During the course of this investigation, it became clear that the behavioral rehearsal treatment group was being exposed to conditions not controlled for by this study's design; specifically, the behavioral rehearsal participants not only engaged in two or three role playing vignettes and received feedback for their performance, but they were also witness to the other group members' attempts at rehearsing the skill. Therefore, each behavioral rehearsal group

member viewed from 6 to 12 additional modeling examples for each of the two skills. With the vast amount of research verifying the powerful effects that modeling alone has on the acquisition of new behaviors (e.g. Bandura, 1977), this variable cannot be easily dismissed.

When considering the influence that modeling might exert on the acquisition and maintenance of the social approval skill, one must also be aware that each participant had the opportunity to view other staff members' performance in an in-vivo context. Post-hoc analysis of the staff rosters indicated that a member of the discussion group condition was always on the same shift and ward as a member of the experimental role playing groups. Therefore, if indeed the viewing of models is a significant component of the training format, the access to such models in an in-vivo context must also be accounted for. Clearly, this added modeling exposure confounds the present study's attempt to implicate behavioral rehearsal and performance feedback as the most potent components of an effective training format.

Conclusion

The results of this investigation clearly demonstrate that the training formats did have a significant differential effect on the in-vivo use of the skill of social approval. What this means for existing behavioral programs is that it is possible to utilize a brief in-service training format to effectively teach new behavioral skills to nursing personnel. While one must exercise caution as to the

generalizability of this study, for the parameters of this form of training method remain to be determined experimentally, the advantages to the applied setting are clear.

Foremost is the fact that nursing personnel need not be relieved from their ward duties for extended periods of time to attend in-service education sessions. The validation of a brief (maximum 1 hour for each skill), but effective training medium can provide monetary benefit to the hospital while fulfilling the nurses' need for an ongoing upgrading and refinement of their skills.

This brief training format also does not require an exorbitant amount of trainer preparation time nor actual instruction time. An estimation from this study suggests that approximately four hours were required to prepare both videotapes which contained the description of the skills plus the modelling examples -- and this was accomplished by neophyte video technicians! Again, the financial savings to the hospital cannot be understated.

As mentioned earlier, the recognition of an extraneous variable (the increased role of modeling in the behavioral rehearsal groups) leaves one impotent to discern the salient components of this efficacious training format. To alleviate this difficulty, future research could include a modelling treatment condition in their design. Such a group would view the description and the videotaped models of a skill and then observe the behavioral rehearsal condition group undergoing their experimental exposure. This would allow one to discern the differential effects which modeling vs behavioral rehearsal plus

modeling within a training format could accomplish. To control for the in-vivo modeling effects that participants were subjected to, one could assign participants to treatment conditions on the basis of ward and/or shift composition.

A further possible area of concern is the reduction in the amount of social approval dispensed from post to four-week follow-up intervals. While this is not a significant decrease for either experimental group, it could at a later follow-up pose a concern.

Many researchers have commented that the work behavior of hospital personnel is subject to the same principles of learning as are the behaviors of patients they are treating (Ayllon & Azrin, 1968; Panyan, Boozer & Morris, 1970; Hollander & Plutchik, 1972; McReynolds & Coleman, 1972; Patterson, Cooke & Liberman, 1972; Pomerleau, Bobrove & Smith, 1973; Pommer & Streedbeck, 1974). One commonly held explanation for the continued performance of various non-professional personnel is that the patient's progress rewards the trainer (Panyan et al., 1970; Philp, 1977), however this hypothesis of staff behavior has received little investigative attention.

One attempt to maintain staff performance has resulted in a number of projects to reinforce the reinforcers; situations such as supplying staff performance feedback (Bricker, Morgan & Grabowski, 1972; Patterson et al., 1972), salary increases, vacation time preference (Ayllon & Azrin, 1968), achievement plaques (Watson, Gardner & Sanders, 1971), and trading stamps (Hollander & Plutchik, 1972) have all, by some measurable way, had the desired effect of maintaining the

performance of staff. Unfortunately, no systematic research has been undertaken to definitely ascertain which staff, working with which population under which conditions leads to such improvement. Clearly this is another area that requires much experimental scrutiny.

