THE EFFECTS OF COGNITIVE INFORMATION AND SUPERVISED PRACTICE UPON THE ACQUISITION OF CRISIS INTERVENTION SKILLS

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ABSTRACT

THE EFFECTS OF COGNITIVE INFORMATION AND SUPERVISED PRACTICE UPON THE ACQUISITION OF CRISIS INTERVENTION SKILLS

By

Michael J. Brown

Statement of the Problem

Crisis centers and hotlines have become solidly entrenched as part of our nation-wide response to mental health needs. Staffed primarily by non-professionals, situated conveniently in neighborhood communities, and offering a wide range of community services, these centers continue to grow in number, professional respect, and public acceptance.

The advantages of crisis centers are many and varied, not the least of which lies in their ready accessibility and low cost. Unfortunately, herein lies also one of the greatest problems. Crisis center staffs, generally non-professional and often unpaid, must nevertheless be equipped with certain intervention skills if they are to provide adequate service to their treatment populations.

The use of unpaid personnel to man crisis centers severely limits availability of staff time. Selection and training of crisis

intervention agents must be designed to provide these agents with effective intervention strategies and skills in a relatively short period of time.

Purpose of the Study

The purpose of this study was to examine the impact of adding a unifying theory of personality structure and change, Transactional Analysis (TA), to the present crisis intervention skills of volunteers at the Open Door Crisis Center, Lansing, Michigan. Prior to this study, such a theory was not included in the training of volunteers. The addition of such a component was designed to increase the volunteers' abilities to select and implement intervention strategies which are appropriate to specific situations.

The Open Door's training program is designed to teach specific communication skills and cognitive information to prospective volunteers. These communication skills include Empathic Understanding, Attitude and Values Clarification, and Problem-Solving. The cognitive information consists of facts pertaining to community resources, as well as global strategies for dealing with specific types of problems.

The Open Door's training model is based on a structured skills-building model. The philosophy underlying this approach is that crisis intervention skills can be taught by didactic instruction and practice, with no direct focus on changing the trainees' affective responses to stimuli.

It was hypothesized that the addition of TA theory to the present training would eliminate three major weaknesses: (1) a communication gap between trainers and trainees, caused by the lack of a

common language; (2) a knowledge gap caused by the lack of a unifying theory of personality; and (3) the inability of trainees to generalize effective intervention strategies learned during training to the treatment setting.

This study examines the effects of cognitive information, in the form of TA theory, and supervised practice, via a structured skills-building model, upon the acquisition of crisis intervention skills.

Methodology

Procedure

At the time of the study, seventy (70) persons were active volunteers at the Open Door Crisis Center. Two of these persons, Senior Trainers, were selected to serve as trainers for this project. Of the remaining 68 volunteers, 56 agreed to participate in the study. During the course of the experiment, five (5) of the 56 became inactive and were deleted from the study, leaving a final sample of 51 subjects. These subjects were pre-tested on TA knowledge and leveled into six (6) groups as follows:

<table>
<tr><td rowspan="2">Control Group (CG)</td><td rowspan="2">Transactional Analysis Study Group (TAS)</td><td>Transactional Analysis Practice Group (TAP_1)</td><td>Interpersonal Process Recall Group (IPR_1)</td></tr>
<tr><td>Transactional Analysis Practice Group (TAP_2)</td><td>Interpersonal Process Recall Group (IPR_2)</td></tr>
</table>

All subjects were also pre-tested with the Affective Sensitivity Scale and the Skills Ability Scale. Control group (CG) subjects received no further treatment. The TA Study group (TAS) was given a TA handbook for personal study. The TA Practice groups (TAP) received the TA handbook, plus attended a two-day training workshop where TA theory was applied to crisis intervention skills. The Interpersonal Process Recall groups (IPR) attended a two-day workshop on crisis intervention skills, without application of TA theory. Subjects assigned to non-TA oriented groups were instructed not to study TA for the duration of the experiment. All six groups were post-tested with all three instruments immediately following the workshops, and again five weeks later.

All four training workshops were held during the same two-day period, and the TA study group received the handbook that same weekend. All four workshop leaders were experienced in Transactional Analysis, and two leaders (TAP_1 and IPR_1) were Senior Trainers at the Open Door. All four trainers attended a series of meetings to assure continuity of training methods, except for the addition or deletion of TA theory.

The Affective Sensitivity Scale is a commercially available videotape and paper-and-pencil instrument designed to measure subjects' abilities to discriminate and label affect in another person (empathy).

The TA Cognitive Tests (Forms 1, 2, 3) were designed for this study and measure subjects' knowledge of TA information.

The Skills Ability Scale (SAS) was designed for this study and yields three subscale scores measuring subjects' abilities to select

and implement crisis intervention strategies which are appropriate to specific situations.

Design and Analysis

A repeated measures analysis of variance was performed for each scale of each instrument, yielding five separate analyses to test for significance of group means across tests and within groups.

The Scheffe method of post-hoc multiple comparisons was used to test the significance of differences between specific group means.

Due to the exploratory nature of the study, the .10 level of significance was established as the critical level for accepting or rejecting differences.

Conclusions

The following results of the study are outlined according to the major assumptions, or predictions, previously stated: The following order of performance for improvement and retention of scores was predicted:

TA Cognitive Tests:	TAP > TAS > IPR = Control
Skills Ability Scale:	TAP > TAS > IPR > Control
Affective Sensitivity Scale:	TAP > IPR > TAS > Control

TA Cognitive Tests: The research results tend to support the assumption that persons receiving TA information will improve on scores measuring TA knowledge. Subjects assigned to both the TA Study and TA Practice groups demonstrated significant improvement and retention of scores on this test. Subjects assigned to the TA Practice groups showed a trend toward greater improvement than those assigned to the TA Study

group. Comparisons of gain scores between groups indicate that both the TA Study and TA Practice groups demonstrated significantly greater improvement in and retention of scores than did subjects assigned to the IPR or control groups.

Skills Ability Scale: The research results clearly support the assumption that the addition of Transactional Analysis theory to the structured skills-building model, via cognitive information and supervised practice, results in improvement and retention of trainees' abilities to select and emit effective crisis intervention strategies, as defined by measures on the instruments used in this study. Significant improvement and retention of scores on all three subscales of the Skills Ability Scale were demonstrated by subjects assigned to the TA Practice group. Additionally, significant differences were found in improvement and retention of scores on all three subscales between subjects assigned to the TA Practice groups and those assigned to the control group (TAP-CG) or to the IPR groups (TAP-IPR).

Subjects assigned to the TA Study group demonstrated no significant differences between pre- and post-test results on any of the SAS subscales. However, there was a significant difference for these subjects between pre- and delayed post-test results on subscale Type I (Information), indicating that scores on this subscale continued to climb for this group between these two testing periods. This same trend was demonstrated on subscale Type III (Long-Term Stress), although the results in this case were not significant. Additionally, significant differences were found in improvement and retention of scores on

subscale Type I between subjects assigned to the TA Study group and those assigned to the control group (TAS-CG); and in improvement of scores on subscale Type II (Dangerous Emotions) between subjects assigned to these same two groups.

On all three subscales, subjects assigned to the TA Practice groups demonstrated a trend toward superiority when compared with subjects assigned to the TA Study group (TAP-TAS). However, this trend was significant only for improvement and retention of scores on subscale Type III.

Subjects assigned to the IPR groups demonstrated improvement in scores on subscale Type I only. No significant retention of scores was demonstrated for any of the subscales. Additionally, subjects assigned to the IPR groups demonstrated significantly greater improvement in scores on subscale Type I, when compared with subjects assigned to the control group (IPR-CG). No other significant differences in improvement or retention of scores were demonstrated by subjects assigned to the IPR groups.

Affective Sensitivity Scale: No significant differences in improvement or retention of scores on the Affective Sensitivity Scale were demonstrated, nor were any significant differences found between subjects assigned to any pair of groups. This failure to show significant gains may be partially explained by (1) the extremely low validity of the Affective Sensitivity Scale; and/or (2) the fact that the subjects used in this study were already trained in empathy skills and had previously demonstrated relatively high levels of achievement in these skills. It is important to note that scores on the Affective Sensitivity Scale did show an upward trend, where predicted, suggesting that

trainees' abilities to determine affect in another person were maintained or enhanced during the course of the experiment.

In all, 12 of 34 hypotheses predicting significant differences in improvement and retention of scores on three measures were accepted, in addition to one hypothesis which predicted null results. Five of the six hypotheses predicting improvement on the TA Cognitive Tests were accepted, and four of the five hypotheses predicting retention of scores on this test were also accepted. For the Skills Ability Scale, two of the six hypotheses predicting improvement and two of six predicting retention were accepted for all three subscales; and, a total of nine of twelve hypotheses predicting improvement or retention of scores were accepted for one or more subscales. None of the hypotheses predicting improvement or retention of scores on the Affective Sensitivity Scale were accepted.

Discussion

The general assumption of predicted comparative gains and retention of scores on the Transactional Analysis Cognitive Tests was as follows: TAP > TAS > IPR = Control. This assumption held true for both improvement and retention of scores, and was significant for all comparisons except TAP > TAS.

The general assumption of predicted comparative gains and retention of scores on the Skills Ability Scale was as follows: TAP > TAS > IPR > Control. This assumption held true for improvement and retention of scores for subscales Type II (Dangerous Emotions) and Type III (Long-Term Stress). For subscale Type I (Information),

subjects assigned to the IPR groups actually demonstrated higher scores on the post-test than did subjects assigned to the TA Study group. However, this difference was very slight and was reversed to the expected direction on the delayed post-test.

The general assumption of predicted comparative gains and retention of scores on the Affective Sensitivity Scale was as follows: TAP > IPR > TAS > Control. This assumption held true for improvement of scores. However, on delayed post-test scores, subjects assigned to the TA Study actually demonstrated slightly higher scores than did those assigned to the IPR groups. None of these gains were significant.

The results of this study suggest that the addition of Transactional Analysis theory to a structured skills-building model for training crisis intervention agents, via cognitive information and supervised practice, does result in improvement in trainees' abilities to select and emit effective crisis intervention strategies, as defined by measures on the instruments used in this study. Furthermore, results indicate that once trainees have been trained in the basic communication skills of Empathic Understanding, Attitudes and Values Clarification, and Decision-Making, cognitive information regarding Transactional Analysis theory and practice, without additional supervised practice, is more helpful for increasing crisis intervention skills than is additional supervised practice, without the cognitive information. Indications are that most of these improved skills are maintained over time.

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Department of Counseling, Personnel
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DEDICATION

Dedicated to my wife, Susan,

my daughter, Jennifer, and

my friends.

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CHAPTER I

INTRODUCTION

In the United States, crisis centers and hotlines are relatively new approaches to the growing concern for mental health. McCord and Packwood (1973) have defined a crisis center as "a community service organization whose primary function is telephone listening or counseling." Such centers have experienced phenomenal growth during the past several years. Thirteen known centers were in operation in 1966, 253 in 1971, and possibly triple that number by 1974 (Townley, 1974). Crisis centers are located in every state, with California having more centers than any other. Centers tend to cluster in metropolitan areas, the largest being Boston, Los Angeles, and San Francisco. There are currently six crisis centers in the greater Lansing area. College populations on campuses and in nearby towns are especially prone to utilize the services of crisis centers (Tucker, Megenty, and Vigil, 1970; McCarthy, 1970).

Crisis center growth appears to be a result of increased drug usage and dissatisfaction with the operation of traditional counseling centers and mental health agencies. This dissatisfaction stems from the fact that most traditional agencies make services available only during the day, require persons seeking services to come to the office, emphasize maintenance of identifiable client records, and are not

equipped to handle bad drug experiences and other personal crises which require immediate attention. Stating these objections, a large percentage of crisis center service populations report an unwillingness to utilize more traditional services (Swenson, 1974).

In the most recent survey of crisis centers in the United States, McCord and Packwood (1973) report their general characteristics. As illustrated in Table 1, there is a wide variation in the number of hours that crisis centers offer telephone services.

*Table 1. Calls Received During February 1971 (227 Crisis Centers)

Hours Open Per Day	Number of Centers	Total Calls Received	Calls Per Center	Calls Per Center Per Day
1-4	7	883	126	4.5
5-8	29	8,867	306	10.9
9-12	23	6,466	281	10.0
13-16	14	4,991	357	12.8
17-23	5	6,244	1,248	30.6

*from McCord and Packwood (1973)

The fewest number of calls occur between 3:00 a.m. and 9:00 a.m., and the greatest number of calls is received between 6:00 p.m. and midnight. These centers reported an average of more than 113 calls per center per day, from one to 12 telephone lines available for calls (average 2.6), and the number of available listeners on duty ranging from 1.6 to 3.4. The number of full-time staff ranged from 2 to 200 per center, with a mean of 11.2. The number of part-time staff ranged from 2 to 150, with a mean of 26.3.

Crisis centers typically offer a wide range of services other than telephone listening-counseling. These services may include emergency medical and free clinic services, rumor control, job placement, co-operative purchasing arrangements, birth control, pregnancy and abortion information, drug analysis, day-car for children, craft and other "free university" courses, speakers' bureaus, and rehabilitation programs. Most centers do not charge fees for any or some of their services. When fees are charged, they usually cover medical services, educational programs, speakers' bureaus, and ongoing counseling services. The services most frequently offered and the types of calls received are listed in Tables 2 and 3, respectively.

Crisis centers are typically staffed by non-professional personnel. Backlogs in intake in counseling centers and mental health agencies, together with the high activity level of crisis centers, strongly suggest a continuing need for non- and para-professional staff to man these centers. According to the National Institute for Mental Health (1972), this rationale is further supported by the uniqueness of what non- and para-professionals have to offer, particularly in the areas of social competence training, continuity of care, and primary prevention. This argument is bolstered by the high incidence of cases in which crisis center clientele, when given opportunity for referral to traditional agency services, refuse to avail themselves of those services and state a preference for continued contact with the crisis center staff (Swenson, 1974). The utilization of non- and para-professionals in the mental health field has been widely acclaimed (Reiff and Riessman, 1965) and even called the "third revolution in

the treatment of the emotionally disturbed" (Steisel, 1972).

*Table 2. Services Most Frequently Offered (253 Crisis Centers)

Services	Number of Centers	Percent[a]
Telephone listening/counseling (by definition--100 percent)	253	100
Referral services	252	99
Walk-in services	127	50
House-call services	127	50
Practicum setting for students in helping professions	114	45
Information services	109	43
Organizer for group counseling	94	37
Referral agent for academic tutors	62	25
Other	35	14

[a]Total exceeds 100 percent because centers generally offer a combination of services

*from McCord and Packwood (1973)

Statement of the Problem

Since crisis centers are almost always staffed primarily by non-professional personnel with little or no prior training, the issue of selection and training of staff becomes vital to their continued existence. McCord and Packwood (1973) found that 86 percent of the centers they surveyed used some variation of a formal (specific sequential steps) preservice training procedure, and that 74 percent of the centers used the training procedure itself as a screening device.

Since the majority of crisis intervention agents are not paid for their time or services, including time spent in training, the issue of short-term training is a crucial one. Hence, a major goal of crisis center training is to devise a short-term training model which will adequately screen and prepare volunteer crisis intervention agents for work in the center.

*Table 3. Types of Calls Received (230 Crisis Centers)

Type of Call[a]	Percent
Drugs, except legal problems	20
Relationship: problems based on relationships with other people	13
Home life: problems based on life at home	11
Resources: need of outside resources not covered in other categories	10
Dating and Marriage	8
Feelings not specifically related to any category; general counseling	8
Suicide: contemplated, threatened, or attempted	6
Crank calls: cop-outs, no problems discussed	6
School	5
Legal and draft: includes arrest, legal problems, and draft information	4

[a]All of the 230 centers were required to make their categories of types of calls received conform to the list of categories above. Since few centers use the same categories, the transference of percentages may result in some error.

*from McCord and Packwood (1973)

Purpose of the Study

The purpose of this study was to examine the impact of adding unifying theory of personality structure and change, Transactional Analysis (TA), to the structured skills-building model currently being used to teach crisis intervention skills to crisis intervention agents at the Open Door Crisis Center, Lansing, Michigan. Prior to this study, such a unifying theory has not been included in the training of volunteers. The addition of such a component was designed to increase the volunteers' abilities to select and implement intervention strategies which are appropriate to specific situations.

The Open Door's training program is designed to teach specific communication skills and cognitive information to prospective volunteers. These communication skills include Empathic Understanding, Attitudes and Values Clarification, and Problem-Solving. The cognitive information consists of facts pertaining to community resources, as well as global strategies for dealing with specific types of problems, such as suicidal contacts, drug-related and other affective crises, and substance overdose.

The Open Door training model is based on the Interpersonal Process Recall technique (Kagan, 1972). Trainees take turns practicing the communication skills by listening to another trainee talk about some real concern, problem, or experience. The interaction is audio or video taped and then played back, with the trainer facilitating the trainee in self-discovery learning. The focus during the self-discovery learning is to help the listener to discover what personal factors played a part in determining the responses made during the interaction. At the end

of the self-discovery learning period the trainer gives the trainee specific instructions on how to incorporate the new information into more appropriate behavior, in terms of the communication skills and strategies listed above.

The philosophy underlying this approach is that the use of the communication skills can be taught by didactic instruction and practice, i.e., that the trainees can learn to use their own effective responses to aversive or emotion-laden stimuli to select appropriate responses, in terms of communication skills, without necessarily changing their own affective response. The philosophy does not deny that changes in affective responses take place through the exposure, practice, and didactic instruction. Nonetheless, there is no direct focus on changing the trainees' affective responses to stimuli.

Justification for the Study

Three major weaknesses of this training model were noted, all of which are related to the lack of a consistent theory of personality structure and change. First, the lack of such a theory hampers the communication between the trainers and trainees regarding possible strategies for handling inappropriate behaviors (in terms of the communication skills) connected to the trainees' affective response. This communication gap interferes with the acquisition of the appropriate behavior response.

A second shortcoming stemming from the lack of a theory of personality structure and change is that the trainee is not given a model to be used in making decisions about which particular communication

skill should be used in the interaction. This lack of knowledge further decreases the listener's effectiveness, commonly resulting in confusion and anxiety which is exhibited during training, and probably later when actually delivering services.

A third weakness is that the use of the communication skills may not generalize to situations other than the training environment. Due to the lack of a model of personality structure, there is no framework present in the training that promotes generalizations to people in all situations. Therefore appropriate behaviors on the part of the trainees may become cued to the training environment, not to any internalized cues (or external cues) which would carry the behavior into other situations.

In order to eliminate the weaknesses described above, a consistent theory of personality structure and change was incorporated into the existing training model. It was hypothesized that the inclusion of this theory would (1) eliminate the communication gap between trainers and trainees by providing a common language for all participants, (2) eliminate the knowledge gap by providing a model for making decisions regarding the "when" and "why" of specific intervention strategies, and (3) allow for a greater generalization of effective intervention strategies and behaviors by providing thought patterns upon which those strategies and behaviors could be internally cued.

The theory of personality structure and change chosen to be integrated into the training model was Transactional Analysis (TA). Transactional Analysis is a particularly appropriate theory for training crisis intervention agents for at least three reasons. First, TA

theory maintains that it is possible to teach a person more appropriate behavioral responses through verbal instructions without attempting to change the underlying affective responses (Berne, 1962; 1966). This position is compatible with the present training philosophy and therefore supplements rather than changes the existing training model. Secondly, this approach uses a simple language, easily understood by non-professionals, which can be operationalized to permit a more accurate verbal communication between trainer and trainee. And, third, TA provides operationalized descriptions of cues which can be used to discern which communication skill would be most appropriate for a given situation.

In sum, this study attempted to seek answers to the following questions:

1. Will the addition of the Transactional Analysis theory of personality structure and its implications for crisis intervention to the current training model result in improvement in trainees' abilities to select and emit effective crisis intervention strategies, as defined by measures on the instruments used in this study?

2. Will supervised practice in Transactional Analysis theory and practice result in improvement in trainees' abilities to select and emit effective crisis intervention strategies, as defined by measures on the instruments used in this study?

3. Will improvements in these abilities be maintained over time?

Definitions

For the purpose of this study, the following definitions will be used:

Crisis center: A community service organization whose primary function is telephone listening or counseling.

Crisis intervention agent: Any person who utilizes the skills of a helping profession while working in a crisis center.

Structured skills-building model: A training model which uses a sequential series of structured exercises and techniques to teach specific skills, without emphasizing change of trainee affective response.

Transactional Analysis (TA): A theory for predicting, describing, and changing human behavior, as defined by Eric Berne.

Transactional Analysis terminology (Berne, 1972):

- Adult: An ego state oriented toward objective, autonomous data-processing and probability-estimating.
- Child: An archaic ego state. The Adapted Child follows parental directives. The Natural Child is autonomous.
- Contract: An explicit agreement between a patient and a therapist which states the goal of the treatment during each phase.

Decision: A childhood committment to a certain form of behavior, which later forms the basis of character.

Drama triangle: A simple diagram showing the possible switches of roles in a game or script. The three major roles are Persecutor, Victim, and Rescuer.

Ego state: A consistent pattern of feeling and experience directly related to a corresponding consistent pattern of behavior.

Game: A series of transactions with a con, a gimmick, a switch, and a crossup, leading to a payoff.

Life position: A concept of O.K.ness and not O.K.ness which justifies a decision; a position from which games are played.

Parent: An ego state borrowed from a parental figure. It may function as a directing influence (the Influencing Parent), or be directly exhibited as parental behavior (the Active Parent). It may be nurturing or controlling.

Permission: (1) a parental license for autonomous behavior.
(2) an intervention which gives the individual license to disobey a parental injunction if he is ready, willing, and able, or releases him from parental provocations.

Potency: The strength with which a therapeutic intervention is delivered, relative to emphasis and timing.

Protection: Support offered to the patient by the therapist throughout the treatment process.

Racket: The sexualization and transactional seeking and exploitation of unpleasant feelings.

Script: A life plan based on a decision made in childhood, reinforced by the parents, justified by subsequent events, and culminating in a chosen alternative.

Stamps: A feeling "collected" as the payoff in a game, cashed in later to justify a behavior.

Stroke: A unit of recognition, such as "Hello."

Structural Analysis: Analysis of the personality, or of a series of transactions, according to Parent, Adult, and Child ego states.

Time Structure: The six (6) possible ways in which a person may use his time at any given moment--withdrawal, rituals, pastimes, activities, games, and intimacy.

Transaction: A transactional stimulus from a certain ego state in the agent plus a transactional response from a certain ego state in the respondent. A transaction is the unit of social action.

Volunteer: A non-professional crisis intervention agent.

Organization of the Thesis

Chapter I served as an introduction to the thesis. It delineated the purpose of the study, statement of the problem, object of the study, and the justification for the study. Also included in the first chapter was a brief description of the hypotheses, listed as questions to be tested, and a brief list of pertinent definitions. Chapter II consists of a review of the literature in the areas of crisis intervention and applicable training models. The general methodology and the design of the study are discussed in Chapter III. Chapter IV analyzes the data and results, while Chapter V includes summary material, discussion of the results, recommendations for further research, and conclusions of the study. Other ancillary information pertinent to the study is found in the appendices.