Endings imply beginnings while this investigation has succeeded in providing an effective applied training format, it has, from an academic point of view, provided more questions than answers. It is anticipated that future research in the understanding of effective training formats coupled with experimental information on maintaining the resultant increased performance of staff will lead to a more systematic and consistent implementation of behavioral therapeutic skills in institutional settings. It is such a change that will result in a similar increase in the efficacy of behavior therapy so as to assist those individuals for whom this therapeutic system offers so much hope.

Appendix A

Transcript of Verbal Social Approval Training Videotape

Social attention and approval are generalized reinforcers. This means that the behavior of most people is to some extent under their control. A simple example of social reinforcement in operation is found in a typical conversation. A speaker is more likely to continue talking about a particular topic when his listener expresses interest verbally by saying "Yes", "Um-huh", and occasionally asks questions about that topic. If the listener was to not express any verbal feedback, it is quite likely that the speaker would change topics or would cease to speak altogether. In this case, we say that the speaker's behavior is being maintained by verbal social reinforcement.

In certain cases, however, social attention appears to have little reward value. When this occurs, it becomes necessary to enhance its reinforcing value by pairing social approval with a material reinforcer. With repeated pairings, social attention will become reinforcing and thus serve as a secondary reinforcer. Eventually it will be possible to fade the use of the material reinforcer and to rely solely on social attention to maintain the behavior.

Perhaps the most typical ward example that we have in the development of social approval as a secondary reinforcer is its use accompanying a cigarette which is contingent upon the completion of a task. Initially a parent may wipe a table or mop the floor to earn a cigarette; however, with repeated pairings of staff attention and praise accompany-

ing the cigarette and following the task, it will be possible to maintain the behavior on social attention alone. If it is necessary to actually develop social attention as a reinforcer, it seems reasonable to ask why we should bother to do so when it is clear that material reinforcers are effective.

We work on making social attention a secondary reinforcement because although material reinforcers will have to be discontinued when a patient leaves hospital, social attention will always be available. If a patient has learned to carry on appropriate conversations and to make his wishes known in a polite and reasonable manner, it is likely that the people he meets in the community will respond with social approval and thus help him to continue to interact appropriately with others.

Another reason to work on developing social attention as a reinforcer is that it allows for more flexibility in behavioral programming. Patients are less likely to become satiated on social attention than on chocolate bars or cigarettes. Social attention can also be used with minimum fuss and minimum delay. Especially with behaviors that are rather weak, this immediacy of reinforcement may be important in bringing about changes.

There are five major categories of verbal social approval:

Praise, Greeting, Receipt of Task Information, Descriptive Praise Statement, and Expressing an Interest. We will discuss each one in turn.

All too often the term social approval is considered to be synony-

mous with praise words. While praise words like 'good', 'correct' and so on are often reinforcing, it is important to remember that there are other possibilities. Simply acknowledging the presence of another person is usually interpreted positively and a friendly greeting, like 'hi' or 'hello' paired with the person's name can be an expression of positive feeling. This is especially important in the case of psychiatric patients who often get very little individual recognition. Many of us make a point of saying good morning to staff we work with, calling them by name the first time we see them on a particular day. Many of the patients who come to us are accustomed to relatively little individual attention. This gives any instance of personal recognition, especially from staff members who have high status within the institution compared to patients, very strong reinforcing value.

Perhaps the minimum amount of social attention which can be given is the acknowledgement that a behavior has occurred. In our program we are careful to avoid acknowledging behavior which should be on extinction since any recognition can reinforce and thus maintain inappropriate behavior. Certainly none of us would approach someone who is screaming loudly and say "I noticed you're screaming". Not only might this approach ultimately increase the frequency of screaming behavior, it might also lead to physical assault. However, in the case of appropriate behavior we sometimes overlook the fact that simple acknowledgement of the occurrence of desired behavior can be reinforcing. For example, saying "I noticed you combed your hair this morning" or "looks like you finished all your tags today" can serve as social

approval. In a similar way, when a patient comes to report on a task, he can be told "Thank you for doing your envelopes or typing or whatever else may be".

It was already noted that praise words are usually reinforcing. In order to ensure that you do not become too stereotyped in your responses to patients, it is important to have a variety of responses to use and to suit them to the occasion. Thus it is not really appropriate to describe a half-hearted attempt to clean a couple of ashtrays as "tremendous". If we over-respond in this fashion, the words we use will lose their reinforcing value. One way to avoid being rigid about praising is to supply feedback of task performance along with verbal praise. For example, instead of simply saying to a neatly dressed and well-groomed patient "You look nice today", you could say "it's good to see your hair so neatly combed because not that it's not hanging in your face, I can enjoy seeing your smile". This sort of response expresses approval but also provides information about performance criteria and will help the patient to know what is required the next time he must do the task.

Finally, the most subtle kind of social approval is provided when staff expresses interest in the patient's well being or talk with him about topics they know that he is interested in. For example, if you know a patient likes movies, a brief chat about the most recent movie that you've seen is almost sure to be reinforcing. Almost all patients will find a conversation about a recent shopping trip or a visit home to be rewarding. In general, any indication that you have noticed the

patient as an individual with particular likes or dislikes, and are concerned enough to remember the important events in his life, will be socially reinforcing.

Now you are going to see some vignettes in which verbal social approval is being delivered to a patient. See if you can identify the categories that we have just discussed, remembering that those categories are: Greeting, Receipt of Task Information, Praise, Descriptive Praise Statements, and Expressing an Interest.

Appendix B

Transcript of Nonverbal Social Approval Training Videotape

Research in social psychology has consistently shown that non-verbal cues are the dominant source of meaning in social interactions. It is clear that when there is a conflict between verbal and non-verbal components of a message, the latter wins out. If someone says, "I'm happy," but has a furrowed brow and a glum expression, we seriously doubt his statement.

Especially in the case where we believe that someone has a vested interest in making a particular impression, we attend to non-verbal cues because these cues are not under as much conscious control as speech. We normally feel that someone's facial expression and other non-verbal cues express his true feelings while his words may lie. Judges and juries have long recognized the reliability of information provided by non-verbal cues and recent research on decision-making in juries indicates that their members rely heavily on such cues in deciding cases.

In Social Learning Therapy, non-verbal behaviors are also very important: In all of the many social interactions which occur daily between staff and patients, staff are communicating certain messages through their non-verbal behaviors. For this reason it is important that we learn to control and use these cues for therapeutic purposes. Clinical research has shown that training can improve one's ability to communicate non-verbally by as much as 50%. The remainder of this

session will attempt to aid each of you in improving these skills to become more effective therapists.

Nonverbal communication is composed of three major systems:

1) facial cues, 2) gestures, and 3) body posture. I'll talk about each of these in turn.

Facial Communication: The face functions primarily as an emotional display system -- no other communication system serves this function so effectively or efficiently. Research conducted with psychiatric patients suggests that the dimension of Happiness-Unhappiness can be reliably assessed from facial cues. Breaking this dimension down further, it has been found that the primary focus is on the lip and mouth area. Therefore, if one wants to convey the message that one is pleased, the best way to do it is by smiling.

It has also been found that establishing eye contact during interactions is likely to be interpreted as a positive response. This does not mean that one must stare someone into submission, but rather that an intent but relaxed gaze will usually be reinforcing. Please pay attention to the facial cues in the following examples.

Gestural Communication: Gestures are particularly important in nurse/patient interactions because the close physical proximity of the participants ensures that virtually every gesture is noticed.

A gesture refers to the movement of some specific part or parts of the body. A communicator's gestures are normally reliable indicators of the intensity of his feelings. The most important gestures

are head nods and hand movements which serve to emphasize verbal approval. Nodding is an almost universal message that information has been received and that actions are approved. Hand movements usually convey the message that the speaker cares about what he is saying. Notice how gestural cues are used as social approval in these examples.

Postural Communication: The posture which one assumes in a social interaction also conveys important information. For example, when a nurse is sitting behind a desk speaking to a patient, the interaction is more likely to be interpreted as friendly if he or she leans toward the patient, partially closing the gap between them.

Of course, the presence of the table in this example decreases the effectiveness of the non-verbal communication. Leaning toward a patient is more likely to serve as approval if you are seated next to him. In this situation your body position -- being seated -- is conveying the message that you are on the same social level as the patient and are approaching as a friend rather than formally as a staff member. It is very important to avoid putting physical barriers between yourself and your patients, and to adopt a casual approach if you wish to be maximally reinforcing. Notice the difference in the impression produced by different body postures in the following examples.