CHAPTER II

REVIEW OF THE LITERATURE

A review of the literature has been conducted in basic learning principles, crisis intervention theory, Transactional Analysis in a crisis intervention model, crisis center research, and the structured skills-building model as it pertains to crisis center training.

Basic Learning Principles

Davis, Alexander, and Yelon (1974) define learning as "a relatively permanent change in behavior as a function of practice or experience." These authors list several ways in which learning changes behavior: new responses are learned to stimuli; non-essentials are eliminated; and behavior becomes better integrated and more autonomous. Furthermore, these changes are often relatively permanent.

Nine general principles of learning have been derived from psychological experimentation, and these principles can be applied in any learning system:

1. Meaningfulness: A student is likely to be motivated to learn things that are meaningful to him. Meaningfulness is a personal thing, relevant to individual experience.

2. Prerequisites: A student is more likely to learn something new if he has all the requisites. Sequential skills-building is based on this principle.

3. Modeling: A student is more likely to acquire new behavior if he is presented with a model performance to watch and imitate. Good trainers show how by providing an example.

4. Open Communication: A student is more likely to learn if the presentation is structured so that the instructor's messages are open to the student's inspection. Feedback is used to verify this openness.

5. Novelty: A student is more likely to learn if his attention is attracted by relatively novel presentations.

6. Active Appropriate Practice: The student is more likely to learn if he takes an active part in practice geared to reach an instructional objective.

7. Distributed Practice: A student is more likely to learn if his practice is scheduled in short periods distributed over time. Unfortunately, in this study this distribution is precluded by the structure of the existing model.

8. Fading: A student is more likely to learn if instructional prompts are withdrawn gradually.

9. Pleasant Conditions and Consequences: A student is more likely to continue learning if instructional conditions are made pleasant. In addition to physical comfort, practice conditions can be made pleasant by setting challenging tasks, giving feedback, and rewarding students' efforts.

Three types of learning are of particular importance when training crisis intervention agents: concept learning, principle learning, and problem-solving. A concept is an abstraction from an experience. Some writers treat concepts as external stimuli which a person acquires, while others treat concepts as "ideas" generated from within. In either case, a concept is "an abstract property which cuts across diverse events.... Concepts are used to organize and classify experience." (Davis, et al., 1974). Concepts are learned by differentiating between examples and non-examples (Carrol, 1964; Mechner, 1965). Prerequisite concepts are embedded in the definition of new concepts, and the new concept is derived by either an inductive or deductive approach. Practice and reinforcement solidify the learning process.

Principles are used to predict, explain, and control phenomenon by stating relationships between two or more concepts (DeCecco, 1968). Although principles can generally be converted into "if-then" statements, a principle is not simply a number of concepts linked in the same sentence. A principle states a relationship between classes of events which enables us to (1) predict consequences; (2) explain events; (3) infer causes; (4) control situations; and (5) solve problems. A principle is learned most readily when a clear objective specifies which of the five applications is to be used. Once this is established and prerequisite knowledge is derived, the principle is received (usually by being told or by demonstration), practiced as per the objective, and reinforced. Since principles are functional and enable people to do things, using a principle is reinforcing (Gagné, 1966).

Problem-solving is needed when someone encounters a situation for which no appropriate response is immediately available, and can take place only after the person has learned concepts and principles in other contexts. Problem-solving is an advanced type of learning which includes a major element of discovery. In problem-solving a person integrates previously learned knowledge into new and more complex principles (Melton, 1964; Desse and Hulse, 1967). Psychologists generally agree that the steps of problem-solving include preparing for the problem (organizing and understanding it); analyzing the problem, selecting and carrying out the plan, and testing to verify the appropriateness of the action (Davis, et al., 1974).

Students may be taught how to solve specific types of problems or they may be taught general principles and strategies of problem-solving which will transfer to problems of many different types. Davis, et al. (1974) cite four major steps in teaching students to solve specific problems: (1) state an objective; (2) pretest and review the requisites; (3) arrange conditions for learning by providing many kinds of problems, modeling the problem-solving approach, and teaching specific algorithms; (4) use procedures to provide practice. There are many rules of thumb which can be used to promote learning how to solve problems, i.e. producing more than one solution, progressive deepening; modeling; delaying choice of solution, stopping when stumped, trouble-shooting, etc. (Johnson, 1972).

The structured skills-building model, as applied to most crisis intervention training programs, adheres to eight of the nine general principles of learning as described above: meaningfulness;

prerequisites; open communication; novelty; active appropriate practice; fading; and pleasant conditions and surroundings. The one general exception is that of distributed practice. Due to the limited availability of volunteer trainer and trainee time, many crisis centers collapse the training program into a single intensive two- or three-day weekend experience, sometimes supplemented by one or two brief (two to four hours) follow-up sessions after the volunteer has worked one or more shifts in the center.

Crisis Intervention Theory

Contemporary crisis theory sees a person who is in crisis as being at a turning point. The individual is facing a problem which he cannot solve in his usual way and, as his responses continue to meet with little success, his anxiety and tensions rise. He feels confused and helpless, overwhelmed by the situation, and feels that he needs help to resolve the problem (Paul, 1971). Crisis intervention at this point offers a person help in learning how to find a workable solution.

Crisis intervention theory is a product of preceeding theories. It begins with Freud's principle of causality in psychic determinism, which states that all human behavior is a product of, or has as its source, the history and experience of the individual (Lowenstein, 1966). Hartman, Rado, and Erickson contributed work on ego psychology and adaptational dynamics, and further recognized the importance of the social environment of the individual (Rado and Daniels, 1956; Rappaport, 1959). Lindemann and Caplan then modified and applied these beginnings to their ideas on community-wide mental health and came up with an

equilibrium or homeostasis model of crisis and intervention (Lindemann, 1956). Crisis is defined by Caplan as occuring "when a person faces an obstacle to important life goals that is, for a time, insurmountable through the utilization of customary methods of problem-solving. A period of disorganization ensues, a period of upset, during which many abortive attempts at solution are made." (Caplan, 1961). After Caplan's work at the Harvard School of Public Health in the early 1960's, the crisis intervention approach became widely used in the mental health field.

Crisis intervention is based on the concept that the individual strives to maintain a homeostatic balance in his life (O'Connell, 1971). When he is faced with a situation in which his usual responses do not work, he is thrown into a condition of uncertainty or disequilibrium. His perceptions of the situation become distorted and the probability of finding an adaptive response is decreased. The state of crisis is theorized to be a time-limited event lasting one to six weeks, since the individual cannot tolerate the extreme tension of crisis and uncertainty for more than a short period of time. During this time a solution is sought and one may be chosen which leads the individual to prior, more adequate, or less adequate levels of functioning.

Crisis intervention can provide the help an individual needs to solve a personal crisis. Solving a crisis primarily involves the use of logical reasoning and five steps (Aguilera, Messick, and Farrell, 1970).

1. defining the problem
2. finding alternate solutions
3. testing the solutions
4. evaluating the results
5. redefining the problem when necessary

Transactional Analysis in a Crisis Intervention Model

Several different theoretical approaches have been used within the crisis intervention model (Aguilera , et al., 1970; Parad, 1969). Unfortunately, these theoretical positions have not, for the most part, been supported by empirical research. Transactional Analysis has been theorized to be an efficient and versatile model for crisis counseling (Samuels, Teutsch, and Everts, 1968; Paul, 1971). Brown and Griz (1973) reported a study in which non-professional crisis intervention trainers were presented a 10-hour didactic presentation of Transactional Analysis theory applied to crisis intervention, followed by a marathon TA group and, finally, six months of ongoing personal growth groups. The trainers met with an experienced TA therapist in groups of eight for weekly two-hour sessions. Trainers reported an increase in their effectiveness as trainers, and Table 4 illustrates the results of the project.

These authors indicate that

> it is important that the person in crisis be aware of and understand his feelings, and apply existing knowledge and information to the situation. TA provides the essentials that the individual and the crisis intervention agent need for successful intervention. For healthy crisis resolution, a person needs to use:

*Table 4. Results of Trainer Exposure to TA Theory and Practice

Criterion	Jan.-June 1972	July-Dec. 1972	Jan.-June 1973
Average contacts per month:	81	134	467
(Other crisis centers in the area reported a 10-30% decrease in contacts from July-Dec. '72 to Jan.-June '73)			
Average length of time with contact:	not available	57.3 mins.	40.5 mins.
Referrals to Mental Health Services:	5	8	29
Mean time before referral to other agencies: chronic callers:	not available	11.5 months	6.2 months
(Therapists follow-up reports indicate that since Jan. '73 referrals have been better prepared and more highly motivated for therapy.)			
Known suicides and/or attempts after contact with Center:	4	5	0
Trainee loss ratio (trainees who begin but do not successfully complete training):	42%	44%	18%
		(last training session--7%)	
Volunteers in therapy	5	5	28
(Consultation began in February, 1973. This project with the crisis center staff has been a rewarding and successful experience. Transactional Analysis has proven to be an effective and efficient model for the training of non-professional crisis intervention agents.)			

*from Brown and Griz (1973)

1. correct perceptions of the situation, which is furthered by seeking new knowledge and by keeping the problem in focus (Adult data input)
2. awareness of feelings and an ability to express them, which leads to a decrease in anxiety (Adult awareness of Child; catharsis)
3. development of patterns of seeking and using help with actual tasks and feelings by using interpersonal and institutional resources (Adult decision-making)

A person in a crisis situation needs to have a cathected Adult ego state before contact with the worker is ended. The communication skills which the crisis intervention agent most commonly has at his disposal include Empathic Understanding, Attitudes and Values Clarification, and Problem-Solving. Empathic Understanding means to feed the "hurt" Child ego state, permitting free expression of feelings, or catharsis. Attitudes and Values Clarification means to ferret out the Parent messages, recognize their effects on the Adapted Child, and provide this as useable data to the Adult. Problem-Solving (perhaps this should be renamed Decision-Making to emphasize the positive aspects of change) requires Adult awareness and Child energy which is available only after the "hurt" Child has been cared for (catharsis followed by support) and the Parent decommissioned (protection plus permission to change). Thus, Transactional Analysis provides a conceptual framework for integrating the various skills necessary for effective crisis intervention (Brown, 1974). (For a more complete understanding of TA terminology, see glossary of definitions at end of Chapter I.)

Crisis Center Research

Crisis intervention techniques have demonstrated effectiveness in dealing with a number of specific problem categories. Individual

counseling combined with environmental manipulation has been a successful approach to treatment with potential college dropouts. In a study by Garner (1970), 45 college freshmen who had been relatively poor achievers in high school and who were considered potential dropouts were exposed to crisis counseling (maximum 12 visits). All the counselors had at least a master's degree in counseling plus an additional 30 semester hours of study. When compared to a control group, this group of students had significantly fewer dropouts and improved academic performance.

Immediate telephone intervention has recently been recognized as a valuable method of treating suicidal persons, substance overdose and/or withdrawal, and other emergency situations requiring immediate intervention (Schneidman, Farberow, and Litman, 1970; McCarthy and Berman, 1971; McCord and Packwood, 1973). And crisis intervention has been applied to even more complex intervention needs, like family therapy (Langsley and Kaplan, 1968). Rappaport (1965) has outlined numerous case studies supporting family crisis intervention as a primary prevention technique, and Parad and Caplan (1960) have used similar case studies to propagate a contemporary theory of family therapy. Additional applications of crisis theory have been reported with management of acute grief (Lindemann, 1944; Morrissey, 1964), parenthood (Dyer, 1963; LeMasters, 1957), adolescents (Miller, 1959), and children (Klein and Ross, 1958; Irvine, 1964).

In sum, the crisis intervention approach appears to be an effective model for dealing with emotional difficulties of various

sorts. This approach has demonstrated effectiveness over a 30-year period with persons of all ages and with a wide range of presenting problems.

The Structured Skills-Building Training Model

Short-Term Training

The structured skills-building model for training crisis intervention agents in the skills of Empathic Understanding, Attitudes and Values Clarification, and Decision-Making has become commonplace. Short-term training programs have been described in detail in publications by Truax, Carkhuff, and Douds (1964) and Truax and Carkhuff (1967). The central elements in this training approach can be summarized as (a) a therapeutic context in which the supervisor communicates high levels of empathy, warmth, and genuineness to trainees; (b) a didactic use of research scales for the measurement of empathy, warmth, and genuineness for "shaping" trainees' responses; and (c) a quasi-group therapy experience designed to aid trainees to achieve an integration of the didactic training with their personal values, goals, and life-styles. Truax (1970) offers the following description of the training sequence:

> ...The scales are used to identify tape-recorded samples of experienced therapists offering very high levels of therapeutic conditions, thus providing models for imitation. It should be remembered that even the best recordings of total sessions usually provide a number of examples of precisely what not to do. Secondly, the trainees are taught the use of the scales so that they will learn to identify high and low levels of empathy, warmth, and genuineness in their own therapy and that of others. Third, empathy training, warmth training, or genuineness training, is provided by playing a tape recording of client interviews and then requiring trainees to make immediate therapeutic responses. These responses are immediately rated on the research

> scales to provide prompt feedback. As the trainee shapes his responses toward higher levels of empathy, warmth and genuineness, he begins role-playing which, in turn, is recorded, brought to class, and rated by a group of trainees on the research scales. Thus, the trainees compete among themselves in ability to communicate therapeutic conditions. Finally, they begin one-shot interviews with real clients which are again tape-recorded and brought to class for rating. In all, the complete basic training program involves less than 100 hours of training.

Truax and Lister (1971) measured the effects of this training upon accurate empathy and warmth. Twelve experienced counselors were pre-rated and placed in two groups. These counselors then engaged in an intensive 40-hour training program over a two-week period. Counselors initially high (N equals 6) and counselors initially low (N equals 6) made approximately equal gains on empathy, whereas no significant changes were made on warmth. Similar results have been obtained in numerous studies and replications cited by Carkhuff (1972). These results indicate the effectiveness of short-term training, using a structured skills-building model, for teaching basic communication skills to counselors at varying levels of functioning.

Interpersonal Process Recall (IPR)

Kagan (1972) has expanded the structured skills-building model into a systematic recall and evaluation process which implements third party intervention, audio or visual aids, and/or group feedback (IPR, or Interpersonal Process Recall). In an undated manuscript, Harris and Dendy have modified the IPR process to formulate a training model to teach crisis center volunteers the specific skills of Empathic Understanding, Attitudes and Values Clarification, and Decision-Making. This method has been widely used in the Midwest and is currently the most commonly used training model for crisis centers in the state of

Michigan. Further modification and expansion of this model by Hinds, James, Gieszer, and Jacobs (1972) has led to the publication of a handbook to be used as a training aid for crisis center volunteers. This handbook has been packaged and distributed by the Michigan Governor's Office of Drug Abuse and Alcoholism and is currently undergoing modification for national distribution by the National Institute for Mental Health.

A modified IPR model is currently being used to train volunteers at the Open Door Crisis Center, and was used to train crisis intervention agents for this study. This model is described more fully in Chapter III.

Interpersonal Communication Skills

Basic empathy skills provide the base for all three of these interpersonal skills (Empathic Understanding, Attitudes and Values Clarification, and Decision-Making) in all of the above models. The importance of empathy in counseling and psychotherapy has been espoused by counseling theorists like Rogers (1957; 1961), Bordin (1968), Tyler (1969), and Krumboltz (1966). Truax and Carkhuff (1967) have theorized a positive correlation between interpersonal skills and psychotherapy outcomes. In a study by Dickenson and Truax (1966) 24 "essentially neurotic" underachieving college freshmen were divided into three eight-member counseling groups. The groups met twice weekly over a period of 12 weeks, for a total of 24 one-hour sessions. When compared to a group of 24 matched, non-counseled control subjects, the experimental students showed significantly greater improvement in grade point average. Some of this difference, however, may be attri-

buted to a "halo" effect. Moreover, those counseled subjects who received the "highest therapeutic conditions" tended to show the greatest improvement. Level of therapeutic conditions was determined by tape recording each session, randomly selecting one four-minute segment from the middle third of each hour, and rating these segments by two independent raters for measures of Accurate Empathy (Truax, 1961), Unconditional Positive Regard (Truax, 1962), and Therapist Genuineness (Truax and Dickenson, 1964). The authors conclude that "only therapists and counselors who provide relatively high levels of accurate empathy, warmth, and genuineness are helpful." Similar results were reported for therapists working with schizophrenics (Rogers, 1962) and neurotics (Truax, 1963).

To demonstrate the appropriateness of these communication skills in a crisis center setting, Dilley, Lee, and Verrill (1971) compared the empathy scores of 15 trained and untrained counselors in a crisis center utilizing telephone intervention. Measurements were taken in three settings: face-to-face, telephone, and confessional (separated by a screen). As expected, trained counselors scored significantly higher Empathic Understanding scores than untrained counselors. Moreover, there was little difference among the ratings for the three settings used, indicating the appropriateness of interpersonal skills for telephone intervention, the intervention modality most frequently used by crisis center personnel.

In an elaborate explanation of his systematic Human Resources Development model, Carkhuff (1972) cites 27 experimental studies which

support the effectiveness of trainer interpersonal skills combined with a structured skills-building model for improving trainee functioning. Systematic Human Resources Development emphasizes two primary factors of training effectiveness: the skills with which the helpers relate to other people (interpersonal skills), and the skills which they have in their specialty area (program skills). The trainees, or helpees, are taught specific interpersonal skills via didactic presentation, demonstration, and supervised practice. These studies were conducted with professional and non-professional trainees in agencies, schools, hospitals, and correctional facilities. Many of these studies (23 of 27) involved non-professionals (parents, students, correctional officers and inmates, hospital personnel, patients, etc.) and all report significant increases in trainee effectiveness.

Anthony and Carkhuff (1970) found similar results in a study which investigated change in measures of communication and discrimination among Rehabilitation Counselor trainees. Brown and Schmidt (1973) trained 16 agency professionals using a structured Interpersonal Process Recall model and found significant improvement in trainee scores, when compared with a control group, on the Affective Sensitivity Scale (Danish and Kagan, 1971), as well as 10 sub-scales of the Personal Orientation Inventory (Shostrum, 1964): Other-Directed, Inner-Directed, Self-Actualizing Values, Feeling Reactivity, Spontaneity, Self-Regard, Self-Acceptance, Nature of Man, Acceptance of Aggression, Capacity for Intimate Contact.

Research results demonstrate the effectiveness of the structured skills-building model for teaching interpersonal communication

skills to professional and non-professional workers in a wide variety of settings. No research is available which investigates the effects of adding theory to structured skills-building models, or to counseling effectiveness in general.

Counselor Education Program

Recently, a number of different counselor education programs have stressed the integration of a combined didactic and experiential training program. Carkhuff and Truax (1965) applied such an approach to two separate but essentially identical training programs, one for advanced graduate students and the second for volunteer but otherwise unselected lay hospital personnel. Sessions lasted 16 weeks, meeting twice per week for two-hour periods. The students spent an additional two hours per week listening on their own to recorded therapy. First, the trainees were didactically taught the therapeutic conditions involved. Next, in order to obtain practice at discriminating levels of therapist and client conditions, they were exposed to tape recorded samples of counseling which had been previously rated at various levels of conditions and involvement. Then the trainees received empathy training, followed by role-playing, and finally their initial clinical interviews were recorded and rated so as to provide immediate and concrete informational feedback on how well they were learning to put into operation the concepts involved. During the last week of the training period each trainee had a single taped clinical interview with each of three hospitalized patients. Six four-minute excerpts (two from each tape) were randomly selected and rated on four variables: Accurate

Empathy, Unconditional Positive Regard, Therapist Self-Congruence, and Client Depth of Self-Exploration. Ratings from the two groups were compared with each other and with an experienced group of prominent psychotherapists. Although the results showed consistent performance in the following descending rank order: (a) experienced psychotherapists; (b) graduate students; and (c) lay personnel, there was no significant difference between experienced therapists and graduate students, nor between graduate students and lay personnel on any of the measures. The only significant difference was between experienced therapists and lay personnel on the Therapist Self-Congruence dimension. These results suggest that "in a relatively short training period, i.e. approximately 100 hours, both graduate students and lay personnel can be brought to function at levels of therapy nearly commensurate with those of experienced therapists."

Miller (1969) designed a counseling practicum program which moved trainees from non-counselor modes of behavior to more experienced counselor behavior. The 30 randomly selected trainees received didactic presentations regarding methods of intervention. Then, prior to their first counseling contact, they were exposed to different conditions: (a) no intervention; (b) practice responding to taped stimulus statements where a supervisor offered possible alternatives without a consistent model; and (c) practice responding to a tape where the supervisor offered only understanding responses as alternatives, with verbal reinforcement on a variable ratio schedule for making understanding responses. All subjects then had a "counseling session" with an actor-client, which were then rated on four variables: Understanding Response,

Topic Changes, Number of Interactions, Number of Evaluations. Those trainees who were reinforced for using understanding responses during supervision responded that way significantly more often than the other students. They also changed the topic fewer times and had less total number of interactions with their clients. Results suggest the importance of combining didactic instruction with consistent supervised practice to effect the learning of desirable counseling intervention skills.

Truax (1970) outlines a 100-hour training program for agency workers which not only involves experiential training in the form of supervised practice and structured skills-building, but emphasizes the didactic use of the rating scales themselves for training professional and non-professional counselors. The central elements and the procedural steps of this model are the same as those outlined earlier (Truax, 1970), with additional emphases being placed on periodic follow-up seminars to enhance retention of skills, and feedback from client benefits to provide unit quality control and a continuous influx of information regarding counseling effectiveness.

Blocher and Wolleat (1972) developed and implemented a two-quarter training model within a two-year program leading to a master's degree in counseling. This program consisted of six quarter-hour credits during each of the students' second and third quarters. This model again emphasized a combined didactic and experiential approach to counselor training, and added a third dimension of concurrent practical learning experiences in the form of supervised practicum. Eleven students each conducted twenty-minute video taped interviews

with a coached, actor-client on three occasions: (a) during the first week of the course; (b) during the last week of the course; and (c) eight months subsequent to completing the course. These three sets of interviews were then rated independently in random order by three pairs of trained judges on three outcome variables: Cognitive Flexibility (ability of the counselor to develop a consistent psychological framework for understanding the client and his concerns); Perceptual Sensitivity (ability of counselor to comprehend the total meaning of the client's communication); and Involvement with Client (the attitude of the counselor toward the client and the amount of counselor risk). The instrument used in making the ratings was the Burks Counselor Interview Rating Scales (CIRS). The students made significant gains (.05) during the training period on both Cognitive Flexibility and Perceptual Sensitivity, but not on Involvement with Client, the baseline for which was substantially higher than the other two. During the follow-up period, ratings increased on all three outcome variables. In the authors' words:

> ....Perhaps the most encouraging result of this evaluation was the evidence that a non-traditional training program with a combination of didactic, experiential, and practical instructional inputs contributes to substantial growth in counselor trainees. The candidates' counseling behavior not only improved considerably over the training period, but continued to change positively over the follow-up period. At the end of the evaluation, the findings lend support to those of Truax and Carkhuff, whose didactic-experiential training program has also been shown to contribute to the improvement, rather than the deterioration, of functioning on several facilitative conditions.
>
> In summary, it now appears that we can point to at least some reliable evidence that innovative counselor preparation programs which are not limited solely to the traditional didactic model have the potential to substantially improve the effectiveness of counselor trainees on several relevant dimensions.