I have just talked about three aspects of non-verbal social approval individually (those being facial cues, gestures and body posture), but obviously these do not occur in isolation. In every staff/patient interaction, one could identify a number of non-verbal

messages. Have a look at the following vignettes of staff/patient interactions and see how many components of non-verbal social approval you can identify.

Appendix C

Scenarios to be Role-Played during Behavioral Rehearsal

Training Format

Bob is having a card game with Bert in the dayroom. Since Bob has been verbally abusive for most of the day, this appropriate behavior is a good opportunity to reinforce Bob's actions.

Henry has just finished cleaning the ashtrays in the dayroom. He is standing in front of you at the nursing station to report that he has completed his program task.

Ann has been in the cooking group for the past three weeks and by all reports has been doing well. She is now having stores and is sitting by herself in the dayroom.

Linda has just finished doing R. T. and is standing by the nursing station to report task completion. She earns stores by doing all of the exercises in the R. T. program.

Trudy has been out on a boarding home visit today and is now sitting by herself in front of the T. V.

Sheila has just cleared the magazines from the tables in the day-room. She is approaching the nursing station to report that she has finished the task.

Lee has just finished cleaning the bathroom sinks and is reporting the task completion to you. You both walk over to the nursing station to mark it off in his program.

Mary has just straightened the chairs behind the tables in the day-room and is standing in front of the nursing station to report this. She also earns stores (to be given out in $\frac{1}{2}$ hour) by doing this task.

Ted is standing at the nursing station to report that he has washed up for lunch. He earns a cigarette for completing this task.

Barbara has just returned from the hairdresser's after getting her hair cut and permed and is sitting in the dayroom.

Margot is cleaning the tables after stores. She has done a very good job as the tables were especially messy. You approach her just as she is finishing the last one.

Fred has just finished dry-mopping the corridor and is standing in front of you at the nursing station to report that he has completed his program task. Fred earns a cigarette for doing this task.

Just before bedtime, Alice passes you in the corridor and tells you that she has brushed her teeth. Even though this item is on her program, the allotted time has elapsed. Hygiene skills have been a major focus of Alice's program.

Colin has just finished reading an article on "Vancouver Restaurants" and wants to report on it to you. Colin earns a chocolate bar for successfully completing this task (he must report 2 items).

Margaret has finished working in craft group and is waiting to go back to her ward. You notice her standing in the corridor as you are walking by.

Appendix D

Quizzes to Assess Cognitive Awareness of Social Approval

Skills

Verbal Social Approval: Posttest

The following quiz is used to assess your understanding of the material presented in this education session. The scores that you receive on the quiz will not be seen by anyone other than the psychologists involved in this research project and have no bearing whatsoever on your employment situation. These papers will be destroyed immediately after the research project has been completed.

QUESTION #1: Dawn, a 28 year old patient has been working on a hooked rug in the craft group for the past three weeks and is making good progress. You, as a staff member, approach her to deliver approval. List five (5) examples of verbal social approval statements that you could give her. Remember to vary your statements to encompass the categories that you have learned in this education session.

1. _____
2. _____
3. _____
4. _____
5. _____

QUESTION #2: Bill, a 55 year old male patient has just approached the nursing station to return the electric shaver that he has just used.

As hygiene skills have been a major focus of his program, you wish to reinforce this behavior. List five (5) examples of verbal social approval statements that would be appropriate in this situation.

Remember to vary your statements to encompass the categories that you have learned in this education session and also, please use DIFFERENT statements than those used in QUESTION #1 above.

1. _____
2. _____
3. _____
4. _____
5. _____

Nonverbal Social Approval: Posttest

The following quiz is used to assess your understanding of the material presented in this education session. The scores that you receive on this quiz will not be seen by anyone other than the psychologists involved in this research project and have no bearing whatsoever on your employment situation. These papers will be destroyed immediately after the research project has been completed.

QUESTION #1: Helen, a 38 year old female patient has just finished giving out evening stores and is walking with you down the corridor to return the wagon. During your interaction, you want to not only give verbal social approval for completing her ward task, but also to give non-verbal social approval. Describe three (3) behaviors that YOU could emit which would indicate your positive feelings to Helen.