Crisis intervention appears to be a viable treatment approach. Combined didactic and experiential training models have been effectively employed in the training of workers in a variety of settings. Whether or not the integration of didactic and experiential techniques within a consistent personality theory will provide a more effective vehicle for trainee acquisition of crisis intervention skills will be the issue upon which this author will concentrate his efforts in this study.

CHAPTER III

METHODOLOGY AND DESIGN OF THE STUDY

The purpose of this chapter is to delineate a step-by-step narrative of the methodology involved in this study. It includes a description of how the population for the study was determined, and a description of each instrument used in the study. The procedure used in the study is discussed, the research hypotheses are listed, and the methods used for statistical analyses are summarized.

Population

The population of subjects for the study consisted of the active volunteer crisis intervention agents at the Open Door Crisis Center, located at 1320 S. Washington Avenue, Lansing, Michigan. The Open Door is a three-year old non-profit corporation, staffed totally by volunteers, offering telephone and walk-in crisis abatement, referral services, and some long-term counseling. At the time of the study the center was handling an average of 500 contacts per month.

Each volunteer used as a subject for this study had successfully completed a 40-hour training program in communication and crisis intervention skills prior to the experiment. Seventeen volunteers had completed necessary additional training requirements to become a trainer of new volunteers. Furthermore, each volunteer

was working at least one four-hour shift per week, which qualified the person for "active" status at the center.

The following demographic information is provided as a description of the volunteers at the center during the time of the study. (Refer to Table 5.1, Age Distribution; Table 5.2, Length of Services; and Table 5.3, Educational Background.) A general summary statement describing the center's staff is "white, middle-class, and young."

Sample

The subjects for the study were selected as follows: First, approximately three months prior to the experiment, the project was presented to the entire staff and approved. Care was taken at this time not to spell out the specifics of the experiment in such a way as to contaminate the study. Second, approximately two months before the pre-tests, a letter was sent to each volunteer explaining more fully the purpose of the study. Included with this letter was a scheduling questionnaire, requesting volunteers to participate in the experiment and to submit a schedule for testing. Those volunteers who did not immediately respond were contacted by phone.

Two volunteers were not included in this procedure, but instead were selected to lead two of the training groups during the experiential weekend. In this manner, one of each of the different practice groups was led by a Senior Trainer who was intimately familiar with the traditional training model used at the Open Door.

Table 5.1. Distribution of Active Volunteer Crisis Intervention Agents at Open Door Crisis Center (December, 1973)

Age in Years	Male		Female		Total
	Single	Married	Single	Married	
15	1	0	1	0	2
17	0	0	1	0	1
18	0	0	1	0	1
19	0	0	1	0	1
20	3	0	2	1	6
21	3	0	5	0	8
22	3	2	2	2	9
23	0	1	2	1	4
24	3	0	1	3	7
25	1	2	3	2	8
26	2	1	0	1	4
27	1	2	1	2	6
28	1	0	0	0	1
29	0	0	2	1	3
30	1	1	1	2	5
32	0	2	0	1	3
35	0	0	0	1	1
Total	19	11	23	17	70
Mean	23.1	26.5	22.1	26.2	24.1
Median	22	25	21	24	24

Table 5.2. Length of Service in Weeks: Active Volunteer Crisis Intervention Agents at Open Door Crisis Center (December, 1973)

Length of Service in Weeks	Male		Female		Total
	Single	Married	Single	Married	
0 to 9	1	4	5	3	13
10 to 19	1	1	3	4	9
20 to 29	2	1	3	1	7
30 to 39	1	1	0	2	4
40 to 49	4	1	5	2	12
50 to 59	2	1	1	0	4
60 to 69	1	0	0	0	1
70 to 79	0	1	3	0	4
80 to 89	0	0	0	0	0
90 to 99	2	0	2	4	8
100 to 109	2	1	0	1	4
130 to 139	0	0	1	0	0
150 to 159	3	0	0	0	3
Total	19	11	23	17	70
Mean	69.7	34.0	42.4	43.8	49.0
Median	50 to 59	20 to 29	30 to 39	30 to 39	40 to 49

Table 5.3. Educational Background of Active Volunteer Crisis Intervention Agents at Open Door Crisis Center (December, 1973)

Educational Background	Male		Female		Total
	Single	Married	Single	Married	
In High School	1	0	3	0	4
In undergraduate	10	3	12	6	31
B.A. or B.S.	4	2	7	5	18
In graduate school	4	5	1	5	15
M.A. or M.S.W.	0	1	0	1	2
Total	19	11	23	17	70
Attending School	15	6	13	7	41
Not Attending School	4	5	10	10	29
Total	19	11	23	17	70

Of the remaining 68 volunteers, 56 agreed to participate in the experiment. As can be seen from Tables 6.1, 6.2, and 6.3, there were no apparent demographic differences between the population and the original sample. These 56 subjects were leveled into six groups on the basis of pre-test scores on the Transactional Analysis Cognitive Test.

Between the pre-test and the delayed post-test, five (5) subjects became "inactive" and therefore inaccessible. Tables 6.4, 6.5, and 6.6 show the demographic information for the 51 subjects completing the experiment.

Instruments

This study employed three instruments--the Affective Sensitivity Scale (Form C), Transactional Analysis (TA) Cognitive Tests (Forms 1, 2, 3), and the Skills Ability Scale (Subscales: Information, Dangerous Affect, Long-Term Stress). The Affective Sensitivity Scale is commercially available and is described as per existing reliability and validity data. The

Table 6.1 Age Distribution--Original Sample

Age in Years	Male		Female		Total
	Single	Married	Single	Married	
15	1	-	1	-	2
17	-	-	-	-	-
18	-	-	1	-	1
19	-	-	1	-	1
20	2	-	2	1	5
21	3	-	4	-	7
22	3	1	2	-	6
23	-	1	2	1	4
24	2	-	1	2	5
25	1	2	3	2	8
26	2	1	-	1	4
27	-	1	1	1	3
28	1	-	-	-	1
29	-	-	2	-	2
30	1	-	1	2	4
32	-	1	1	2	4
35	-	-	-	1	1
Total	16	7	21	12	56
Mean	22.9	25.1	22.4	26.8	23.9
Median	22	25	22	26	24

Table 6.2. Length of Service in Weeks: Original Sample

Length of Service in Weeks	Male		Female		Total
	Single	Married	Single	Married	
0 to 9	1	3	5	2	11
10 to 19	1	1	3	3	8
20 to 29	2	0	3	1	6
30 to 39	1	0	0	1	2
40 to 49	4	1	4	1	10
50 to 59	0	1	1	0	2
60 to 69	1	0	0	0	1
70 to 79	0	1	3	0	4
80 to 89	0	0	0	0	0
90 to 99	2	0	2	3	7
100 to 109	1	0	0	1	2
130 to 139	0	0	0	0	0
150 to 159	3	0	0	0	3
Total	16	7	21	12	56
Mean	69.4	29.3	37.9	45.8	47.5
Median	45	15	25	30	45

Table 6.3. Educational Background: Original Sample

Educational Background	Male		Female		Total
	Single	Married	Single	Married	
In High School	1	0	2	0	3
In undergraduate	8	2	11	6	28
B.A. or B.S.	3	1	7	4	14
In graduate school	4	3	1	1	9
M.A. or M.S.W.	0	1	0	1	2
Total	16	7	21	12	56
Attending School	13	4	11	5	33
Not Attending School	3	3	10	7	23
Total	16	7	21	12	56

Table 6.4. Age Distribution: Final Sample

Age in Years	Male		Female		
	Single	Married	Single	Married	Total
15	1	-	1	-	2
17	-	-	-	-	-
18	-	-	1	-	1
19	-	-	1	-	1
20	2	-	2	-	4
21	3	-	3	-	6
22	3	-	2	-	5
23	-	-	2	1	3
24	2	-	1	1	4
25	1	2	3	2	8
26	2	1	-	1	4
27	-	1	1	1	3
28	1	-	-	-	1
29	-	-	2	-	2
30	1	-	1	2	4
32	-	1	-	1	2
35	-	-	-	1	1
Total	16	5	20	10	51
Mean	22.9	26.7	22.5	27.8	24.1
Median	22	26	23	27	24

Table 6.5. Length of Services in Weeks: Final Sample

Length of Service in Weeks	Male		Female		Total
	Single	Married	Single	Married	
0 to 9	1	1	5	1	8
10 to 19	1	1	3	2	7
20 to 29	2	0	3	1	6
30 to 39	1	0	0	1	2
40 to 49	4	1	3	1	9
50 to 59	0	1	1	0	2
60 to 69	1	0	0	0	1
70 to 79	0	1	3	0	4
80 to 89	0	0	0	0	0
90 to 99	2	0	2	3	7
100 to 109	1	0	0	1	2
130 to 139	0	0	0	0	0
150 to 159	3	0	0	0	3
Total	16	5	20	10	51
Mean	69.4	39.0	37.6	53.0	50.7
Median	45	45	25	40	45

Table 6.6. Educational Background: Final Sample

Educational Background	Male		Female		Total
	Single	Married	Single	Married	
In High School	1	0	2	0	3
In undergraduate	8	0	10	5	23
B.A. or B.S.	3	1	7	3	13
In graduate school	4	3	1	1	9
M.A. or M.S.W.	0	1	0	1	2
Total	16	5	20	10	51
Attending School	13	4	11	4	32
Not Attending School	3	1	9	6	19
Total	16	5	20	10	51

TA Cognitive Tests and the Skills Ability Scale were developed for this experiment and are described in more detail.

An Overview of the Affective Sensitivity Scale (Form C)

Introduction and Test Development

Affective sensitivity can be conceptualized as "the ability to detect and describe the immediate affective state of another, or in terms of communication, the ability to receive and decode affective communication." (Kagan, Krathwohl, and Farquahr, 1965). The Affective Sensitivity Scale was developed to measure subjects' abilities to identify affect in this manner, thereby providing a measure of what is termed generically as empathy (Danish and Kagan, 1971).

The scale operationalizes this concept through a videotape situational test containing 66 scenes involving 11 different clients and counselors, both male and female. These scenes are taken from actual counseling sessions of clients, representing typical counseling situations which vary in emotional depth and content of client concern. Each showing of a videotaped sequence is followed by the subjects' answering of several multiple-choice paper-and-pencil items, each of which contains three responses, or foils, which define what the client may be feeling about the counselor. The subject is to choose the foil which he thinks most clearly describes the client's feelings.

The reliability of the scale has been assessed using internal consistency and test-retest coefficients. Internal consistency coefficients range between .58 and .77 with the majority of coefficents

in the .70's (Danish and Kagan, 1971). A test-retest coefficient of correlation was .75 over a two-week period (Campbell, 1967; Kagan, Krathwohl, Goldberg, Campbell, Schaubel, Greenberg, Danish, Resnikoff, Bowes, and Bondy, 1967).

Campbell, Kagan, and Krathwohl (1971) report a series of concurrent validation studies which compared scores on the Affective Sensitivity Scale with therapist and peer rankings of counseling effectiveness. The average correlation across all studies reported was .26, with rho values ranging from .42 to .17. "These concurrent validity studies suggest that a low, positive relationship exists between scale scores and judgments of counseling affectiveness."

Although the validity data for the Affective Sensitivity Scale is so low as to render its usefulness as doubtful, it was chosen for the study for two reasons: (1) it provides a standardized measure of empathy which had been used in numerous counselor preparation programs; and (2) it therefore provided a method to observe change in scores of empathy while new crisis intervention techniques were being introduced to the subjects.

Administration and Scoring

This scale was administered using computer scoring sheets according to standardized instructions. Subjects were instructed to fill in the answer sheet requests for "student number," the date, and sex of subjects. Answer sheets were computer-scored at the Office of Evaluation Services, Michigan State University.

An Overview of the Transactional Analysis (TA) Cognitive Tests (Forms 1, 2, 3)

Introduction

The TA Cognitive Tests were developed and implemented in order to provide a measure of subjects' knowledge of Transactional Analysis theory and practice. These scores were used to level groups at the onset of the experiment, as well as to measure changes in subjects' knowledge of TA throughout the study.

Each form of the test consists of 55 multiple-choice, paper-and-pencil questions, each with four foils. The subject is requested to choose the most correct answer for each question. Credit is received only when the correct answer is chosen.

Development

An initial question pool of 200 items was developed from the materials presented in a Transactional Analysis handbook. This handbook was used during the experiment to acquaint subjects with TA theory. Each item in the pool was also cross-referenced to Born to Win (James and Jongeward, 1971), a popular TA textbook. Each item consisted of a multiple-choice question with four foils, one of which provided a correct answer.

These 200 questions were then written as two tests, one of 168 items and the other of 32 items, so that they could be scored by the Office of Evaluation Services, Michigan State University. These tests were administered to two different populations in order to determine the ability of the individual items to discriminate between

individuals who were naive and those who were sophisticated in terms of TA theory and practice. The naive population was selected from one undergraduate and one graduate class at Oakland University. The members of these classes reported little or no prior knowledge of TA theory and practice, that being one reason why they had taken the class. The sophisticated population were members of Transactional Analysis Clinical Training programs who had been exposed to at least one introductory TA workshop, supplemented by individual readings and varying amounts of TA training and personal treatment. Table 7.1 illustrates the results of these administrations, indicating that the test items did discriminate between naive and sophisticated populations.

Table 7.1. Transactional Analysis Cognitive Tests: Discrimination of Items with Naive (N) and Sophisticated (S) Groups

No. of Test Items	No. of Subjects	Kuder-20 Reliability	Std. Error of Measure	Mean Score	Score Variance	Significance of Mean Diff.
168	N = 50 S = 37	0.912 0.922	5.739 4.667	82.92 125.89	374.83 279.54	p <.005
32	N = 50 S = 37	0.647 0.836	2.614 2.275	13.63 22.32	19.42 31.56	p <.005

Using the information gained from the item analysis, three tests were developed of equal length (55 items each). The following is a content validity table used to develop the three tests:

Table 7.2. Transactional Analysis Cognitive Tests: Content Validity

Subject Area	Points for Each Area		
	Form 1	Form 2	Form 3
1. Structural Analysis--ego states and content	14	14	14
2. Time Structuring--definition and ways	8	7	8
3. Strokes--definition, types, and need for	10	11	10
4. Life Positions--definitions	4	4	4
5. Transactional Analysis--types of transactions	4	4	4
6. Rackets and Stamps--definition and recognition of	6	6	6
7. Games--definition and recognition of	6	6	6
8. Scripts--definition	3	3	3

These three forms were used in the experiment as pre-, post-, and delayed post-tests, respectively. Copies of the three forms can be found in Appendix A.

Reliability Data

Reliability data was gathered from administering the various forms of the TA Cognitive Tests during the experiment. These three forms were also administered to students at Oakland University as a single final examination for a course in Transactional Analysis.

Table 7.3 illustrates the data obtained.

Table 7.3. Transactional Analysis Cognitive Tests: Reliability Data

Form Number	When Given	Kuder- 20 Reliability	Std. Error of Measure
1	Pre-test	0.78	3.00
	Post-test	0.84	2.85
	Oakland U.	0.79	2.93
2	Post-test	0.88	2.75
	Delayed Post-	0.87	2.70
	Oakland U.	0.78	2.76
3	Delayed Post-	0.84	2.90
	Oakland U.	0.82	2.89

Kuder-Richardson-20 estimates range from .78 to .88, a high reliability for a 55-item test. Furthermore, results from the tests given to the Oakland University students were used to compute test-equivalences, the correlation between individual test scores. These correlations are given in Table 7.4.

Table 7.4. Transactional Analysis Cognitive Tests: Equivalence of Forms

	Form #1	Form #2	Form #3
Form #1	1.00		
Form #2	0.67	1.00	
Form #3	0.87	0.55	1.00

As illustrated in Table 5.4, the correlations between the three forms are adequate, especially since the experiment uses only the comparisons

of Forms 2 and 3 to Form 1. Form #1 correlates with Form #2 at 0.67; and Form #1 correlates with Form #3 at 0.87.

Administration and Scoring

The tests were administered using computer scoring sheets. The person administering the tests was instructed to say:

> I am not allowed to answer any questions about the test. Please read the test instructions carefully, take the test, and return the test booklet and answer sheet to me when you are finished.
>
> Each test had the following verbal instructions.
>
> There is no time limit to this test, so take as much time as you need. There is only one correct answer for each question. You will not lose points for an incorrect answer. Please do not mark on the test booklet. Instead, mark your answers on the answer sheet, using a #2 pencil. Also, mark your experimental code number in the space for "student number," the date, your sex, and the Form # of this test.

The tests were computer-scored by the Office of Evaluation Services, Michigan State University.

An Overview of the Skills Ability Scale

Introduction

The Skills Ability Scale (SAS) was developed following the concept that calls coming into crisis centers can be sorted into categories along the dimensions of (1) the need presented by the caller; and (2) the degree of emotion present in the caller. Three categories have been identified from a history of the contacts taking place at the Open Door. These categories were used to develop three Subscales of the Skills Ability Scale, as described below:

Type I: Information. The caller makes a request for information. The information requested may be about general knowledge, or for the location of appropriate community resources. There are no indications of a strong affective component accompanying the request for information, and there are no indications that the caller will not be capable of hearing and using the information.

Type II: Dangerous Emotions. The caller is apparently overwhelmed by the affective component of the problem. There are strong indications that the caller will not be able to begin appropriate coping behavior until the affective component is brought under control.

Type III: Long-Term Stress. The caller is presenting material about some "long-term" stress. Although affective material is a crucial component, the caller is still able to employ existing coping mechanisms. The caller is usually requesting aid in clarifying the various aspects of the problem and developing alternative courses of action.

Development

Most of the contacts made at the Open Door are made via telephone, which eliminates the use of visual cues in selecting intervention strategies and skills. For this reason, audio tape was selected as the appropriate vehicle for measuring crisis intervention skills. Also, the use of audio tape would result in the development of a measurement instrument which would continue to be used by the Open Door in subsequent training programs.

Sixty (60) typical caller statements, twenty (20) for each of the three categories, were first written and then audio taped. The caller statements were written and recorded by persons experienced in crisis intervention, but who were not subjects in the experiment. The resulting sixty statements were sorted into the above categories by two groups of raters. One group was composed of three experienced crisis

intervention agents who had read the above description of the categories just prior to hearing the audio tape. The second group was composed of 22 student nurses at Lansing Community College who had just listened to a one-hour lecture on crisis intervention strategies and techniques which included a discussion of the above categories.

Caller statements receiving .80 agreement on category assignment were identified. This figure (.80) was arbitrarily chosen as one which would provide a reasonably good assurance that intention of call could be readily identified. Ten (10) caller statements from each category were selected and re-taped in random order. Each caller statement was immediately followed by a 30-second silence. This constituted the final form of the Skills Ability Tape. (See Appendix B for stimulus statements).

Administration

The Skills Ability Scale was administered to a maximum of seven subjects at a time, this upper limit being dictated by the number of tape recorders available. The following instructions were given:

> You will be listening to speaker statements on the reel-to-reel tape recorder and recording your responses on the casette recorder in front of you. To do this you will turn your recorder on and off with the switch on the microphone. It should be done this way....turn your recorder on, say 'number one,' and turn your recorder off....do that now. Fine, now you will listen to the first speaker statement, turn your recorder on, pause for a second so your casette will be ready to record, make your response, say 'number two,' turn your cassette off, and wait for the next speaker statement. There will be thirty seconds after each statement for you to make your response. Are there any questions about how you are to take this test?

After questions on the mechanics were answered, the subjects were given the following instructions:

> I cannot answer any questions about this part of the instructions, so listen carefully. You are to fantasize that the speaker statement is the first thing you hear after you answer the phone at the center. You are to make the best response you know how. We will begin now.

Scoring

A five-point scale for each category was developed, based on the existing intervention procedures adopted by the Open Door (refer to Appendix C). These procedures were based on both the theory of crisis intervention and the cumulative experience of the staff. These procedures have been established by majority vote of the staff over a two-year period.

It was determined that each scale could be made behaviorally specific. In this manner, the rater had only to determine if certain sets were present in order to arrive at the rating of the response. Furthermore, in developing the scales it was found that TA provided a ready explanation of why each procedure was adopted. However, it should be stressed that these procedures were developed prior to the introduction of TA concepts to the training model.

Reliability

During the practice sessions with the three raters it was intended to develop an inter-rater reliability of at least 0.60. However, the simplicity of the rating scales allowed for almost perfect agreement by the raters after rating 150 responses. Furthermore, Hoyt reliability for all ratings of responses of the subjects made during the pre-, post-, and delayed post-tests was computed (a total of 4,590 responses), and was found to be 0.97.

Procedure

1. Two months before the training workshop, a letter explaining the nature and purpose of the study was mailed to each active crisis intervention agent at the Open Door. This letter was accompanied by a questionnaire requesting demographic information and what times the person could be available for testing and the weekend training workshop.

2. Starting one month before the pre-test, each crisis intervention agent was contacted by telephone to verify his response to the letter and questionnaire. At this time the crisis intervention agent was again informed of the importance of the study, but was not otherwise pressured into participating in the experiment. Each person's decision was recorded and no attempt was made to determine why an individual chose not to participate. By the end of this activity, a list of the crisis intervention agents who had made the committment to participate in the study was developed.

3. Starting one month before the post-test, one two-hour session per week was held with the group leaders, for a total of eight hours. During this time the training procedures and goals were discussed and practiced until all the group leaders were able to consistently follow the same training model. All four of the leaders were attending Transactional Analysis Clinical Training Programs throughout the duration of the experiment. Two of the group leaders were certified as Senior Trainers of the Open Door. Senior Trainer certification is achieved by successfully completing 120 hours of training and then

receiving recommendation for Senior status by two observers during three consecutive trainings. This certification is maintained as long as the trainer continues to receive Senior status recommendations during subsequent trainings.

4. Due to the scheduling requirements of the subjects and limitations in equipment and space, the pre-tests were conducted over a four-day period, Monday through Thursday. The Skills Ability Scale could only be administered to seven subjects at a time, due to the requirement of each subject having to use a tape recorder. Two groups of subjects were tested each evening. The following testing schedule was followed in administering the instruments:

Group I: 7:00 P.M. to 8:00 P.M.--Affective Sensitivity Scale
8:00 P.M. to 8:45 P.M.--TA Cognitive Test; Form #1
8:45 P.M. to 9:30 P.M.--Skills Ability Scale

Group II: 7:00 P.M. to 7:45 P.M.--TA Cognitive Test; Form #1
7:45 P.M. to 8:30 P.M.--Skills Ability Scale
8:30 P.M. to 9:30 P.M.--Affective Sensitivity Scale

5. Each evening after the pre-tests were administered, the TA Cognitive Test was hand-scored. These scores were rank ordered in terms of magnitude of score. After all scores were rank ordered on Thursday evening, subjects were assigned to groups of six on the basis of magnitude of test score. Subjects were assigned to the experimental groups by random assignment from each group of TA test scores. In this manner an attempt was made to level each group in terms of knowledge about Transactional Analysis prior to the beginning of the various treatments. Subjects were notified of their assignments on Friday morning.

6. The following chart shows the six experimental groups to which the subjects were assigned. All subjects received pre-, post-, and delayed post-tests on all three measures.

<table>
<tr><td rowspan="2">Control Group</td><td rowspan="2">TA Study Group</td><td>TA Practice Group$_1$ Sr. Trainer</td><td>IPR Group$_1$ Sr. Trainer</td></tr>
<tr><td>TA Practice Group$_2$</td><td>IPR Group$_2$</td></tr>
</table>

The Control Group (CG) received no further treatment. On Friday, the subjects assigned to the Transactional Analysis Study Groups (TAS) were given a handbook covering an introduction to TA theory, and were instructed to study the handbook over the weekend until they felt comfortable with their knowledge level. Handbooks were turned into the center on the following Monday, and these subjects were instructed not to study any TA material again until the conclusion of the study.

Two Interpersonal Process Recall Groups (IPR) were established. These groups repeated the traditional training model used by the Open Door to teach communication skills to new volunteers. Subjects assigned to these groups were not given TA handbooks, the group leaders were instructed not to use TA concepts or terminology during the training, and the group members were instructed not to read or discuss material about TA for the duration of the study. The group labeled IPR_1 was led by a trainer who was an Open Door Senior Trainer, while the group leader of IPR_2 was not an Open Door Trainer.

Two Transactional Analysis Practice Groups (TAP) were established. Subjects assigned to these groups were given the same handbook

on Transactional Analysis that was given to the TAS group. The TAP groups repeated the traditional training model used by the Open Door, with TA concepts and terminology added. The TAP_1 group was led by an Open Door Senior Trainer, while TAP_2 had a group leader who was not an Open Door trainer.

7. The following is a condensation of the training given to both the IPR and the TAP groups. This model is derived from the Open Door's Training Manual for Trainers.

a. The group leader selects a subject to be a Speaker, who talks about some real concern, problem, or experience; and a subject to be a Listener, who practices the communication skills. The group leader is responsible for making sure that each subject speaks and listens five times, and that the subjects do not listen to the same speaker more than once.

b. The Speaker and Listener proceed to have an interaction that lasts from 5 to 10 minutes, and which is audio taped. During the interaction the group leader takes notes on the behavior of the Listener, rates the interaction on five performance scales (refer to Appendix E), and develops specific feedback for the Listener. The group leader is responsible for terminating the interaction.

c. The audio tape is played back while the group leader facilitates a discussion between the Listener and Speaker about the dynamics of the interaction. During this "non-directive recall" the group leader offers the Listener an opportunity for self-discovery learning through the use of "open-ended questions." During this period the group leader does not give specific instructions or comments about the appropriateness of the Listener's behavior. Generally this process lasts approximately 15 minutes, with the group leader selecting two or three points in the interaction for further inspection and discussion.

d. At the end of the non-directive recall, the group leader gives specific instructions about behaviors that the Listener should change or retain. In many cases this consists of reinforcing the information gained by the Listener during the preceding non-directive recall.

e. The Listener then summarizes the instructions given by the group leader and makes a contract on what behavioral changes the subject will be making in subsequent interactions.

f. The last step consists of providing an opportunity for "group process." During this time questions from the subjects are answered, and, if necessary, feelings of the subjects are dealt with. The objectives of the group process are to provide new information and to facilitate the subjects' maintaining an emotional set conducive to learning. At the end of group process, another interaction is begun. The average cycle takes between 25 and 30 minutes.

The training workshop for this experiment took place from 7:00 P.M. to 11:00 P.M. Friday, and from 9:00 A.M. to 6:00 P.M. Saturday, with a one-hour lunch break on Saturday. This is a total of 12 hours training, which the subjects received in addition to the 28 hours of training which they had previously received during initial volunteer training. At the end of this period the subjects were requested not to discuss the study with any other subject. Furthermore, subjects in all the groups were requested not to study TA until the conclusion of the experiment. Verbal agreement to these requests were received from all subjects.

8. Again, due to scheduling requirements of the subjects and limitations in equipment and space, the post-tests were conducted over a five-day period, Sunday through Thursday evenings. The following testing schedule was used:

Group I: 7:00 P.M. to 8:00 P.M.--Affective Sensitivity Scale
8:00 P.M. to 8:45 P.M.--TA Cognitive Test, Form #2
8:45 P.M. to 9:30 P.M.--Skills Ability Scale
9:30 P.M. to 10:15 P.M.-TA Cognitive Test, Form #1

Group II: 7:00 P.M. to 7:45 P.M.--TA Cognitive Test, Form #2
7:45 P.M. to 8:30 P.M.--Skills Ability Scale
8:30 P.M. to 9:30 P.M.--Affective Sensitivity Scale
9:30 P.M. to 10:15 P.M.-TA Cognitive Test, Form #1

At the beginning and end of the testing the subjects were reminded of their agreement not to study TA material until the end of the experiment, nor to discuss the experiment with each other.

9. Four weeks after the end of the post-tests each subject was contacted by telephone to schedule the delayed post-test. At this point it was determined that five subjects had become inactive at the Open Door, and could not be located. These subjects were deleted from the study.

10. Four weeks after the post-tests, a meeting was held for the three raters who would be used to rate the Skills Ability Scale. These three raters were also participating in the TA Clinical Training Program. During this meeting the Skills Ability Scale was discussed, and the tapes generated by the five subjects who had dropped out of the experiment were used to develop a high degree of agreement on rating responses.

11. Five weeks after the conclusion of the post-tests, the delayed post-tests were administered to the subjects. Again the testing was spread over a five-day period, Sunday through Thursday evenings. The following testing schedule was used:

Group I: 7:00 P.M. to 8:00 P.M.--Affective Sensitivity Scale
8:00 P.M. to 8:45 P.M.--TA Cognitive Test, Form #3
8:45 P.M. to 9:30 P.M.--Skills Ability Scale
9:30 P.M. to 10:15 P.M.-TA Cognitive Test, Form #2

Group II: 7:00 P.M. to 7:45 P.M.--TA Cognitive Test, Form #3
7:45 P.M. to 8:30 P.M.--Skills Ability Scale
8:30 P.M. to 9:30 P.M.--Affective Sensitivity Scale
9:30 P.M. to 10:15 P.M.-TA Cognitive Test, Form #2

12. Immediately after the conclusion of the delayed post-tests, the individual responses to the Skills Ability Scale were re-recorded from cassette to 7" reel tape in random order. In this manner, the raters were kept from knowing which test the recorded responses were from. The SAS responses were rated simultaneously by the three raters. However, precautions were taken to prevent discussion of the responses, once the rating had begun. Raters were instructed not to communicate their responses to each other, and the rating was monitored by a proctor.

13. Once all the data had been compiled in raw form, i.e. computerized answer sheets, the subjects were thanked for their cooperation with a party. During the party, questions about the experiment were answered.

Hypotheses

The primary questions toward which this study was directed were:

(1) Will the addition of the Transactional Analysis theory of personality structure and its implications for crisis intervention to the current training model result in improvement in trainees' abilities to select and emit effective crisis intervention strategies, as defined by measures on the instruments used in this study?

(2) Will supervised practice in Transactional Analysis theory and practice result in improvement in trainees' abilities to select and emit effective crisis intervention strategies, as defined by measures on the instruments used in this study?

(3) Will improvements in these abilities be maintained over time?

The following general trends were predicted:

(1) Subjects assigned to the TA Practice groups, given new cognitive information in addition to receiving supervised practice in the application of this information, will improve and retain scores on all three measures to a higher degree than will subjects assigned to any of the other groups;

(2) Subjects assigned to the TA Study group, given new cognitive information, will improve and retain scores on the TA Cognitive Tests and the Skills Ability Scale to a higher degree than will subjects assigned to the Interpersonal Process Recall (IPR) or control groups; and

(3) Subjects assigned to the Interpersonal Process Recall (IPR) groups, given additional supervised practice in communication skills, will improve and retain scores on the Affective Sensitivity Scale to a higher degree than will subjects assigned to the TA Study (TAS) or control groups.

In sum, the following order of performance for improvement and retention of scores was predicted:

TA Cognitive Tests:	TAP > TAS > IPR = Control
Skills Ability Scale:	TAP > TAS > IPR > Control
Affective Sensitivity Scale:	TAP > IPR > TAS > Control

To answer the primary questions toward which this study was directed, the following research hypotheses were tested:

Hypothesis 1: Subjects assigned to the control group (CG) and to the IPR groups will not demonstrate a significant improvement in scores on the TA Cognitive Tests.

Hypothesis 2: Subjects assigned to the TAS group will demonstrate significantly greater improvement in scores on the TA Cognitive Tests, when compared with subjects assigned to the control group.

Hypothesis 3: Subjects assigned to the TAS group will demonstrate significantly greater improvement in scores on the TA Cognitive Tests, when compared with subjects assigned to the IPR groups.

Hypothesis 4: Subjects assigned to the TAP groups will demonstrate significantly greater improvement in scores on the TA Cognitive Tests, when compared with subjects assigned to the control group.

Hypothesis 5: Subjects assigned to the TAP groups will demonstrate significantly greater improvement in scores on the TA Cognitive Tests, when compared with subjects assigned to the IPR group.

Hypothesis 6: Subjects assigned to the TAP group will demonstrate significantly greater improvement in scores on the TA Cognitive Tests, when compared with subjects assigned to the TAS group.

Hypothesis 7: Subjects assigned to the TAS group will demonstrate a significantly greater retention of scores on the TA Cognitive Tests, when compared with subjects assigned to the control group.

Hypothesis 8: Subjects assigned to the TAS group will demonstrate a significantly greater retention of scores on the TA Cognitive Tests, when compared with subjects assigned to the IPR groups.

Hypothesis 9: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the TA Cognitive Tests, when compared with subjects assigned to the control group.

Hypothesis 10: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the TA Cognitive Tests, when compared with subjects assigned to the IPR groups.

Hypothesis 11: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the TA Cognitive Tests, when compared with subjects assigned to the TAS group.

Hypothesis 12: Subjects assigned to the TAS group will demonstrate a significantly greater improvement in scores on the Skills Ability Scale, when compared with subjects assigned to the control group.

Hypothesis 13: Subjects assigned to the TAS group will demonstrate a significantly greater improvement in scores on the Skills Ability Scale, when compared with subjects assigned to the IPR group.

Hypothesis 14: Subjects assigned to the TAP groups will demonstrate a significantly greater improvement in scores on the Skills Ability Scale, when compared with subjects assigned to the control group.

Hypothesis 15: Subjects assigned to the TAP groups will demonstrate a significantly greater improvement in scores on the Skills Ability Scale, when compared with subjects assigned to the IPR groups.

Hypothesis 16: Subjects assigned to the TAP groups will demonstrate a significantly greater improvement in scores on the Skills Ability Scale, when compared with subjects assigned to the TAS group.

Hypothesis 17: Subjects assigned to the IPR groups will demonstrate a significantly greater improvement in scores on the Skills Ability Scale, when compared with subjects assigned to the control group.

Hypothesis 18: Subjects assigned to the TAS group will demonstrate a significantly greater retention of scores on the Skills Ability Scale, when compared with subjects assigned to the control group.

Hypothesis 19: Subjects assigned to the TAS group will demonstrate a significantly greater retention of scores on the Skills Ability Scale, when compared with subjects assigned to the IPR groups.

Hypothesis 20: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the Skills Ability Scale, when compared with subjects assigned to the control group.

Hypothesis 21: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the Skills Ability Scale, when compared with subjects assigned to the IPR groups.

Hypothesis 22: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the Skills Ability Scale, when compared with subjects assigned to the TAS group.

Hypothesis 23: Subjects assigned to the IPR groups will demonstrate a significantly greater retention of scores on the Skills Ability Scale, when compared with subjects assigned to the control group.

Hypothesis 24: Subjects assigned to the TAS groups will demonstrate a significantly greater improvement in scores on the Affective Sensitivity Scale, when compared with subjects assigned to the control group.

Hypothesis 25: Subjects assigned to the IPR groups will demonstrate a significantly greater improvement in scores on the Affective Sensitivity Scale, when compared with subjects assigned to the control group.

Hypothesis 26: Subjects assigned to the IPR groups will demonstrate a significantly greater improvement in scores on the Affective Sensitivity Scale, when compared with subjects assigned to the TAS group.

Hypothesis 27: Subjects assigned to the TAP groups will demonstrate a significantly greater improvement in scores on the Affective Sensitivity Scale, when compared with subjects assigned to the control group.

Hypothesis 28: Subjects assigned to the TAP groups will demonstrate a significantly greater improvement in scores on the Affective Sensitivity Scale, when compared with subjects assigned to the TAS group.

Hypothesis 29: Subjects assigned to the TAP groups will demonstrate a significantly greater improvement in scores on the Affective Sensitivity Scale, when compared with subjects assigned to the IPR groups.

Hypothesis 30: Subjects assigned to the TAS group will demonstrate a significantly greater retention of scores on the Affective Sensitivity Scale, when compared with subjects assigned to the control group.

Hypothesis 31: Subjects assigned to the IPR groups will demonstrate a significantly greater retention of scores on the Affective Sensitivity Scale, when compared with subjects assigned to the control group.

Hypothesis 32: Subjects assigned to the IPR groups will demonstrate a significantly greater retention of scores on the Affective Sensitivity Scale, when compared with subjects assigned to the TAS group.

Hypothesis 33: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the Affective Sensitivity Scale, when compared with subjects assigned to the control group.

Hypothesis 34: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the Affective Sensitivity Scale, when compared with subjects assigned to the TAS group.

Hypothesis 35: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the Affective Sensitivity Scale, when compared with subjects assigned to the IPR groups.

Analysis of the Data

The 6500 CDC computer at the Michigan State University computer center was used to process the data and perform the following statistical analyses:

A repeated measures analysis of variance was performed for each subscale of each instrument, yielding five (5) separate analyses: (1) TA Cognitive Tests; (2) Affective Sensitivity Scale; (3) Skills Ability Scale: Information; (4) Skills Ability Scale: Dangerous Emotions; and (5) Skills Ability Scale: Long-Term Stress. The results of these analyses are found in Chapter IV;

The Scheffé method of multiple comparisons was performed to test the significance of differences between specific group means, the results of which are also found in Chapter IV.

Due to the exploratory nature of the study, the .10 level of significance was established as the critical level for accepting or rejecting differences.

CHAPTER IV

ANALYSIS OF THE DATA

The purpose of this study was to investigate the effects of adding a unifying theory of personality structure and change, Transactional Analysis (TA), to a structured skills-building model for teaching crisis intervention skills. This chapter presents the statistical analysis of the data in order to examine the hypotheses stated in Chapter III.

To implement this study, 51 volunteer crisis intervention agents were selected and assigned to six groups--one control group, one Transactional Analysis study group, two Interpersonal Process Recall (IPR) groups, and two Transactional Analysis practice groups. (Review the selected population, p. 33, the sample, p. 34, and assignment chart, p. 54, for a detailed description of the population and sample.) These subjects received pre-, immediate post-, and delayed post-tests on five measures: (1) Transactional Analysis Cognitive Tests; (2) Skills Ability Scale: Information; (3) Skills Ability Scale: Dangerous Emotions; (4) Skills Ability Scale: Long-Term Stress; and (5) Affective Sensitivity Scale.

Organization of the Analysis of the Data

To facilitate the investigative process, 35 separate

hypotheses were generated under six general assumptions. The six assumptions represent predictions of improvement in and retention of scores on three instruments. Five separate analyses of variance procedures were performed to test for main effects. The Scheffé method of multiple comparisons was used to test the hypotheses. The .10 level of significance was established as the critical level for accepting or rejecting differences. Data will be presented in the following order:

(1) Transactional Analysis Cognitive Tests
    a. Improvement in scores
    b. Retention of scores
(2) Skills Ability Scale
    a. Improvement in scores
    b. Retention of scores
(3) Affective Sensitivity Scale
    a. Improvement in scores
    b. Retention of scores

Each section will begin with a table which presents the number of subjects, mean score, sum of scores, and sum of squared scores for each group on the three administrations of the instrument. This will be followed by a table presenting the analysis of variance results, a statement of the general assumption and related hypotheses, and, finally, the results of the Scheffé comparisons. The analysis of variance procedure is robust to the slight variations in cell sizes; therefore, no correction factor was used or reported. The interaction

effects of Tests x Groups will be discussed in full along with the Scheffé tables. The two TA Practice groups (TAP) and the two Interpersonal Process Recall groups (IPR) were each collapsed into a single group for the Scheffé comparisons. This procedure yielded a slightly more conservative measure than would be reported if they had not been collapsed, enhancing test integrity.

Transactional Analysis Cognitive Tests

The number of subjects, mean score, sum of scores, and sum of squared scores for each group on the three administrations of the Transactional Analysis Cognitive Tests are presented in Table 8.1

Table 8.1. Transactional Analysis Cognitive Tests: Number of Subjects, Mean Score, Sum of Scores, and Sum of Squared Scores

		Pre-test			Post-test			Delayed Post-test		
Group	n	$\bar{X}$	ΣX	ΣX^2	$\bar{X}$	ΣX	ΣX^2	$\bar{X}$	ΣX	ΣX^2
CG	8	28.500	228	6,728	29.375	235	7,157	28.000	224	6,538
TAS	10	27.400	274	7,696	41.500	415	17,281	38.300	383	14,825
IPR_1	8	29.000	232	7,302	31.000	248	8,372	30.500	244	7,838
IPR_2	8	31.625	253	8,225	33.250	266	8,952	34.125	273	9,479
TAP^2	9	30,000	270	8,280	43.444	391	17,049	41.111	370	15,326
TAP^1_2	8	28,750	230	6,684	42.375	339	14,427	41.000	328	13,681
Total	51	29.157	1,487	44,915	37.137	1,894	73,238	35.725	1,822	67,687

A repeated measures analysis of variance test was performed to test for differences across test means (blocks) and across group means (treatments). The results of this test are presented in Table 8.2. As Table 8.2 illustrates, a significant difference exists across both test and group means, and a significant Tests x Groups Interaction.

Table 8.2. Transactional Analysis Cognitive Tests: Repeated Measures Analysis of Variance Results

Source of Variance	Sum of Squares	d.f.	Mean Square	F	Signi-ficance
Groups	1,906.469	5	381.294	5.203	.0008
S: Groups	3,297.857	45	73.286		
Tests	1,850.052	2	925.026	125.427	.0001
Tests x Groups	1,122.286	10	112.286	15.225	.0001
Tests x S: Groups	663.754	90	7.375		
Total	8,840.993	152			

Improvement in Scores

Assumption: Significant differences in improvement in scores on the TA Cognitive Tests will be found between each pair of groups in the following direction.

TAP > TAS > IPR = Control

Hypothesis 1: Subjects assigned to the control group (CG) and to the IPR groups will not demonstrate any improvement in scores on the TA Cognitive Tests.

Hypothesis 2: Subjects assigned to the TAS group will demonstrate significantly greater improvement in scores on the TA Cognitive Tests, when compared with subjects assigned to the control group.

Hypothesis 3: Subjects assigned to the TAS group will demonstrate significantly greater improvement in scores on the TA Cognitive Tests, when compared with subjects assigned to the IPR groups.

Hypothesis 4: Subjects assigned to the TAP groups will demonstrate significantly greater improvement in scores on the TA Cognitive Tests, when compared with subjects assigned to the control group.

Hypothesis 5: Subjects assigned to the TAP groups will demonstrate significantly greater improvement in scores on the TA Cognitive Tests, when compared with subjects assigned to the IPR groups.

Hypothesis 6: Subjects assigned to the TAP groups will demonstrate significantly greater improvement in scores on the TA Cognitive Tests, when compared with subjects assigned to the TAS group.

The Scheffé method of multiple comparisons was used to test the research hypotheses. Table 8.3 presents the results of these analyses.

Table 8.3. Transactional Analysis Cognitive Tests: Improvement in Test Scores by Scheffé Multiple Comparison Test for all Treatment Groups and all Pair-Wise Comparisons of Treatment Groups--Transactional Analysis Practice (TAP); Transactional Analysis Study (TAS); Interpersonal Process Recall (IPR); and Control (CG)

Contrast	Mean Square	Sample Statistic	Ratio of Sample Statistic to Expected Mean Square	Significant
CG	4.2804	0.880	0.2056	
TAS	3.8285	14.100	3.6829	*
TAP	2.9414	13.535	4.6016	*
IPR	3.0267	1.810	0.5980	
TAP-CG	1.6475	12.655	7.6811	*
TAP-IPR	1.3389	11.725	8.7575	*
TAP-TAS	1.5316	0.565	0.3689	
TAS-CG	1.8217	13.220	7.2568	*
TAS-IPR	1.5482	12.290	7.9383	*
IPR-CG	1.6630	0.930	0.5592	

As illustrated in Table 8.3, significant differences exist between pre- and post-test results of subjects assigned to the TA Practice and TA Study groups. Significant differences in improvement of scores exists: (1) between subjects assigned to the TA Practice groups and those assigned to the control group (TAP-CG): (2) between subjects assigned to the TA Practice groups and those assigned to the IPR groups (TAP-IPR): (3) between subjects assigned to the TA Study group and those

assigned to the control group (TAS-CG); and (4) between subjects assigned to the TA Study group and those assigned to the IPR groups (TAS-IPR). No significant differences exist between pre- and post-test scores of subjects assigned to the IPR or control groups, nor do any significant differences exist: (1) between subjects assigned to the TA Practice groups and those assigned to the TA Study group; nor (2) between subjects assigned to the IPR groups and those assigned to the control group.

Retention of Scores

Assumption: Significant differences in retention of scores on the TA Cognitive Tests, when compared with subjects assigned to the control group.

TAP > TAS > IPR = Control

Hypothesis 7: Subjects assigned to the TAS group will demonstrate a significantly greater retention of scores on the TA Cognitive Tests, when compared with subjects assigned to the control group.

Hypothesis 8: Subjects assigned to the TAS group will demonstrate a significantly greater retention of scores on the TA Cognitive Tests, when compared with subjects assigned to the IPR groups.

Hypothesis 9: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the TA Cognitive Tests, when compared with subjects assigned to the control group.

Hypothesis 10: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the TA Cognitive Tests, when compared with subjects assigned to the IPR groups.

Hypothesis 11: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the TA Cognitive Tests, when compared with subjects assigned to the TAS group.

Again, the Scheffé method of multiple comparisons was used to test the research hypotheses. The results of these analyses are presented in Table 8.4.