Remember to vary your descriptions to encompass the categories of non-verbal social approval that you have learned in this education session.

1. _____
2. _____
3. _____

QUESTION #2: Henry, a 45 year old male patient is standing before you at the nursing station in the dayroom. You are seated behind the desk as he reports that he has finished his Morning Routine items.

Describe three (3) behaviors that YOU could emit which would indicate your non-verbal approval of Henry completing these items. Remember to

vary your descriptions to encompass the categories that you have learned in this education session and also, please use different descriptions than those used in QUESTION #1 above.

1. _____
2. _____
3. _____

Verbal and Nonverbal Social Approval: 5 Week Follow-up

The following quiz is used to assess your retention of the material taught in the Social Approval education sessions. The scores that you receive on this quiz will not be seen by anyone other than the psychologists involved in this research project and have no bearing whatsoever on your employment situation. These papers will be destroyed immediately after the research project has been completed.

Please do not discuss or compare your answers with other staff members as we are interested in your retention of the training material.

QUESTION #1: Henry a 36 year old patient has just returned from the cooking group where he is making good progress. You, as a staff member, wish to reinforce Henry for completing this program item. List five (5) examples of VERBAL social approval statements that you could give to him. Remember to vary your statements to encompass the categories that you learned in the education sessions.

1. _____

2. _____

3. _____

4. _____

5. _____

QUESTION #2: Sue, a 43 year old patient has just returned from the beauty parlour where she has had her hair permed. As self-care and hygiene skills have been a major focus of her program, you wish to reinforce this behavior. List five (5) examples of VERBAL social approval statements that would be appropriate in this situation. Remember to vary your statements to encompass the categories that you have learned in the education sessions and also, please use DIFFERENT statements than those used in question #1 above.

1. _____

2. _____

3. _____

4. _____

5. _____

QUESTION #3: Bob, a 23 year old male patient has just carried the drug basket down to the pharmacy and is walking with you back up the stairs to the ward. During your interaction, you want to not only give verbal social reinforcement for completing this ward chore, but also to give NON-VERBAL social approval. Describe three (3) behaviors that YOU could emit which would NON-VERBALLY indicate your approval to Bob.

Remember to vary your descriptions to encompass the categories of non-verbal social approval that you have learned in the education sessions.

1. _____

2. _____

3. _____

QUESTION #4: Beth, a 38 year old patient is standing before you at the nursing station in the dayroom. You are seated behind the desk as she reports that she has finished making her envelopes as per her program. Describe three (3) behaviors that YOU could emit which would indicate your NON-VERBAL approval of Beth completing this item.

Remember to vary your descriptions to encompass the categories that you have learned in the education sessions and also, please use different descriptions than those used in Question #3.

1. _____

2. _____

3. _____

This follow-up quiz completes the research project designed to investigate the effectiveness of different teaching formats in the acquisition of Social Approval Skills. I hope that you found the training useful in increasing your efficacy as a therapist on the Social Learning Project. If you have any comments regarding the training format that you experienced (likes, dislikes, concerns, complaints, etc.) please feel free to list them below -- your candidness would be appreciated.

May I once again thank you for taking the time and effort to participate in these education sessions.

Sincerely,

Director,

Social Learning Program.

Appendix EIn-vivo Observation Instrument

Three interactions were manually coded on each sheet of 4½" x 13" paper strips (see Figure 2), which contained spaces to record the staff member's name, the patient's name, the length of the interaction plus the frequency of occurrence of each skill component. Coders placed a cardboard template (which separated the skill component spaces) over each strip so that they could record the occurrence of each component without removing their line of sight from the interaction itself. After the interchange terminated, the coder recorded the time length of the interaction (from a hand-held stop watch) and the names of the participants. The template was then placed over the next interaction strip and the stop watch reset to await the initiation of the next appropriate interchange, that being defined as a patient reporting the completion of a program task to a nursing staff member.

INTERACTION #1		INTERACTION #2		INTERACTION #3	
STAFF MEMBER	Length of Interaction (Seconds)				
	PATIENT				
Greeting					
Receipt of Task Information					
Praise Words					
Descriptive Praise Statements					
Smile					
Head Nod					
Gestures					
Positive Body Orientation					

Figure 2: Paper and Pencil Instrument to Record In-Vivo Dependent Variable.

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