Table 8.4. Transactional Analysis Cognitive Tests: Retention of Test Scores by Scheffé Multiple Comparison Test for all Treatment Groups and all Pair-Wise Comparisons of Treatment Groups--Transactional Analysis Practice (TAP), Transactional Analysis Study (TAS), Interpersonal Process Recall (IPR), and Control (CG)

Contrast	Mean Square	Sample Statistic	Ratio of Sample Statistic to Expected Mean Square	Significant
CG	4.2804	-0.500	0.1168	
TAS	3.8285	10.900	2.8471	*
TAP	2.9414	11.680	3.9709	*
IPR	3.0267	2.000	0.6608	
TAP-CG	1.6475	12.180	7.3928	*
TAP-IPR	1.3389	9.680	7.2301	*
TAP-TAS	1.5316	0.780	0.5093	
TAS-CG	1.8217	11.400	6.2577	*
TAS-IPR	1.5482	8.900	5.7487	*
IPR-CG	1.6630	2.500	1.5033	

As illustrated in Table 8.4, significant retention of scores exists for subjects assigned to the TA Practice and TA Study groups. Significant differences in retention of scores exists: (1) between subjects assigned to the TA Practice groups and those assigned to the control group (TAP-CG); (2) between subjects assigned to the TA Practice groups and those assigned to the IPR groups (TAP-IPR); (3) between subjects assigned to the TA Study group and those assigned to the control group (TAS-CG); and (4) between subjects assigned to the TA Study group

and those assigned to the IPR groups (TAS-IPR). No significant differences exist: (1) between subjects assigned to the TA Practice groups and those assigned to the TA Study group; nor (2) between subjects assigned to the IPR groups and those assigned to the control group.

Summary

Hypotheses #1, #2, #3, #4, #5, #7, #8, #9, and #10 are accepted. Hypotheses #6 and #11 are not accepted. Subjects assigned to each of the TA Practice and TA Study groups demonstrated significantly greater improvement and retention of scores than subjects assigned to either the IPR or control group. There are no significant differences between subjects assigned to the TA Practice group and those assigned to the TA Study group, nor between subjects assigned to the IPR groups and those assigned to the control group. (Refer to Table 11--Summary of Hypotheses and Significant Differences, p. 91.)

Skills Ability Scale Results

Since the Skills Ability Scale is designed to yield three subscale scores, rather than a single global score, these subscales will be examined separately. The number of subjects, mean score, sum of scores, and sum of squared scores for each group on the three administrations of each of the three subscales are presented in Tables 9.1, 9.2, and 9.3, respectively. A repeated measures analysis of variance test was performed on each subscale to test for differences across test means (blocks) and across group means (treatments). The results of these tests are presented in Tables 9.4, 9.5, and 9.6, respectively.

Table 9.1. Skills Ability Scale: Information: Number of Subjects, Mean Score, Sum of Scores, and Sum of Squared Scores

		Pre-test			Post-test			Delayed Post-test		
Group	n	$\overline{X}$	ΣX	ΣX^2	$\overline{X}$	ΣX	ΣX^2	$\overline{X}$	ΣX	ΣX^2
CG	8	27.250	218	6,076	26.875	215	5,889	28.125	225	6,445
TAS	10	21.900	219	4,967	28.700	287	8,319	29.300	293	8,733
IPR_1	8	24.000	192	4,658	28.250	226	6,484	27.250	218	6,014
IPR_2	8	24.125	193	4,705	31.000	248	7,816	30.375	243	7,539
TAP^2	9	23.000	207	4,789	34.111	307	10,517	35.556	320	11,548
TAP_2^1	8	23.000	184	4,266	34.000	272	9,284	32.500	260	8,504
Total	51	23.784	1,213	29,461	30.490	1,555	48,309	30.569	1,559	48,783

Table 9.2. Skills Ability Scale: Dangerous Emotions: Number of Subjects, Mean Score, Sum of Scores, and Sum of Squared Scores

		Pre-Test			Post-Test			Delayed Post-test		
Group		$\overline{X}$	ΣX	ΣX^2	$\overline{X}$	ΣX	ΣX^2	$\overline{X}$	ΣX	ΣX^2
CG	8	15.000	120	1,858	14.500	116	1,710	14.750	118	1,850
TAS	10	12.700	127	1,675	17.700	177	3,171	15,000	150	2,362
IPR_1	8	14.500	116	1,720	15.375	123	1,905	16.000	128	2,096
IPR_2	8	14.625	117	1,787	16.375	131	2,229	15.625	125	2,129
TAP^2	9	15.222	137	2,153	20.889	188	4,045	21.556	194	4,426
TAP_2	8	14.250	114	1,772	20.875	167	3,521	20.125	161	3,251
Total	51	14.333	731	10,965	17,686	902	16,581	17.176	876	16,114

Table 9.3. Skills Ability Scale: Long-Term Stress: Number of Subjects, Mean Score, Sum of Scores, and Sum of Squared Scores

		Pre-test			Post-test			Delayed Post-test		
Group	n	$\bar{X}$	ΣX	ΣX^2	$\bar{X}$	ΣX	ΣX^2	$\bar{X}$	ΣX	ΣX^2
CG	8	22.625	181	4,160	23.000	184	4,382	22.750	182	4,206
TAS	10	18.600	186	3,514	22.300	223	5,059	21.900	219	4,820
IPR_1	8	19.250	154	2,984	21.000	168	3,538	21.000	168	3,556
IPR_2	8	21.250	170	3,720	21.125	169	3,589	21.875	175	3,855
TAP^2_1	9	19.778	178	3,592	29.889	269	8,147	30.333	273	8,527
TAP_2	8	20.375	163	3,551	29.000	232	6,770	27.500	220	6,138
Total	51	20.235	1,032	21,521	24.412	1,245	31,475	24.255	1,237	31,111

Table 9.4. Skills Ability Scale: Information: Repeated Measures Analysis of Variance Results

Source of Variance	Sum of Squares	d.f.	Mean Square	F	Signi-ficance
Groups	418.115	5	83.623	3.414	.0107
S: Groups	1,102.133	45	24.492		
Tests	1,547.033	2	773.516	118.581	.0001
Tests x Groups	526.556	10	52.656	8.072	.0001
Tests x S: Groups	587.078	90	6.523		
Total	4,180.915	152			

Table 9.5. Skills Ability Scale: Dangerous Emotions: Repeated Measures Analysis of Variance Results

Source of Variance	Sum of Squares	d.f.	Mean Square	F	Significance
Groups	473.296	5	94.659	5.383	.0006
S: Groups	791.383	45	17.586		
Tests	332.954	2	166.477	26.578	.0001
Tests x Groups	243.312	10	24.331	3.884	.0001
Tests x S: Groups	563.733	90	6.264		
Total	2,404.678	152			

Table 9.6. Skills Ability Scale: Long-Term Stress: Repeated Measures Analysis of Variance Results

Source of Variance	Sum of Squares	d.f.	Mean Square	F	Significance
Groups	877.720	5	175.544	7.736	.0001
S: Groups	1,021.117	45	22.691		
Tests	571.621	2	285.810	49.780	.0001
Tests x Groups	511.651	10	51.165	8.912	.0001
Tests x S: Groups	516.728	90	5.741		
Total	3,498.837	152			

As illustrated in Tables 9.4, 9.5, and 9.6, significant differences exist across test and group means on each of the three subscales. There is also a significant Tests x Groups interaction for each subscale.

Improvement in Scores

Assumption: Significant differences in improvement of scores on the Skills Ability Scale will be found between each pair of groups in the following direction:

TAP > TAS > IPR > Control

Hypothesis 12: Subjects assigned to the TAS group will demonstrate a significantly greater improvement in scores on the Skills Ability Scale, when compared with subjects assigned to the control group.

Hypothesis 13: Subjects assigned to the TAS group will demonstrate a significantly greater improvement in scores on the Skills Ability Scale, when compared with subjects assigned to the IPR groups.

Hypothesis 14: Subjects assigned to the TAP groups will demonstrate a significantly greater improvement in scores on the Skills Ability Scale, when compared with subjects assigned to the control group.

Hypothesis 15: Subjects assigned to the TAP groups will demonstrate a significantly greater improvement in scores on the Skills Ability Scale, when compared with subjects assigned to the IPR groups.

Hypothesis 16: Subjects assigned to the TAP groups will demonstrate a significantly greater improvement in scores on the Skills Ability Scale, when compared with subjects assigned to the TAS group.

Hypothesis 17: Subjects assigned to the IPR groups will demonstrate a significantly greater improvement in scores on the Skills Ability Scale, when compared with subjects assigned to the control group.

Again, the Scheffé method of multiple comparisons was used to test the research hypotheses. Tables 9.7, 9.8 and 9.9 present the results of these analyses for each of the subscales. To facilitate examination,

these subscales will be reported one at a time.

Skills Ability Scale: Type I: Information: As illustrated in Table 9.7, significant differences exist between pre- and post-test results of subjects assigned to the TA Practice and IPR groups. Significant differences in improvement of scores exist: (1) between subjects assigned to the TA Practice groups and those assigned to the control group (TAP-CG); (2) between subjects assigned to the TA Study group and those assigned to the control group (TAS-CG); (3) between subjects assigned to the TA Practice groups and those assigned to the IPR groups (TAP-IPR); and (4) between subjects assigned to the IPR groups and those assigned to the control group (IPR-CG).

Skills Ability Scale: Type II: Dangerous Emotions: As illustrated in Table 9.8, significant differences exist between pre-and post-test results of subjects assigned to the TA Practice and TA Study groups. Significant differences in improvement of scores exist: (1) between subjects assigned to the TA Practice groups and those assigned to the control group (TAP-CG); and (2) between subjects assigned to the TA Practice groups and those assigned to the IPR groups (TAP-IPR); and (3) between subjects assigned to the TA Study group and those assigned to the control group (TAS-CG).

Skills Ability Scale: Type III: Long-Term Stress: As illustrated in Table 9.9, significant differences exist between pre- and post-test scores of subjects assigned to the TA Practice groups. Significant differences in improvement of scores exist: (1) between subjects assigned to the TA Practice group and those assigned to the control group (TAP-CG);

(2) between subjects assigned to the TA Practice groups and those assigned to the IPR groups (TAP-IPR); and (3) between subjects assigned to the TA Practice groups and those assigned to the TA Study groups (TAP-TAS). No other significant differences were discovered.

Table 9.7. Skills Ability Scale: Information: Improvement in Test Scores by Scheffé Multiple Comparison Test for all Treatment Groups and all Pair-Wise Comparisons of Treatment Groups--Transactional Analysis Practice (TAP), Transactional Analysis Study (TAS), Interpersonal Process Recall (IPR), and Control (CG)

Contrast	Mean Square	Sample Statistic	Ratio of Sample Statistic to Expected Mean Square	Significant
CG	2.4745	-0.370	0.1495	
TAS	2.2132	6.800	3.0724	
TAP	1.7004	11.055	6.5013	*
IPR	1.7497	5.560	3.1770	*
TAP-CG	1.5495	11.425	7.3735	*
TAP-IPR	1.2591	5.495	4.3641	*
TAP-TAS	1.4404	4.255	2.9541	
TAS-CG	1.7133	7.170	4.1849	*
TAS-IPR	1.4560	1.240	0.8516	
IPR-CG	1.5640	5.930	3.7915	*

Table 9.8. Skills Ability Scale: Dangerous Emotions: Improvement in Test Scores by Scheffé Multiple Comparison Test for all Treatment Groups and all Pair-Wise Comparisons of Treatment Groups--Transactional Analysis Practice (TAP), Transactional Analysis Study (TAS), Interpersonal Process Recall (IPR), and Control (CG)

Contrast	Mean Square	Sample Statistic	Ratio of Sample Statistic to Expected Mean Square	Signi-ficant
CG	2.0968	-0.500	0.2385	
TAS	1.8754	5.000	2.6661	
TAP	1.4409	6.150	4.2682	*
IPR	1.4826	1.315	0.8869	
TAP-CG	1.5184	6.650	4.3796	*
TAP-IPR	1.2339	4.835	3.9185	*
TAP-TAS	1.4115	1.150	0.8147	
TAS-CG	1.6789	5.500	3.2759	*
TAS-IPR	1.4268	3.685	2.5827	
IPR-CG	1.5326	1.815	1.1842	

Table 9.9. Skills Ability Scale: Long-Term Stress: Improvement in Test Scores by Scheffé Multiple Comparison Test for all Treatment Groups and all Pair-Wise Comparisons of Treatment Groups--Transactional Analysis Practice (TAP), Transactional Analysis Study (TAS), Interpersonal Process Recall (IPR), and Control (CG)

Contrast	Mean Square	Sample Statistic	Ratio of Sample Statistic to Expected Mean Square	Significant
CG	2.3818	0.370	0.1553	
TAS	2.1303	3.700	1.7368	
TAP	1.6367	9.365	5.7219	*
IPR	1.6842	0.815	0.4839	
TAP-CG	1.4536	8.995	6.1880	*
TAP-IPR	1.1813	8.550	7.2380	*
TAP-TAS	1.3513	5.665	4.1923	*
TAS-CG	1.6073	3.330	2.0718	
TAS-IPR	1.3660	2.885	2.1121	
IPR-CG	1.4673	0.445	0.3033	

Retention of Scores

Assumption: Significant differences in retention of scores on the Skills Ability Scale will be found between each pair of groups in the following direction:

TAP > TAS > IPR > Control

Hypothesis 18: Subjects assigned to the TAS group will demonstrate a significantly greater retention of scores on the Skills Ability Scale, when compared with subjects assigned to the control group.

Hypothesis 19: Subjects assigned to the TAS group will demonstrate a significantly greater retention of scores on the Skills Ability Scale, when compared with subjects assigned to the IPR groups.

Hypothesis 20: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the Skills Ability Scale, when compared with subjects assigned to the control group.

Hypothesis 21: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the Skills Ability Scale, when compared with subjects assigned to the IPR groups.

Hypothesis 22: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the Skills Ability Scale, when compared with subjects assigned to the TAS group.

Hypothesis 23: Subjects assigned to the IPR groups will demonstrate a significantly greater retention of scores on the Skills Ability Scale, when compared with subjects assigned to the control group.

Again, the Scheffé method of multiple comparisons was used to test the research hypotheses. The results of these analyses are presented in Tables 9.10, 9.11, and 9.12 (one for each subscale). To facilitate examination, these subscales will be reported one at a time.

Table 9.10. Skills Ability Scale: Information: Retention of Test Scores by Scheffé Multiple Comparison Test for all Treatment Groups and all Pair-Wise Comparisons of Treatment Groups--Transactional Analysis Practice (TAP), Transactional Analysis Study (TAS), Interpersonal Process Recall (IPR), and Control (CG)

Contrast	Mean Square	Sample Statistic	Ratio of Sample Statistic to Expected Mean Square	Significant
CG	2.4745	0.880	0.3556	
TAS	2.2132	7.400	3.3435	*
TAP	1.7004	11.030	6.4866	*
IPR	1.7497	4.750	2.7147	
TAP-CG	1.5495	10.150	6.5507	*
TAP-IPR	1.2591	6.280	4.9875	*
TAP-TAS	1.4404	3.630	2.5202	
TAS-CG	1.7133	6.520	3.8056	*
TAS-IPR	1.4560	2.650	1.8200	
IPR-CG	1.5640	3.870	2.4744	

Table 9.11. Skills Ability Scale: Dangerous Emotions: Retention of Test Scores by Scheffé Multiple Comparison Test for all Treatment Groups and all Pair-Wise Comparisons of Treatment Groups--Transactional Analysis Practice (TAP), Transactional Analysis Study (TAS), Interpersonal Process Recall (IPR), and Control (CG)

Contrast	Mean Square	Sample Statistic	Ratio of Sample Statistic to Expected Mean Square	Significant
CG	2.0968	-0.250	0.1192	
TAS	1.8754	2.300	1.2264	
TAP	1.4409	6.110	4.2405	*
IPR	1.4826	1.250	0.8431	
TAP-CG	1.5184	6.360	4.1887	*
TAP-IPR	1.2339	4.860	3.9387	*
TAP-TAS	1.4115	3.810	2.6993	
TAS-CG	1.6789	2.550	1.5188	
TAS-IPR	1.4268	1.050	0.7359	
IPR-CG	1.5326	1.500	0.9787	

Table 9.12. Skills Ability Scale: Long-Term Stress: Retention of Test Scores by Scheffé Multiple Comparison Test for all Treatment Groups and all Pair-Wise Comparisons of Treatment Groups--Transactional Analysis Practice (TAP), Transactional Analysis Study (TAS), Interpersonal Process Recall (IPR), and Control (CG)

Contrast	Mean Square	Sample Statistic	Ratio of Sample Statistic to Expected Mean Square	Significant
CG	2.3818	0.120	0.0504	
TAS	2.1303	3.300	2.1303	
TAP	1.6367	8.835	5.3980	*
IPR	1.6842	1.190	0.7066	
TAP-CG	1.4536	8.715	5.9954	*
TAP-IPR	1.1813	7.645	6.4719	*
TAP-TAS	1.3513	5.535	4.0961	*
TAS-CG	1.6073	3.180	1.9785	
TAS-IPR	1.3660	2.110	1.3660	
IPR-CG	1.4673	1.070	0.7292	

Skills Ability Scale: Type I: Information: As illustrated in Table 9.10, significant differences exist between pre-and delayed post-test results of subjects assigned to the TA Practice and TA Study groups. Significant differences in the retentions of scores exist: (1) between subjects assigned to the TA Practice groups and those assigned to the control group (TAP-CG); (2) between subjects assigned to the TA Practice Groups and those assigned to the IPR Groups (TAP-IPR); and (3) between subjects assigned to the TA Study Group and those assigned to the control group (TAS-CG).

Skills Ability Scale: Type II: Dangerous Emotions: As illustrated in Table 9.11, a significant difference exists between pre- and delayed post-results for subjects assigned to the TA Practice groups. A significant difference in retention of scores exists: (1) between subjects assigned to the TA Practice groups and those assigned to the control group (TAP-CG); and (2) between subjects assigned to the TA Practice groups and those assigned to the IPR groups (TAP-IPR).

Skills Ability Scale: Type III: Long-Term Stress: As illustrated in Table 9.12, a significant difference exists between pre- and delayed post-test results of subjects assigned to the TA Practice groups. Significant differences in retention of scores exists: (1) between subjects assigned to the TA Practice groups and those assigned to the control group (TAP-CG); (2) between subjects assigned to the TA Practice groups and those assigned to the IPR groups (TAP-IPR); and (3) between subjects assigned to the TA Practice

groups and those assigned to the TA Study group (TAP-TAS). No other significant differences were discovered.

Summary

Hypotheses #14 (TAP > CG) and #15 (TAP > IPR) are accepted for all three subscales of the Skills Ability Scale, indicating a significantly greater improvement in scores from pre- to post-test. Hypotheses #20 (TAP > CG) and #21 (TAP > IPR) are also accepted for all three subscales of the Skills Ability Scale, indicating a significantly greater retention of scores from pre- to delayed post-test.

Hypothesis #12 (TAS > CG) is accepted for subscales Type I (Information) and Type II (Dangerous Emotions), indicating a significantly greater improvement from pre- to post-test. Further, hypotheses #17 (IPR > CG) and #18 (TAS > CG) are accepted for subscale I (Information), and hypotheses #16 (TAP > TAS) and #22 (TAP > TAS) are accepted for subscale III (Long-Term Stress).

The only consistently significant differences in improvement and retention of scores on all three subscales are found in the subjects assigned to the TA Practice groups. The only consistent significant differences in comparisons of improvement and retention of scores on all three subscales are found between subjects assigned to the TA Practice groups and subjects assigned to the control group or to the IPR groups: (TAP-CG) or (TAP-IPR). (Refer to Table 11--Summary of Hypotheses and Significant Differences, p. 91).

Affective Sensitivity Scale Results

The number of subjects, mean score, sum of scores, and sum of squared scores for each group on the three administrations of the Affective Sensitivity Scale are presented in Table 10.1.

Table 10.1. Affective Sensitivity Scale--Number of Subjects, Mean Score, Sum of Scores, and Sum of Squared Scores

		Pre-test			Post-test			Delayed Post-test		
Group	n	$\bar{X}$	ΣX	ΣX^2	$\bar{X}$	ΣX	ΣX^2	$\bar{X}$	ΣX	ΣX^2
CG	8	39.625	317	12,833	39.500	316	13,092	41.250	330	13,900
TAS	10	34.100	341	12,147	34.900	349	12,617	37.000	370	14,124
IPR_1	8	43.000	344	14,926	39.625	317	12,901	41.375	331	14,005
IPR_2	8	39.750	318	13,510	48.625	389	19,113	45.125	361	16,813
TAP^2_1	9	38.667	348	13,652	46.667	420	19,712	44.667	402	18,036
TAP_2	8	38.250	306	12,010	45.625	365	16,795	44.375	355	15,805
Total	51	38.706	1,974	79,078	42.275	2,156	94,230	42.137	2,149	92,683

A repeated measures analysis of variance test was used to measure differences across test means (blocks) and across group means (treatments). The results of this test are presented in Table 10.2.

Table 10.2. Affective Sensitivity Scale: Repeated Measures Analysis of Variance Results

Source of Variance	Sum of Squares	d.f.	Mean Square	F	Significance
Groups	1,498.640	5	299.728	3.185	.0152
S: Groups	4,235.125	45	94.114		
Tests	416.980	2	208.490	11.703	.0001
Tests x Groups	569.720	10	56.972	3.198	.0001
Tests x S: Groups	1,603.300	90	17.814		
Total	8,323.765	152			

As Table 10.2 illustrates, a significant difference exists across both test and group means. There is also a significant Tests x Groups interaction.

Improvement in Scores

Assumption: Significant differences in improvement in scores on the Affective Sensitivity Scale will be found between each pair of groups in the following direction:

TAP > IPR > TAS > Control

Hypothesis 24: Subjects assigned to the TAS groups will demonstrate a significantly greater improvement in scores on the Affective Sensitivity Scale, when compared with subjects assigned to the control group.

Hypothesis 25: Subjects assigned to the IPR groups will demonstrate a significantly greater improvement in scores on the Affective Sensitivity Scale, when compared with subjects assigned to the control group.

Hypothesis 26: Subjects assigned to the IPR groups will demonstrate a significantly greater improvement in scores on the Affective Sensitivity Scale, when compared with subjects assigned to the TAS group.

Hypothesis 27: Subjects assigned to the TAP groups will demonstrate a significantly greater improvement in scores on the Affective Sensitivity Scale, when compared with subjects assigned to the control group.

Hypothesis 28: Subjects assigned to the TAP groups will demonstrate a significantly greater improvement in scores on the Affective Sensitivity Scale, when compared with subjects assigned to the TAS group.

Hypothesis 29: Subjects assigned to the TAP groups will demonstrate a significantly greater improvement in scores on the Affective Sensitivity Scale, when compared with subjects assigned to the IPR groups.

The Scheffé method of multiple comparisons was used to test the hypotheses. Table 10.3 presents the results of these analyses.

Table 10.3. Affective Sensitivity Scale: Improvement in Test Scores by Scheffé Multiple Comparison Test for all Treatment Groups and for all Pair-Wise Comparisons of Treatment Groups--Transactional Analysis Practice (TAP), Transactional Analysis Study (TAS), Interpersonal Process Recall (IPR), and Control (CG)

Contrast	Mean Square	Sample Statistic	Ratio of Sample Statistic to Expected Mean Square	Significant
CG	4.8506	-0.130	0.0268	
TAS	4.3385	0.800	0.1844	
TAP	3.3333	7.690	2.3070	
IPR	3.4299	2.755	0.8032	
TAP-CG	2.5606	7.820	3.0540	
TAP-IPR	2.0808	4.935	2.3717	
TAP-TAS	2.3803	6.890	2.8946	
TAS-CG	2.8313	0.930	0.3285	
TAS-IPR	2.4061	-1.955	0.8125	
IPR-CG	2.5846	2.885	1.1162	

As illustrated in Table 10.3, no significant differences were found between pre- and post-test results. Also, no significant differences were found in improvement of scores between subjects assigned to any group, when compared with subjects assigned to any other group.

Retention of Scores

Assumption: Significant differences in retention of scores on the Affective Sensitivity Scale will be found between each pair of groups in the following direction:

TAP > IPR > TAS > Control

Hypothesis 30: Subjects assigned to the TAS group will demonstrate a significantly greater retention of scores on the Affective Sensitivity Scale, when compared with subjects assigned to the control group.

Hypothesis 31: Subjects assigned to the IPR groups will demonstrate a significantly greater retention of scores on the Affective Sensitivity Scale, when compared with subjects assigned to the control group.

Hypothesis 32: Subjects assigned to the IPR groups will demonstrate a significantly greater retention of scores on the Affective Sensitivity Scale, when compared with subjects assigned to the TAS group.

Hypothesis 33: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the Affective Sensitivity Scale, when compared with subjects assigned to the control group.

Hypothesis 34: Subjects assigned to the TAP groups will demonstrate significantly greater retention of scores on the Affective Sensitivity Scale, when compared with subjects assigned to the TAS group.

Hypothesis 35: Subjects assigned to the TAP groups will demonstrate a significantly greater retention of scores on the Affective Sensitivity Scale, when compared with subjects assigned to the IPR groups.

Again, the Scheffé method of multiple comparisons was used to test the research hypotheses. The results of these analyses are presented in Table 10.4.

As illustrated in Table 10.4, no significant differences were found between pre- and delayed post-test scores. Also, no significant differences were found in retention of scores between subjects assigned to any group, when compared with subjects assigned to any other group.

Table 10.4. Affective Sensitivity Scale: Retention of Test Scores by Scheffé Multiple Comparison Test for all Treatment Groups and for all Pair-Wise Comparisons of Treatment Groups--Transactional Analysis Practice (TAP), Transactional Analysis Study, (TAS), Interpersonal Process Recall (IPR), and Control (CG)

Contrast	Mean Square	Sample Statistic	Ratio of Sample Statistic to Expected Mean Square	Significant
CG	4.8506	1.620	0.3340	
TAS	4.3385	2.900	0.6684	
TAP	3.3333	6.065	1.8195	
IPR	3.4299	1.880	0.5481	
TAP-CG	2.5606	4.445	1.7359	
TAP-IPR	2.0808	4.185	2.0112	
TAP-TAS	2.3803	3.165	1.3297	
TAS-CG	2.8313	1.280	0.4520	
TAS-IPR	2.4061	1.020	0.4239	
IPR-CG	2.5846	0.260	0.1006	

Summary

None of the hypotheses #24 through #35 for the Affective Sensitivity Scale are accepted. (Refer to Table 11 - Summary of Hypotheses and Significant Differences, p. 91).

Summary

The analysis of data in Chapter IV presented the hypotheses under investigation; the analysis of variance tables; and the results of the Scheffé comparisons for each of the five instruments: Transactional Analysis Cognitive Tests; Skills Ability Scale: Information; Skills Ability Scale: Dangerous Emotions; Skills Ability Scale: Long-Term Stress; and the Affective Sensitivity Scale.

Table 11 illustrates a summary of the hypotheses and the significant results.

Table 11. Summary of Hypotheses and Significant Differences

Instrument	Measure	Hypothesis	Assumption	Significant
TA Cognitive Tests	Improvement of Scores	#1	IPR = CG	Null
		#2	TAS > CG	*
		#3	TAS > IPR	*
		#4	TAP > CG	*
		#5	TAP > IPR	*
		#6	TAP > TAS	
TA Cognitive Tests	Retention of Scores	#7	TAS > CG	*
		#8	TAS > IPR	*
		#9	TAP > CG	*
		#10	TAP > IPR	*
		#11	TAP > TAS	
Skills Ability Scale	Improvement of Scores	#12	TAS > CG	
		#13	TAS > IPR	
		#14	TAP > CG	*
		#15	TAP > IPR	*
		#16	TAP > TAS	
		#17	IPR > CG	
Skills Ability Scale	Retention of Scores	#18	TAS > CG	
		#19	TAS > IPR	
		#20	TAP > CG	*
		#21	TAP > IPR	*
		#22	TAP > TAS	
		#23	IPR > CG	
Affective Sensitivity Scale	Improvement of Scores	#24	TAS > CG	
		#25	IPR > CG	
		#26	IPR > TAS	
		#27	TAP > CG	
		#28	TAP > TAS	
		#29	TAP > IPR	
Affective Sensitivity Scale	Retention of Scores	#30	TAS > CG	
		#31	IPR > CG	
		#32	IPR > TAS	
		#33	TAP > CG	
		#34	TAP > TAS	
		#35	TAP > IPR	

Five of the six research hypotheses predicting improvement of scores on the TA Cognitive Tests were accepted at the .10 level of confidence. Four of the five research hypotheses predicting differences in retention of scores on the TA Cognitive Tests were also accepted.

Hypotheses predicting significant differences in improvement and retention of scores on the Skills Ability Scale were accepted for subjects assigned to TA Practice groups, when compared with those assigned to either the control group (TAP-CG) or to the IPR groups (TAP-IPR). In all, nine of the twelve hypotheses predicting differences in improvement and retention of scores on the Skills Ability Scale were accepted for one or more subscales; three were not accepted for any of the subscales.

Hypotheses predicting significant differences in improvement and retention of scores on the Affective Sensitivity Scale were not accepted in any case.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This final chapter is devoted to a summary of the study, a discussion of the conclusions drawn from the data and their analyses, and recommendations and implications for future research.

Summary

Purpose

The purpose of this study was to examine the impact of adding a unifying theory of personality structure and change, Transactional Analysis (TA), to a structured skills-building model for teaching crisis intervention skills. The primary questions toward which this study was directed were:

(1) Will the addition of the Transactional Analysis theory of personality structure and its implications for crisis intervention to the current training model result in improvement in trainees' abilities to select and emit effective crisis intervention strategies, as defined by measures on instruments used in this study?

(2) Will supervised practice in Transactional Analysis theory and practice result in improvement in trainees' abilities to select and emit effective crisis intervention strategies, as defined by measures on instruments used in this study?

(3) Will improvements in these abilities be maintained over time?

The present study was the first research (known to the researcher) performed to date, testing the results of adding a cognitive structure to a structured skills-building model, or to counseling

effectiveness in general.

Population and Sample

The selected population was the active volunteer crisis intervention staff at the Open Door Crisis Center, Lansing, Michigan. Of 70 active volunteers, 56 agreed to participate in the study and were leveled into the following six groups on the basis of knowledge of TA theory and practice: one control group, one TA Study group, two TA Practice groups, and two groups who received the traditional structured skills-building training program, without TA structure. Five subjects were lost during the course of the experiment, leaving a final sample of 51 subjects.

Instrumentation

Five instruments were used to measure crisis intervention skills, all of which were used as pre-, post-, and delayed post-tests: Transactional Analysis Cognitive Tests; Skills Ability Scale: Information; Skills Ability Scale: Dangerous Emotions; Skills Ability Scale: Long-Term Stress; and Affective Sensitivity Scale.

Procedure

All subjects received pre-tests on all of the above instruments. The TA Cognitive Tests were scored immediately and used to level subjects into blocks. Control group subjects received no further treatment. The TA Study group was given a TA handbook for personal study. The TA Practice groups received the TA handbook, plus attended a two-day training workshop where TA theory was applied to crisis intervention skills. The Interpersonal Process Recall (IPR) groups attended a

two-day workshop on crisis intervention skills, without application of TA theory. Subjects assigned to non-TA oriented groups were instructed not to study TA for the duration of the experiment. All six groups were post-tested with all three instruments immediately following the workshops, and again five weeks later.

All four training workshops were held during the same two-day period, and the TA study group received the handbook that same weekend. All four workshop leaders were experienced in Transactional Analysis, and two leaders were Senior Trainers at the Open Door Crisis Center. All four trainers attended a series of meetings to assure continuity of training methods, except for the addition or deletion of TA theory.

The Affective Sensitivity Scale is a commercially available videotape and paper-and-pencil instrument designed to measure subjects' abilities to discriminate and label affect in another person (empathy).

The TA Cognitive Tests were designed for this study and measures subjects' abilities to select and implement crisis intervention strategies which are appropriate to specific situations.

Design and Analysis

A repeated measures analysis of variance test was performed for each scale of each instrument, yielding five separate analyses to test for significance of group means across tests and within groups.

The Scheffé method of post-hoc multiple comparisons was used to test the significance of differences between specific group means.

Due to the exploratory nature of the study, the .10 level of significance was established as the critical level for accepting or rejecting differences.

Conclusions

Findings and Discussion

The following results of the study are outlined according to the major assumptions, or predictions, previously stated: The following order of performance for improvement and retention of scores was predicted:

TA Cognitive Tests:	TAP > TAS > IPR = Control
Skills Ability Scale:	TAP > TAS > IPR > Control
Affective Sensitivity Scale:	TAP > IPR > TAS > Control

TA Cognitive Tests: The research results tend to support the assumption that persons receiving TA information will improve on scores measuring TA knowledge. Subjects assigned to both the TA Study and TA Practice groups demonstrated significant improvement and retention of scores on this test. Subjects assigned to the TA Practice groups showed a trend toward greater improvement than those assigned to the TA Study group. Comparisons of gain scores between groups indicate that both the TA Study and TA Practice groups demonstrated significantly greater improvement in and retention of scores than did subjects assigned to the IPR or control groups.

Skills Ability Scale: The research results clearly support the assumption that the addition of Transactional Analysis theory to the structured skills-building model, via cognitive information and

supervised practice, results in improvement and retention of trainees' abilities to select and emit effective crisis intervention strategies. Significant improvement and retention of scores on all three subscales of the Skills Ability Scale were demonstrated by subjects assigned to the TA Practice group. Additionally, significant differences were found in improvement and retention of scores on all three subscales between subjects assigned to the TA Practice groups and those assigned to the control group (TAP-CG) or to the IPR groups (TAP-IPR).

Subjects assigned to the TA Study group demonstrated no significant differences between pre- and post-test results on any of the SAS subscales. However, there was a significant difference for these subjects between pre- and delayed post-test results on subscale Type I (Information), indicating that scores on this subscale continued to climb for this group between these two testing periods. This same trend was demonstrated on subscale Type III (Long-Term Stress), although the results in this case were not significant. Additionally, significant differences were found in improvement and retention of scores on subscale Type I between subjects assigned to the TA Study group and those assigned to the control group (TAS-CG); and in improvement of scores on subscale Type II (Dangerous Emotions) between subjects assigned to these same two groups.

On all three subscales, subjects assigned to the TA Practice groups demonstrated a trend toward superiority when compared with subjects assigned to the TA Study group (TAP-TAS). However, this trend was significant only for improvement and retention of scores on subscale Type III.

Subjects assigned to the IPR groups demonstrated improvement in scores on subscale Type I only. IPR subjects demonstrated no significant retention of scores for any of the subscales. Additionally, subjects assigned to the IPR groups demonstrated significantly greater improvement in scores on subscale Type I, when compared with subjects assigned to the control group (IPR-CG). No other significant differences in improvement or retention of scores were demonstrated by subjects assigned to the IPR groups.

Affective Sensitivity Scale: No significant differences in improvement or retention of scores on the Affective Sensitivity Scale were demonstrated, nor were any significant differences found between subjects assigned to any pair of groups. This failure to show significant gains may be partially explained by (1) the extremely low validity of the Affective Sensitivity Scale; and/or (2) the fact that the subjects used in this study were already trained in empathy skills and had previously demonstrated relatively high levels of achievement in these skills. It is important to note that scores on the Affective Sensitivity Scale did show an upward trend, where predicted, suggesting that trainees' abilities to determine affect in another person were maintained or enhanced during the course of the experiment.

In all, 12 of 34 hypotheses predicting significant differences in improvement and retention of scores on three measures were accepted, in addition to one hypothesis which predicted null results. Five of the six hypotheses predicting improvement on the TA Cognitive Tests were accepted, and four of the five hypotheses predicting retention of

scores on this test were also accepted. For the Skills Ability Scale, two of the six hypotheses predicting improvement and two of six predicting retention were accepted for all three subscales; and, a total of nine of twelve hypotheses predicting improvement or retention of scores were accepted for one or more subscales. None of the hypotheses predicting improvement or retention of scores on the Affective Sensitivity Scale were accepted.

The general assumption of predicted comparative gains and retention of scores on the Transactional Analysis Cognitive Tests was as follows: TAP > TAS > IPR = Control. This assumption held true for both improvement and retention of scores, and was significant for all comparisons except TAP > TAS.

The general assumption of predicted comparative gains and retention of scores on the Skills Ability Scale was as follows: TAP > TAS > IPR > Control. This assumption held true for improvement and retention of scores for subscales Type II (Dangerous Emotions) and Type III (Long-Term Stress). For subscale Type I (Information), subjects assigned to the IPR groups actually demonstrated higher scores on the post-test than did subjects assigned to the TA Study group. However, this difference was very slight and was reversed to the expected direction on the delayed post-test.

The general assumption of predicted comparative gains and retention of scores on the Affective Sensitivity Scale was as follows: TAP > IPR > TAS > Control. This assumption held true for improvement of scores. However, on delayed post-test scores, subjects assigned

to the TA Study actually demonstrated slightly higher scores than did those assigned to the IPR groups. None of these gains were significant.

The results of this study suggest that the addition of Transactional Analysis theory to a structured skills-building model for training crisis intervention agents, via cognitive information and supervised practice, does result in improvement in trainees' abilities to select and emit effective crisis intervention strategies, as defined by measures on the instruments used in this study. Furthermore, results indicate that once trainees have been trained in the basic communication skills of Empathic Understanding, Attitudes and Values Clarification, and Decision-Making, cognitive information regarding Taansactional Analysis theory and practice, without additional supervised practice, is more helpful for increasing crisis intervention skills than is additional supervised practice, without the cognitive information. Indications are that most of these improved skills are maintained over time.

For each of the instruments significant differences in improvement and retention of scores were predicted between each pair of groups in a hierarchical order:

Transactional Analysis Cognitive Tests:	TAP > TAS > IPR = Control
Skills Ability Scale:	TAP > TAS > IPR > Control
Affective Sensitivity Scale:	TAP > IPR > TAS > Control

(Note that for the TA Cognitive Tests, it was hypothesized that IPR and Control subjects would show no significant differences.) The differences between each pair of groups, although not significant in some cases, were almost always in the expected direction. The lack of significance in

these findings may be attributed to: (1) the relatively short duration of the training workshops and the brevity of the TA handbook; or (2) the fact that subjects employed in this study had previously been exposed to training and experience in crisis intervention skills. These questions can be answered by repeating the study with more naive subjects and a longer training workshop, i.e. a full 28-hour program, rather than a 12-hour version.

There were two instances in which groups did not demonstrate differences in the expected hierarchical order. On Skills Ability Scale Type I (Information), IPR subjects demonstrated more improvement between pre- and post-test scores than did subjects assigned to the TA Study group. This difference was very slight and was not retained over the follow-up period. It appears that cognitive information and supervised practice are about equally effective in training subjects to respond to calls requesting information.

On the Affective Sensitivity Scale, subjects assigned to the IPR groups improved more than those assigned to the TA Study group during the training period. However, IPR subjects did not retain this difference during the follow-up period, and TAS subjects actually demonstrated greater scores on the delayed post-test than those assigned to the IPR groups. It appears that the supervised practice, without cognitive information, causes immediate improvement in trainees' abilities to determine affect, but that this improvement rapidly decreases over time. Cognitive information, without supervised practice, causes less immediate improvement than supervised practice alone, but this improvement is more likely to be maintained over time.

In sum, it appears that cognitive information is a useful model for training crisis intervention agents, especially when combined with supervised practice. The cognitive structure appears to enhance trainees' abilities to select and emit effective crisis intervention strategies. Once trainees have acquired basic communication skills, cognitive information alone appears to be more beneficial for improving crisis intervention skills than supervised practice alone.

Limitations: A possible contamination of the study may have resulted from the fact that all volunteers engaged in the study were aware of its intent prior to the onset of the experiment, i.e. that its purpose was to measure the effects of adding TA theory to the IPR model. Subjects assigned to the TA groups may have experienced added incentive as a result of this knowledge, responding to an expectation that they would perform better as a result of participating in a newer training model. Subjects assigned to the IPR groups, on the other hand, were aware of the fact that they were receiving the traditional training program, rather than a newer model. This may have resulted in IPR subjects responding to an expectation that they would not perform as well as those subjects assigned to the revised model. There is no way to measure the effects this knowledge had upon changes in test scores.

This limitation may be further amplified by the fact that the subjects were aware of the skills and interests of the experimenter, who had been consulting with the crisis center for over a year prior to the study. Knowing that the experimenter had an interest in Transactional

Analysis may have caused a bias in mental set, possibly resulting in change in test scores in one direction or the other. Results of these effects remain unknown.

Another limitation of the validity of the results reported in this study stems from the lack of reliability and validity data for the Transactional Analysis Cognitive Tests and the Skills Ability Scale, both of which were designed for this study. To this date, no standardized measures are known to the author which accurately measure trainees' skills in crisis intervention. The Skills Ability Scale shows promise of meeting this need, but much more data needs to be accumulated before this instrument can be employed with any great deal of confidence.

The Affective Sensitivity Scale, while being supported by reliability and validity studies, has not demonstrated sufficient validity to gain the confidence of this author. This instrument was employed in this study to provide some measure of trainees' abilities to determine the affective state of another person while learning to select and emit effective crisis intervention strategies. Results indicate that improvement and retention of abilities to select and emit effective crisis intervention strategies are not necessarily correlated with improvement and retention of abilities to determine affect, as measured by the Affective Sensitivity Scale.

Recommendations

Crisis centers and hotlines continue to grow in numbers, types of services offered, and public and professional acceptance. The trend

toward non-professional staffing of these centers, as well as increased utilization of non-professionals in traditional mental health agencies, has created a large demand for short-term training models which adequately prepare volunteers and other untrained personnel for working with the public. Further studies involving the effectiveness of short-term training, structured skills-building models, and cognitive information upon the acquisition of crisis intervention skills are badly needed, in addition to more reliable and valid instruments to measure the effectiveness of these programs.

Further reliability and validity studies should be conducted for all three subscales of the Skills Ability Scale. These studies will be conducted at the Open Door Crisis Center, and other places, in the near future, and will be made public upon their completion. Additionally, investigations will be conducted into the feasibility of developing a more standardized paper-and-pencil instrument modeled after the Skills Ability Scale, which would render it more accessible to centers and agencies with limited availability of financial resources and rater time.

This study has demonstrated that Transactional Analysis theory, applied to a structured skills-building model via cognitive information and supervised practice, effectively increases trainees' acquisition of crisis intervention, as defined by measures on instruments used in this study. Trainees used in this study were already practicing crisis intervention agents, previously trained in basic crisis intervention skills. Future studies are planned at the Open Door in which new volunteers, without previous training, will be exposed to the TA Practice model as their initial training experience. These subjects will be

compared with other subjects who will receive training via the structured skills-building model, without the addition of Transactional Analysis theory. The purpose of this future study will be to examine the impact of adding TA theory to the training model for new volunteers, and the .05 level of confidence will be used to determine significance. Should these results demonstrate that the additional component of TA theory to the model is effective for new volunteers, TA theory will be installed as a regular component to the program, i.e. all new volunteers will receive training via the TA Practice model used in this study.

Replications of this study should be repeated in other settings to insure its effectiveness. Such replications are planned for two locations in the near future, one at another crisis center in a different city, and one as part of a clinical training program for professionals.

Additional studies should be conducted with theoretical approaches other than Transactional Analysis. Some of the more modern approaches to human personality seem particularly suitable for application to short-term training models, e.g. behavior modification, Rational-Emotive Therapy, Reality Therapy. These approaches can be applied to a variety of training models to devise the most effective combination of cognitive information and supervised practice.

Additional studies should also be conducted with counselors and other helping professionals at various levels of competence and training, i.e. B.A., M.A., M.S.W., Ph.D., M.D., etc. to determine the effectiveness of cognitive information and supervised practice upon the acquisition of skills pertinent to their many applications. This

issue could be pursued throughout the social sciences and into ancillary fields such as teaching, administration, child-rearing, etc.

Finally, no training model is useful unless it can be demonstrated to be effective in preparing trainees to function in their setting. The effectiveness of crisis agents trained in this program will be ascertained by continued examination of the application of their skills with the treatment population. Records will be maintained and examined regarding number of types of contacts, length of time spent with contacts, number and preparation of referrals to other agencies, known suicides, and client satisfaction with services. Results of these examinations will provide a measure of effectiveness regarding application of skills with the treatment population, a practical and more direct evidence supporting the utilization of any particular training model.

APPENDICES

APPENDIX A

TRANSACTIONAL ANALYSIS COGNITIVE TESTS
(FORMS #1, #2, #3)

APPENDIX A

TRANSACTIONAL ANALYSIS COGNITIVE TEST

FORM #1

Instructions

Please do not write or make any marks on this test. Instead a computor answer sheet should be used to record your answer to each question. Please make sure to record your code number, the date and the Form #1 on the computer answer sheet with a #2 pencil. If you decide to change an answer to a question make sure that you completely erase the first answer. If you cannot completely erase the answer ask for another answer sheet. Each question has one best answer that you should select. Remember that all questions should be answered from within the framework of Transactional Analysis. There is no time limit to this test.

.....

1. An ego boundry lesion is:

   A. an Adult contamination.
   B. an interference in adequate functioning.
   C. a critical remark.
   D. a psyche sore spot.

2. "I never do anything right as far as you're concerned" is an example of:

   A. banal scripting.
   B. the Victim role.
   C. a negative conditional stroke.
   D. the Parent ego state.

3. The Child initiates a game intending to:

   A. redeem some gold stamps.
   B. persecute others.
   C. "hook" the Child or Parent of another person.
   D. feel rejected.

4. When we use the term "Racket" in TA, we mean:

   A. an existential position.
   B. a delusion.
   C. a pay-off
   D. chronic lousy feelings that lead to no useful action.

5. Positive strokes convey:

   A. positive feedback about behavior.
   B. "OK" feelings.
   C. a desire for reciprocal strokes.
   D. positive aspects of the giver.

6. Which is a function of the Little Professor?

   A. Agression.
   B. Rebellion.
   C. Intuition.
   D. Affection.

7. A woman who always calls her mother-in-law even though she always feels depressed afterwards is:

   A. playing Persecutor.
   B. structuring time with a pastime.
   C. playing a game.
   D. too stupid to know any better.

8. Of the occupations listed below, a person with an excluded Parent and Child (constant Adult) would probably do best as:

   A. youth counselor.
   B. teacher.
   C. computer programmer.
   D. therapist.

9. Which of these terms has to do with the need to structure time?

   A. Decisions.
   B. Experiences.
   C. Games.
   D. Deprivations.

10. Which statement is not true about why people play Games?

A. They have a need to structure time.
B. They play games to avoid boredom
C. Games are the first step to intimacy.
D. Games are played to reach a payoff.

11. A positive conditional stroke is:

A. detriment to the giver.
B. a discount.
C. dependent on being earned.
D. the deepest form of recognition.

12. A couple seeking a marriage counselor may be seeing the counselor as a:

A. Persecutor.
B. Nurturing Parent.
C. Rescuer.
D. Victim.

13. People who collect stamps seem to be wasting time and energy because:

A. people don't need excuses for what they feel.
B. their rationalizations are generally ridiculous.
C. they prefer to make war not love.
D. they should get them free.

14. An ulterior transaction is:

A. never justifiable because there's a hidden motive.
B. outside the awareness of the Adult.
C. within Child awareness of both persons.
D. involving more than two ego states.

15. In a crossed transaction the one who initiates it:

A. feels discounted.
B. had an ulterior motive.
C. collects stamps.
D. switches roles in the Game Drama Triangle.

16. According to TA_____ of the people have Scripts:

A. about 50%.
B. about 90%.
C. about 20%
D. all

17. An example of a positive stroke is:

A. "My parents never listen to me."
B. "Boy I'm a lousy teacher!"
C. "Well you finally did something right."
D. "Having you around is nice."

18. In TA terms spontaneity refers to:

A. the freedom to choose from the three ego states.
B. recapturing your childhood.
C. letting things come naturally.
D. expressing warmth.

19. The Natural Child is:

A. determined by a person's age.
B. selfish and sensuous.
C. docile.
D. learned behavior.

20. "Don't kiss me in front of the children" is an example of:

A. a positive stroke.
B. a discount.
C. an Adult evaluation of a sensitive situation.
D. a Natural Child fear.

21. In TA terms a person who is a "winner" would be expected to have which Life Position?

A. I'm OK; You're OK.
B. I'm OK; You're not-OK.
C. I'm not-OK; You're OK.
D. I'm not-OK; You're not-OK.

22. Early childhood decisions are frequently unwise because the person making them:

A. hasn't learned to cathect his Adult.
B. does so only after a traumatic experience.
C. has plenty of data but doesn't know how to interpret it.
D. perceives life through the small peekhole of his existence, which can create distortions.

23. A person who sets himself up to feel lonely, depressed, or afraid is:

A. immature and unstable.
B. suicidal.
C. severely depressed and needs hospitalization.
D. getting ready for his racket feeling.

24. When exposing a game, a good rule of thumb is to:

A. make the players see how deliberately dishonest they are.
B. wait until the player gets his pay-off and then ask him what he's feeling.
C. make sure that the players' Adults are aware of what they have done.
D. punish them enough so that they won't do it again.

25. A complementary transaction is one in which:

A. both people are on good terms with each other.
B. the content is socially acceptable.
C. a message gets an expected response.
D. a positive stroke is given.

26. People who collect stamps:

A. need a reason to have fun.
B. usually look for pay-offs they haven't earned.
C. seem to prefer negative to positive strokes.
D. are probably more use to conditional then unconditional strokes.

27. "Who am I? What am I doing here? and "Who are all the others?" is the basis for:

A. choosing rackets.
B. being Victim.
C. stroking yourself.
D. a person's script.

28. A woman who plays "If It Weren't For You" with her husband just as her mother did is an example of:

A. an outward expression of the Parent.
B. a defense mechanism.
C. banal scripting.
D. following her script.

29. "I can't help it if I'm crabby. It's not my fault", is what type of discount?

A. denying that a problem exists.
B. denying that the situation is important.
C. denying that anything can be done.
D. denying the ability to do anything about the problem.

30. "You're great!" is a _____ stroke.

A. unconditional positive.
B. conditional positive.
C. unconditional negative.
D. conditional negative.

31. The first ego state to develop is:

A. Parent.
B. Child.
C. Adult.
D. Parent and Child develop simultaneously.

32. When you act as your parents acted you are most likely in which ego state?

A. Adapted Child.
B. Adult.
C. Little Professor.
D. Parent.

33. People with full books of stamps:

A. can turn them in for a prize of suicide or homocide.
B. are more easily managed because their books are full.
C. are undoubtedly in their anger racket.
D. have rightfully earned them.

34. According to TA the Adult ego state is all but:

A. the executive of the personality.
B. a computer gathering data.
C. contains genuine responses to an actual situation happening now.
D. inborn.

35. A person's Adult can be contaminated by:

A. his Parent.
B. an incomplete Parent.
C. both his Child and Parent.
D. his Child.

36. The term "ego state" means:

A. a way of classifying Parental, Adult and Childish behaviors.
B. the parts of a person's ego.
C. the ego, superego and id.
D. a system of feelings and related behaviors.

37. Psychological Games are:

A. like board games or cards.
B. alternative stereotype transactions leading to withdrawal.
C. complementary ulterior transactions leading to a pay-off.
D. ulterior transactions brought into Adult awareness.

38. An adult at a football game is really excited, jumping up and down, and screaming. Which ego state has executive control?

A. Child.
B. Adult.
C. Parent.
D. two of the above.

39. Which statement is most true about withdrawal as a way of structuring time?

A. the only source of strokes is the person stroking himself.
B. withdrawal is unhealthy because there are no strokes.
C. it is difficult to withdraw because there are too many people.
D. withdrawal is totally learned behavior.

40. Negative strokes are strokes that:

A. make the receiver feel not-OK.
B. convey negative feedback about behavior.
C. are conditional.
D. are given negative value by the recipient.

41. A person who illegitimately feels victimized by society would probably be coming from a Life Position of:

A. I'm OK; You're OK.
B. I'm OK; You're not-OK.
C. I'm not-OK; You're OK.
D. I'm not-OK; You're not-OK.

42. People who totally lose interest in living are most likely taking the position:

A. I'm OK; You're OK.
B. I'm OK; You're not-OK.
C. I'm not-OK; You're OK.
D. I'm not-OK; You're not-OK.

43. A stroke is not:

A. a unit of recognition.
B. a physical touch.
C. a spoken "Hello".
D. a discount.

44. Framing a picture on a Sunday afternoon is an example of a:

A. pastime.
B. withdrawal.
C. activity.
D. ritual.

45. A person's sense of real self:

A. is firmly lodged in the Natural Child.
B. doesn't crystalize until he reaches 12 years old.
C. can be experienced in any ego state.
D. is only felt when all three ego states are fully cathected.

46. Stroke hunger is:

A. a theoretical concept.
B. conditioned by heredity.
C. the inborn need for touch.
D. conditioned culturally.

47. A person who bases his decisions on prejudiced data is said to have a:

A. dysfunctional Adult.
B. Critical Parent.
C. gallows transaction.
D. contaminated Adult.

48. Procrastination becomes a common pattern of the Adapted Child because:

A. the Parent is too restrictive.
B. the Natural Child wants to rebel and the Adapted Child doesn't so the Little Professor stalls.
C. it satisfied the Adapted Child's need to rebel.
D. he holds being late as a positive value learned from his parents.

49. A ritual is:

A. a simple and stereotyped complementary transaction.
B. not a source of important strokes.
C. a type of pastime.
D. something you do to fill time when you belong to an organization.

50. Self indulgence in feelings of guilt and inadequacy is an example of:

A. a decathected Parent.
B. adapted feelings.
C. racket feelings.
D. a suicide script.

51. A person can give up playing games by:

A. recognizing and avoiding them.
B. collecting stamps instead.
C. blowing off steam.
D. starting a stamp collection.

52. People most fear intimacy because:

A. they are inately suspicious.
B. they aren't in the habit of being open.
C. intimacy is an expression of the future.
D. it involves giving up Activities and Pastimes.

53. Which statement is most true about Life Positions?

A. They are relative to each other.
B. Each of us spends time in each position but one is our most favorite.
C. They are learned after we begin to speak.
D. They are relatively unimportant.

54. A complementary transaction is one in which:

A. both people are on good terms with one another.
B. people exchange Adult-Adult strokes.
C. the person starting the exchange gets an expected response from the person's ego state to the ego state that started the transaction.
D. everything is exactly even.

55. Talking about the book "Games People Play" is an example of:

A. the game "Psychiatry".
B. a pastime.
C. an activity.
D. cathecting the Adult ego state.

TRANSACTIONAL ANALYSIS COGNITIVE TEST

FORM #2

Instructions

Please do not write or make marks on this test. Instead a computer answer sheet should be used to record your answer to each question. Please make sure to record your code number, the date, and the Form #2 on the computer answer sheet with a #2 pencil. If you decide to change an answer to a question make sure that you completely erase the first answer. Each question has one best answer that you should select. Remember that all questions should be answered from within the framework of Transactional Analysis. There is no time limit to this test.

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1. An act, word or gesture that says "I know you're there" is an example of:

   A. Reality testing.
   B. Ego functioning.
   C. a stroke.
   D. a Nurturing Parent statement.

2. "I like you" is an example of:

   A. an unconditional stroke-
   B. the beginning of "Rapo".
   C. stroke hunger.
   D. a ritual.

3. Life Positions are:

   A. relative to others.
   B. decisions made at an early age about others and one's self.
   C. decisions made to keep others away.
   D. the cause of psychological games.

4. Ulterior transactions are:

   A. not necessarily dishonest.
   B. characteristically dishonest.
   C. always gamey.
   D. duplex rather than angular.

5. The hunger for structured time is:

   A. conditioned culturally.
   B. to avoid the pain of boredom.
   C. a sexual need.
   D. a ritual.

6. The position "I'm OK; You're OK", is best described as:

   A. an unrealistic goal.
   B. a potentially mentally healthy position.
   C. a position of people who feel victimized.
   D. a homicidal position.

7. A person is extremely upset and crying. Which ego state has executive control?

   A. Child.
   B. Adult.
   C. Parent.
   D. two of the above.

8. Which of these ways of structuring time best illustrates withdrawal?

   A. sleeping.
   B. fantasizing.
   C. reading a book.
   D. answering the mail.

9. People who collect trading stamps are wasting time and energy because:

   A. they usually can be beaten at their own game.
   B. they are "re-proving" an incorrect childhood decision.
   C. usually they collect more than they really need.
   D. usually they can't keep track of their collection and how they can cash it in.

10. If a chairperson of a meeting presents a problem and then shoots down all suggestions (without good reasons) he is:

   A. crossing transactions.
   B. in his rebellious Natural Child.
   C. playing a game.
   D. probably doing it for the member's own good.

11. When calling a game, a good rule of thumb is to:

A. come on Persecutor to protect yourself.
B. not pay any attention to the player's payoff feeling.
C. make sure that you have "hooked" the player's Adult first.
D. laugh at the person as that probably isn't the payoff they are after.

12. Awareness in TA terms refers to:

A. sensitivity to others.
B. reality testing.
C. knowing what's happening now.
D. wearing rose-colored glasses.

13. An example of the Nurturing Parent is:

A. "Be sure to take the trash out before you leave."
B. "Don't get into cars with strangers."
C. "Boys shouldn't wear long hair."
D. "I don't think he'd be good for the job."

14. The position of "I'm OK; You're not-OK" is best described as:

A. a winner position.
B. Victim position.
C. suicidal position.
D. a powerless position.

15. Of the categories of time structuring, playing football is an example of:

A. intimacy.
B. ritual.
C. pastime.
D. activity.

16. Unwise Child decision can be:

A. reversed because they are self determined.
B. best blotted out by drug therapy.
C. ignored, but not completely changed.
D. reversed at the risk of incurring psychosomatic reactions.

17. Games and Rackets come mainly from:

A. siblings and peers.
B. television soap operas.
C. learned adapted behavior.
D. Parent ego state.

18. Select the positive conditional stroke:

A. (Father to Son) "You did a good job on the lawn."
B. (Daughter to Mother) "Gee you're pretty, mommy."
C. (Brother to Sister) "Smooth move, ex-lax."
D. (Husband to Wife) "You look tired. Why don't you take it easy?"

19. A good example of a crossed transaction is:

A. A student says, "You doubler crosser" and the second student answers "And you're another."
B. A nice boy says to his mother, "I'm hungry" and she responds crossly "I'm too upset to fix dinner."
C. A boy says "I've lost your crossword puzzle," and the teacher answers "Where did you last see it?"
D. The chaplain says "You've torn down my cross" and the revolutionary answers "Yes, I want it for a demonstration."

20. "I really like you," "I like you too" is an example of:

A. Child-Child complementary transactions.
B. Natural Child-Adult cross transactions.
C. Ulterior transactions.
D. Data exchanged by an Adult-Adult transaction.

21. Which of these statements about Rackets is <u>not</u> true:

A. it's a lousy feeling.
B. it leads to no action.
C. it is chronic.
D. it is a genuine feeling.

22. A "Victim" is:

A. a game player.
B. someone who collects stamps.
C. a position in the Game Drama Triangle.
D. the only loser in the Game Drama Triangle.

23. Which of the following is <u>not</u> a classification for transactions?

A. ulterior.
B. crossed.
C. congruent.
D. complementary.

24. When a child learns to say "Thank you" to someone he is in which ego state?

A. Little Professor part of the Child ego state.
B. Nurturing Parent part of the Parent ego state.
C. Adult ego state.
D. Adapted Child part of the Child ego state.

25. Which of the following is not a way of stopping a game?

A. reinforcing old decisions.
B. giving up discounting.
C. crossing transactions.
D. withholding a payoff.

26. People who turn down positive strokes:

A. are commonly considered easy to manage.
B. usually know phoniness when they see it.
C. probably had overly loving mothers.
D. are probably in a not-OK position.

27. Ignoring the obvious signs that a person needs to cry is what type of discount?

A. denying that a problem exists.
B. denying that the situation is important.
C. denying that anything can be done.
D. denying the ability to do anything.

28. "It was really nice of you to cook dinner," is a _____ stroke?

A. unconditional positive.
B. conditional positive.
C. unconditional negative.
D. conditional negative.

29. When behavior fluctuates between compliance to parental interference and rebellion against it, the conflict is between:

A. Adapted Child and Adult.
B. Natural Child and Parent.
C. Parent and Adapted Child.
D. Adapted Child and Natural Child.

30. A discount is harmful because:

A. it is a sign of neurosis.
B. it is always painful.
C. it can't be avoided.
D. it is scripted.

31. A person who expands his capacities for awareness, spontaneity and intimacy is:

A. developing an integrated Adult in moving toward autonomy.
B. decathecting the Parent.
C. dysfunctional.
D. in his Child most of the time.

32. A person who hugs others easily and genuinely is an example of:

A. expressing intimacy.
B. an integrated Adult.
C. a third degree Game Player.
D. a Rescuer.

33. The part of the Child that is innately intuitive, creative, and manipulative is the:

A. Critical Child.
B. Natural Child.
C. Adapted Child.
D. Little Professor.

34. In TA, "Hi, how are you?" would most likely be the beginning of a:

A. Racket.
B. Game
C. Angular Transaction.
D. Ritual.

35. A depressed person might be taking the position:

A. I'm OK; You're OK.
B. I'm not-OK; You're OK.
C. I'm OK; You're not-OK.
D. I'm not-OK; You're not-OK.

36. The bad feeling one is left with at the end of a Game is called:

A. an anger stamp.
B. an expression of the Critical Parent.
C. an ulterior transaction.
D. a Racket feeling.

37. Prejudiced statements of a contaminated Adult are usually voiced as:

A. discounts.
B. negative strokes.
C. facts.
D. Critical Parent expressions.

38. The Natural Child can be:

A. nurturing and warm.
B. informative.
C. selfish.
D. a Victim.

39. A person whose behavior is unpredictable and often irrational is:

A. in his Natural Child a lot.
B. someone with lax ego boundaries.
C. in need of reparenting.
D. playing Victim.

40. False flattery and compliments are examples of:

A. a conditional stroke.
B. cultural scripting.
C. Critical Parent subversion.
D. a negative stroke.

41. Game analysis deals with:

A. ulterior transactions leading to an unexpected payoff.
B. motivations of people who play psychological games.
C. competitive motivations in sports and how they relate to life.
D. ulterior transactions which lead to an exchange of strokes.

42. People play games because:

A. it's fun and avoids pain.
B. they lead to a predictable payoff.
C. they do not yearn for intimacy.
D. they have much unresolved hostility.

43. If someone is deprived of the opportunity to exchange strokes:

A. he learns his lesson.
B. he hungers for strokes, even negative ones.
C. he loses interest in wanting to socialize.
D. he gets angry.

44. A Rescuer is someone who:

A. helps people who aren't functioning adequately to stand on their own.
B. creates crisis situations to look good in.
C. cashes in a lot of stamps.
D. keeps others dependent on him

45. In TA terms, a psychological script is:

A. the plan of the transactions of a Game.
B. a compulsively followed life plan.
C. the structure of a ritual.
D. the identity of the individual.

46. A person who has ego boundry lesions:

A. fixates in one ego state.
B. cannot use his Adult.
C. has a hysterical Parent.
D. exhibits uncontrollable behavior when touched in a "sore point".

47. Which statement is an example of the Adult?

A. "I wish I dared talk like that."
B. "I'm really angry with you!"
C. "That music makes me want to dance!"
D. "These socks are both brown."

48. When people manipulate others to re-experience and collect old feelings they are:

A. using their Little Professor.
B. scripted to fail.
C. indulging themselves in a Racket.
D. coming from "I'm not-OK; You're not-OK".

49. "You swim like a champion" is an example of:

A. maintenance stroking.
B. a positive stroke.
C. a discount.
D. recognition hunger.

50. Religious beliefs come from:

A. the Parent.
B. national scripting.
C. the Adult.
D. magical thinking.

51. When an infant seeks to avoid painful experiences and responds at the feeling level, this is an example of:

A. an emerging Adult ego state.
B. the Little Professor.
C. an emerging Parent ego state.
D. the Adult ego state being in executive control.

52. In which of the occupations listed below would you most likely find a person with an excluded Child?

A. Judge.
B. youth counselor.
C. disc jockey.
D. stunt driver.

53. Magical thinking is a function of:

A. Little Professor.
B. Critical Parent.
C. Adapted Child.
D. a contaminated Adult.

54. Which statement is an example of an unconditional positive stroke?

A. "Thanks for doing the dishes. I really appreciate it."
B. "Janet never listens to me."
C. "You've worked hard this week. Yes, you may have the car tonight."
D. "I really enjoy knowing you."

55. People who save archaic feelings and later feel bad about themselves are:

A. cashing in stamps.
B. playing Persecutor.
C. using social control.
D. being in their Child.

TRANSACTIONAL ANALYSIS COGNITIVE TEST

FORM #3

Instructions

Please do not write or make any marks on this test. Instead a computer answer sheet should be used to record your answer to each question. Please make sure to record your code number, the date and the Form #3 on the computer answer sheet with a #2 pencil. If you decide to change an answer to a question, make sure that you completely erase the first answer. If you cannot completely erase the answer, ask for another answer sheet. Each question has one best answer that you should select. Remember that all questions should be answered from within the framework of Transactional Analysis. There is no time limit to this test.

.....

1. In TA terms, withdrawal means:

   A. Going off addictive drugs.
   B. Rejecting strokes.
   C. Not exchanging strokes.
   D. Not giving strokes.

2. Pastimes are:

   A. Relatively safe since you don't see the people again.
   B. Necessary steps to intimacy.
   C. Safe ways of getting to know people.
   D. Self-defeating because you don't get enough strokes.

3. Transactional Analysis proper is the study of:

   A. Whether the therapist is performing properly.
   B. What people do and say to each other.
   C. Appropriate situations for using TA.
   D. Correct clinical usage of TA terms.

4. "A consistent pattern of feeling and experience directly related to a corresponding consistent pattern of behavior" is the definition of:

   A. A transaction.
   B. A racket feeling
   C. A rubber band feeling.
   D. An ego state.

5. Child battering is an extreme form of:

   A. Natural Child rebellion.
   B. Adapted Child fear.
   C. Game playing
   D. Discounting.

6. The reason that a person plays games is:

   A. Well within the Adult awareness of the player.
   B. Probably not within the Adult awareness of any player, at least when he makes his first move.
   C. That people are basically not-OK.
   D. That it usually is the only way to get strokes.

7. A "Racket" feeling is one that:

   A. Is carried by Winner scripts.
   B. A familiar feeling that leads to no action.
   C. Is the result of genuine misbehavior.
   D. Leads to a change of status quo.

8. Flunking a test by not studying and partying instead can be an example of:

   A. Stupidity.
   B. Cashing in stamps.
   C. Gold stamps redemption.
   D. Little Professor.

9. The Drama triangle refers to:

   A. Conflicts between the three ego states.
   B. Three Games being played at the same time.
   C. Basic roles in a Game.
   D. Manipulative "hooks" in a game.

10. Activities are:

   A. Ways of structuring time that deals with reality.
   B. Something you must do.
   C. Found in everyone's lives.
   D. Found only in organizations.

11. "You take it all too seriously," is what type of discount?

A. Denying that a problem exists.
B. Denying that the situation is important.
C. Denying that anything can be done.
D. Denying the ability to do anything.

12. A Game played from which ego state reinforces a life position and advances a script?

A. Parent.
B. Contaminated Adult.
C. Child.
D. Critical Parent.

13. A realistic, mentally healthy position is:

A. I'm not-OK; You're OK.
B. I'm OK; Your're OK.
C. I'm OK; You're not-OK
D. I'm not-OK; You're not-OK.

14. In TA terms "stamps" refer to:

A. S & H green stamps.
B. Psychological suicide.
C. A collection of old feelings.
D. Beating up the Child from the Parent.

15. If the Adult is in executive control, then:

A. Stimuli is received through it before a person responds or acts.
B. Autonomous decisions are more difficult.
C. A person will be more spontaneous.
D. The Parent ego state is de-cathected.

16. "Stop crying, it doesn't help" is a _____ stroke.

A. Unconditional positive.
B. Conditional positive.
C. Unconditional negative.
D. Conditional negative.

17. The Parent ego state is:

A. The manipulator of the personality.
B. The executive of the personality.
C. Discounted in TA.
D. The second ego state to develop.

18. Strokes for "being" rather than "doing":

A. Should be avoided if the giver is uncomfortable.
B. Are unconditional reinforcers of an I'm OK position.
C. May hinder actions toward autonomy.
D. Are best left to professionals to deal with.

19. All but one of these statements about Games is true. Which is incorrect:

A. The players must know the game in order to play.
B. All games have a beginning and a given set of rules.
C. They are ongoing series of complementary transactions which are plausible at the social level.
D. Pay-offs are usually unpredictable and a surprise to the players.

20. A person who says, "I've tried and tried for years and can't get anywhere" is involved in:

A. Rituals.
B. Banal scripting.
C. Integrating his Child and Parent with his Adult.
D. Reluctance to look at the total situation to avoid the obvious.

21. "What time is it?" "You're always in such a hurry!", is an example of:

A. Nagging.
B. Discounting.
C. Teasing.
D. Crossed transaction.

22. The Nurturing Parent contains:

A. Moralizing punitive messages.
B. An evaluation process.
C. Protective limits.
D. Opinions on how to behave.

23. The Adapted Child is:

A. Inborn.
B. Learned from Parent figures.
C. Creative.
D. A believer of magic.

24. Which ego state would cover stress by acting cheerful?

A. Natural Child.
B. Adult.
C. Critical Parent.
D. Adapted Child.

25. The definition of a positive stroke is:

A. A sincere compliment.
B. Positive recognition.
C. A modified physical touch.
D. A script message activated by a situation.

26. "Wouldn't you like to come up to see my etchings?" is an old cliche´ illustrating:

A. Complementary transactions.
B. Superficial transactions.
C. Indirect transaction.
D. Ulterior transactions.

27. A "racket" feeling is:

A. A necessary step to action.
B. A pay-off to a Game.
C. Usually real.
D. Not based on any experience.

28. People play psychological games to:

A. Support their existential position.
B. Have a good time.
C. Strengthen their Adult ego state.
D. Protect their Child ego state.

29. The decisions we made during our childhood:

A. Can't be changed.
B. Were usually right because kids don't fool themselves.
C. Didn't have anything to do with reality.
D. Were usually wrong but can be changed.

30. According to TA, all games start with:

A. A discount.
B. Someone taking one of the game roles.
C. A crossed transaction.
D. Someone cashing in a stamp.

31. Counter-injunctions are usually:

A. Created by the person to off-set injunctions they got from their parents.
B. Given non-verbally.
C. Given verbally.
D. Telling the person how their life should end up.

32. The Natural Child part of the Child ego state:

A. Decreases in importance as a person gets older.
B. Is the source of empathy.
C. Is expressed when a student is engrossed in studying.
D. Is indifferent to hurting others.

33. According to TA, a person who is highly effective:

A. Is always in their Adult and therefore is very logical.
B. Uses their Adult to decide if their needs are OK.
C. Can change ego states readily in response to changing situations.
D. Is usually in their Child and therefore is doing what they need to do.

34. The need to structure time is:

A. Conditioned culturally.
B. A sexual need.
C. Inborn.
D. A ritual.

35. Feeling lonely instead of finding someone to be with is an example of:

A. Being in your "racket".
B. Rubber band feelings.
C. "Blemish"
D. Time structuring.

36. In TA terms, a delusion is caused by:

A. "Adult" contamination of "Child".
B. Traumatic childhood trauma which results in crazy "Parent tapes".
C. "Parent" contamination of "Adult".
D. "Child" contamination of "Adult".

37. In TA, the phenomenon of exclusion is related to:

A. Rigid ego boundaries.
B. Lax ego boundaries.
C. Group dynamics.
D. Social control of individuals.

38. Script instructions are programmed into:

A. The "Adult" ego state.
B. The natural "Child" ego state.
C. The adapted "Child" ego state.
D. The "Parent" ego state.

39. TA advocates which Life Position for people to work towards?

A. I'm OK; You're OK.
B. I'm OK; You're not-OK.
C. I'm not-OK; You're OK.
D. I'm not-OK; You're not-OK.

40. The position of "I'm not-OK; You're OK" would most likely be held by a:

A. Paranoid.
B. Delinquent.
C. Someone who usually is withdrawn.
D. Truck driver.

41. Intimacy in TA terms refers to:

A. Being together.
B. Expressing the Natural Child feelings of warmth and tenderness.
C. Risking growth.
D. Having Child-Child interactions with someone you like.

42. Select the positive, unconditional stroke:

A. You look good today.
B. I like you when you're so sweet.
C. You have great taste in clothes.
D. I enjoy being with you.

43. Which of these is an example of intimacy:

A. Doing someone's chores because you want to help.
B. A mother singing to her baby.
C. A husband bringing his wife flowers and candy.
D. Husband and wife share their feelings about the wife's new job.

44. The definition of stroke in TA terms is:

A. Any act implying recognition of another's presence.
B. A biological deficiency that needs to be eradicated.
C. Physical touching.
D. A response to a need.

45. A person who is insufficiently positively stroked will often:

A. Die.
B. Feel I'm OK; You're not-OK.
C. Provoke negative strokes.
D. Become a "Now I've got you, you son of a bitch" player.

46. When an initial "Adult" to "Adult" stimulus provokes a "Parent" to "Child" response, the transaction is:

A. Angular.
B. Ulterior.
C. Complementary.
D. Crossed.

47. "Teasing" a child is, in TA terms:

A. A "Warm Fuzzy".
B. A conditional stroke.
C. A negative stroke.
D. A ritual.

48. The position I'm not-OK; You're not-OK is best described as:

A. Schizoid.
B. Paranoid.
C. Healthy.
D. Depressed.

49. A contaminated Adult is:

A. Experienced as withdrawal.
B. Hard to cathect.
C. Can be delusions and hallucinations in extreme cases.
D. Emancipated and can make its own autonomous decisions.

50. "Hellos" and "goodbyes" are examples of:

A. Rituals.
B. Child-Child dialogue.
C. Transactions.
D. Intimacy.

51. Which statement about positive strokes is not true:

A. Sometimes they are compliments.
B. They are often an expression of affection.
C. They are usually complementary transactions.
D. They create stroke hunger by stimulating the need.

52. Someone who sets unnecessarily strict limits on behavior or is charged with enforcing rules sadistically is a:

A. Karpman dramatist.
B. Kick Me player.
C. An Adult out of control.
D. Persecutor.

53. The ego state part which "psyches out" the best move in the situation is the:

A. Adapted Child.
B. Natural Child.
C. Adult.
D. Little Professor.

54. A person with a Lax Ego Boundary is said to:

A. be low-energy.
B. Be able to change ego states readily.
C. Exceptional in functioning.
D. Lacks identity.

55. "Don't feel bad, Doc, I can take the truth," is an example of:

A. Contract.
B. Winner script.
C. Kick Me player.
D. Nurturing Parent.

APPENDIX B

SKILLS ABILITY SCALE: STIMULUS STATEMENTS

APPENDIX B

SKILLS ABILITY SCALE: STIMULUS STATEMENTS

#1 (Male). "She did it again! Just walked out leaving the dishes in the sink....That woman is driving me crazy....Twenty years of..."

#2 (Female, young). "My girlfriend asked me to call. She..ah.. felt kinda funny calling. Well, she thinks she's pregnant. But she's afraid to go to her family doctor. You know, he's known her since she was a kid. Anyway, I said I'd call for her. She's my best friend. I just heard your thing on the radio about referrals and stuff. Do you know of a doctor she could go to for a test?"

#3 (Female, scared). "Hello! Is someone there? Jesus! I heard the noise again. Some guys are outside fooling with my door. I called the police and they said they'd be right over. But I'm all alone. Oh, no! They're shaking the door know again. Hello! Hello!"

#4 (Male). "I don't have any money and I need to see a doctor about this rash I got. Someone at work said there's free clinics somewhere. But I couldn't find them in the phone book."

#5 (Female). "Boy, I'm really pissed! I was at a party tonight and I got to talking with this guy. He seemed really nice. We talked about sports and found out that we both like to ski and I thought maybe I'd finally found a guy I could have some fun with. Boy was I

wrong! He offered to take me home and I thought he was just being polite. So I invited him in and offered him a drink.

Well, that did it. He wouldn't keep his hands off me. I told him I wasn't that kind of girl and he got mad. He said I was leading him on wearing sexy clothes and inviting him in! And I wasn't! I was just trying to be nice. It seems like every date I've been on ends that way. You just can't trust men. They're all alike!"

#6 (Male). "Hi! How ya doin'? I'm doin' fine. My buddy's been with me all afternoon. This is a bomb trip, man! Great acid. Anyway, Chuck's going out to get us some food and he doesn't want me to be alone. So you get elected to be my guide for twenty minutes. Doesn't pizza sound great!"

#7 (Male). "I've got a gun here. It's loaded and I know how to use it. I was in Nam ya know. Saw lots of things....but what's it matter now? (sigh) No one cares. I lost my legs and I can't get a job. And this is real funny. You're gonna get a kick out of this! My fiancee is marrying someone else tomorrow."

#8 (Female). "Someone told me that using contraceptive foam is just as good as using birth control pills. I've been on pills a couple of years and haven't tried anything else. I thought I'd check it out, though, first. Do you have any information?"

#9 (Female). "My fiancee thinks I'm a virgin, but I'm not. Is there any way he can tell?"

#10 (Female). "I'm thinking about ending it all. I've had it. Everything's gone wrong. There's nothing I can do about it. And I've got a bunch of pills here that'll help me."

#11 (Female). "I don't like being a nosey neighbor, but something's got to be done. The father next door is an alcoholic and comes home and beats up his children. It just makes me sick. This morning Sarah came over to play with my Linda and she had a swollen wrist. I don't know much about medicine, but I think it's broken. Can I take the child to the doctor or call the police? I'm not sure what's legal."

#12 (Female). "Some smart ass guy in my class says that it's OK to drink alcohol and take downers. He says it's a great trip and I should try it. I told him I was going to call you first and find out if he's telling the truth. Is he?"

#13 (Female). "Boy am I going to get my boss! I'm so mad at him! All year long my boss has loaded me with more work than the other secretaries. He thinks I'm such a good worker! Well, I've had it! He left yesterday for vacation and he expects me to run everything. I'm twice as busy doing his work too! Well, I'm just going to let everything pile on his desk. I'm just going to sit there and drink coffee and read magazines and he can go to hell! When he gets back and opens his door...Man...will he be surprised! Don't you think that's a good trick?"

#14 (Female). "I want to know what my rights are. My husband says he doesn't have to pay child support 'cause I'M the one who left with the kids. Is he right?"

#15 (Female). "I was going to this therapist and I really trusted him and was willing to work in the group. But just because I never had

anything to work on when I got there he said I didn't really want to work. It wasn't true! I just didn't trust the other people in the group. Mrs. James would laugh all the time and make an ass of herself and that funny looking Mr. Carlson never said anything, but he made these funny noises. I got stuck with a bunch of creeps. I didn't belong there.

And then I found out that the therapist was a draft dodger! Can you beat that! I'm not going to trust anybody who doesn't believe in his country! And here all the time I thought he was a good person.... Good thing I found out about that in time."

#16 (Male, scared). "Can you help me? My friend just passed out on the floor. There's just the two of us in the house and I don't know what to do."

#17 (Female). "I found some red capsules in my daughter's purse. If I describe them can you tell me what they are?"

#18 (Male). "I'm afraid to go home to my wife. I got fired today and I feel really stupid. I've been having a lot of trouble at work. My boss and I have a personality clash. And he warned me that I was calling in sick too much. The next time I better bring in a doctor's excuse or I'd be fired.

Well, I didn't think he'd do that. And I really wanted to go hunting Friday so I took the day off. Well, when I walked in the office without a doctor's excuse this morning, he blew his stack.

Um...I don't know what I'm going to tell my wife. This is the fourth job I lost this year. I can't figure out how come I always end up a loser...I guess I always pick on the wrong bosses."

#19 (Female). "Hey....I need some help. My bedroom is scaring me. The walls keep weaving in and out and my bed won't stop moving. I'm afraid to sit on it. Mag and I dropped some window pane about three hours ago, but I never saw this stuff before. Can you come over?"

#20 (Male, angry). "I warned her! I said if I caught her going out on me again I'd kill her. And I will! I came home from work and she's not here. So I'm just waiting. She better have a good excuse."

#21 (Male, hesitant). "Ah...I'm just here for a...for ah... construction job for the summer. I don't know any...anybody except the guys at work...wonder how I can meet some chicks."

#22 (Male). "I don't know what to do. I feel numb. Diane and I went together all through high school. We were planning on getting married when I got done with college, but that isn't going to happen. We just had a big fight and she gave me back her diamond. I can't believe this is happening to me."

#23 (Female). "Is this a volunteer place I'm calling? I have three children in school during the day and I'd really like to get involved in something. The only organization I know about is the Red Cross, but I'm not the nursing type. I used to be a bookkeeper before I was married. Is there any place that I could use my skills part time?"

#24 (Male). "I just can't get to sleep tonight. I've tried reading and warm milk. Nothing helps. I just keep thinking about the funeral today. I thought maybe if I talked it out I could get some rest."

#25 (Female). "I'm a sensitive person and sometimes people can't understand that I take things to heart. I seem to always be around

people who hurt my feelings. I don't understand how they can be so cruel. My second husband was especially mean to me. It took me a long time to realize he wouldn't change.

Why, just yesterday I offered Rosemary--she's my cousin--a recipe for my special fruitcake. And she said she didn't bake much and probably wouldn't ever use it, so I shouldn't go to the bother and write it down for her. That's what really hurt my feelings. I don't offer my recipe to everyone!"

#26 (Female). "Nobody appreciates what I do. (sigh) I work so hard to do everything right. I want to be a good mother you know. I make breakfast in the morning for everyone, drive the kids to school. My house is always open for the kids to bring their friends home to. I bake special desserts that I know they'll like. I've always tried to please Jack--that's my husband. But it seems like they never notice. I feel like I'm being taken for granted. I don't understand what I'm doing wrong."

#27 (Male). "My mother is really mad at me. She asked me to stop at the dry cleaners after class to pick up the coat she wanted to wear to a party tonight. I forgot. And now it's closed. She said it's the last straw. I guess she's right. I'm always forgetting things. (sigh) Last month I forgot to send in the insurance money for my car and now it's cancelled. My dad just says it figures. He thinks I'm stupid anyway. I guess I am."

#28 (Female). "I want to go to college but I'm not going. My parents are divorced and my mother supports us. I had a rough time growing up, taking care of the younger kids while Mom worked. My teachers say I have

a high I.Q. and I should get better grades. They expect too much of me. I'd like to do better, but I just can't. I wish I could, though. No one in our family's been to college. I'd like to be the first one. If I'd been born in another family I'd be able to go. How come I had to have it so rough?°

#29 (Female). "My parents won't let me do anything I want. I could be a great guitar player...they won't give me money for lessons. It's not as if we're poor. They're just selfish. They know how much I want to play. They just like to see me miserable. I could do a lot of things if it weren't for them. They just enjoy having all the power over me. I can't wait until I'm 18. Then I'll be happy!"

#30 (Male). "Ever since I was a kid people have been picking on me. People expect too much of me. They don't understand that I've had a rough life and I don't get sympathy from anyone. They tell me 'Do this, John', 'Do that, John', but I can't do everything! I wish people would just leave me alone."

APPENDIX C

SKILLS ABILITY SCALE: RATING SCALES

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SKILLS ABILITY SCALE: RATING SCALES

GENERAL DISCUSSION: Underlying the Skills Ability Scale (SAS) is the concept that calls coming into a crisis center can be sorted into categories along the dimensions of presented need of the caller and the degree of emotion present. Three categories were identified from a history of the contacts taking place at the Open Door. The categories are as follows:

Type I: Information:
The caller is making a request for information. The information requested can be about general knowledge or for the location of appropriate community resources. There are little or no indications of a strong affective component accompanying the request for information. And there are no indications that the caller will not be able to hear and use the information.

Type II: Dangerous Emotions:
The caller is apparently overwhelmed by the affective component of the situation. There are strong indications that the caller will not be able to begin appropriate coping behavior until the affective component is brought under control. Also applies to trippers or other drug users having a good time.

Type III: Long-Term Stress:
The caller is presenting material about some long-term stress or pattern in his or her life. Although affective material may be a crucial component, the caller is still able to use existing coping mechanisms. It is assumed that the caller is requesting aid in clarifying the various aspects of his/her problem and developing alternative courses of action.

Type I: Information:

Level 1. Responses at this level are judged to be "turn offs." The response is judgmental, in a negative sense, of the caller and/or the request. Or the response gives information that does not correctly respond to the request.
Examples:
a. "I'm sorry but answering that question conflicts with my values systems. You'll have to talk with my shift partner."
b. (In response to a request to identify some capsules) "Why don't you bring the tabs of acid in and we will analyze it for you."

Level 2. Responses at this level do not answer the caller's question. However, the response does not turn off the caller. The most common example is an empathic response to the question. Or the Crisis Intervention Agent does not indicate his limitations in giving information. For example, giving legal or medical information without telling the caller he is not an expert and advising the caller to contact a professional.

Level 3. Responses at this level indicate that the question can be answered. The limits of the Crisis Intervention Agent in giving legal or medical information is clearly communicated to the caller. However, the information given is incomplete or indicates another source of information that must be contacted before the caller's questions can be answered (Crisis Intervention Agents are expected to be able to provide a complete, accurate answer to each speaker statement.)

Level 4. Responses at this level give an accurate answer to the caller's question while clearly communicating the limits of the Crisis Intervention Agent's expertise.

Level 5. Responses at this level give an accurate answer to the caller's question while clearly communicating the limits of the Crisis Intervention Agent's expertise. The response may also indicate the existence of further resources. And all responses at this level contain an invitation to the caller to continue talking about his/her concern.

Type II: Dangerous Emotions:

General: In life-threatening situations or when the caller requests a Flying Squad, the response must include a request for the caller's location. If this is not done, the response should receive a rating one level lower than it normally would.

Level 1. Responses at this level tend to keep the caller overwhelmed by emotions. The most common example of this level is making an empathic response.

Level 2. Responses at this level tend to move the caller into a cognitive process. However, the response does not offer reassurance, new information, or suggestions for appropriate action. The most common example of this level is a response which requests more information from the caller.

Level 3. Responses at this level contain 2 out of the 3 following elements:
(a) reassurance to the caller,
(b) a tendency to move the caller into a cognitive process,
(c) giving new information or correcting false information.

Level 4. Responses at this level contain all three of the following elements:
(a) reassurance to the caller,
(b) a tendency to move the caller into a cognitive process.
(c) giving new information or correcting false information.

Level 5. Response at this level contains all three of the elements listed in Level 4. In addition, the response contains instructions to the caller which aid in coping with the immediate crisis.
Examples of instructions.
a. Bad Trip: "Open and close your hand. See, you control that!"
b. Suicide: "Let's make a contract to talk to each other for the next hour before you do anything."

Type III: Long-Term Stress:

General: This category of contacts is typically made up of people playing what Transactional Analysts call "games." The general expectation of responses is that they will be nonjudgmental, show "positive regard" for the caller, demonstrate that the Crisis Intervention Agent hears/understands what the caller is saying, and does not reinforce the caller's game or racket feeling.

Level 1. Responses at this level tend to reinforce the caller's game or racket feeling. There may be evidence that the Crisis Intervention Agent is setting up or participating in a series of Ulterior Transactions.
Examples:
a. Instead of "You feel stupid," the response is "You're stupid."
b. The Crisis Intervention Agent explains how the caller probably misunderstood the situation or somehow acted in the wrong manner.

Level 2. Responses at this level still tend to reinforce the caller's game or racket feeling. However, the Crisis Intervention Agent is not participating in Ulterior Transactions. The most common response of this type is empathy, focusing on the racket feeling.
Examples:
a. (Stupid) "You really feel stupid."
b. (NIGYSOB) "You're really angry."

Level 3. Responses at this level do not reinforce the caller's game or racket. The response (a) shows that the caller's feelings (still racket) are heard and accepted, but (b) tends to move the caller into his/her Adult by requesting more information.
Examples:
a. (RAPO) "You're really angry at men because they all seem to be after sex. Have you ever met a man who wasn't?"
b. Stupid) "You really feel stupid because you forgot to pick up your mother's coat. It seems that you end up feeling stupid a lot of the time."

Level 4. Responses at this level (A) are directed at feelings underlying the caller's racket and (b) introduce the idea that changes are possible without making the change the caller's responsibility.

Examples:

a. (RAPO) "I hear that you're angry and hurt. How could those things change for the better?"

b. (NIGYSOB) "You're really angry because you don't feel that your boss is fair to you. But it sounds like what you're doing could get you into trouble."

c. (If It Weren't For You) "You are really disappointed because you don't feel able to go to college. Have you thought about other ways to finance your education?"

Level 5. Responses at this level (a) are directed to feelings underlying the caller's racket, (b) tend to hook the caller's Adult, and (c) put the responsibility for change on the caller.

Examples:

a. (RAPO) "You're angry and hurt. What do you think you can do differently next time?"

b. (Stupid) "You're feeling worthless because you always seem to be making mistakes. How can you change things so you'll feel better?"

APPENDIX D

LETTER AND QUESTIONNAIRE SENT TO VOLUNTEERS

APPENDIX D

LETTER SENT TO VOLUNTEERS

Dear Volunteer:

Several months ago it was decided at a staff meeting that the Open Door would perform an experiment to determine if certain changes should be made in our training package. This experiment will also be Mike Brown's doctoral thesis. This letter is to let you know more about that experiment.

The basic question that is being asked is whether or not adding Transactional Analysis (TA) will improve the training in Empathy, Value Clarification and Decision Making. This will be done by giving each volunteer at the Open Door some pre-tests and then randomly assigning you to different groups. These groups are (a) a Control Group that doesn't do anything except take some tests, (b) a TA Study Group that only reads a handbook and takes the same tests, (c) a TA Practice Group that reads the handbook and then goes through our regular IPR training, and (d) a group that just repeats our regular IPR training.

Because of the nature of the experiment, some of you will be asked to put in more time than the others. But each group is equally important for the experiment to really be meaningful.

The experiment will take an effort from each of us. When it is done we will have the necessary information to decide if we want to include TA in our training program. And we will have an excellent justification for our decision which is important in the present move by the State for greater control of crisis centers.

I should also mention that the results of the study will not be used to evaluate your skills. The tests that you take will not identify you as a person. To facilitate this lack of identification, please select for yourself a four digit number (perhaps the last four digits of your Social Security Number) for you to use in identifying the various tests. Please keep your code number to yourself because the lack of identity is necessary for the experiment to be valid. However, I need to know what code number you selected so that I can make sure that there is no duplication.

Enclosed with this letter is a questionnaire that will be used to set up the schedule for the whole experiment. It also requests some demographic information so we can describe the Open Door's volunteer staff. Please fill it out and return it to my folder the next time you are working a shift.

Thank you,

Mike Swenson

SCHEDULING QUESTIONNAIRE

TRAINING EXPERIMENT

Name _____ Experiment Code No. _____

Marital Status _____ Age _____

Highest school grade completed _____ Major _____

Employment _____ Full time ____ Half time ____

I. Pre-tests: Please check all the times that you could attend.

Feb. 11th 7:00 pm to 11:00 pm ___ Feb. 13th 7:00 pm to 11:00 pm___

Feb. 12th 7:00 pm to 11:00 pm ___ Feb. 14th 7:00 pm to 11:00 pm___

However, you will only be asked to come to one session.

II. The experiment will take place at the following dates:

Feb 15th (Friday) 7:00 pm to 11:00 pm Can Come _____

Feb 16th (Sat.) 9:00 am to 6:00 pm

Feb 17th (Sun.) 9:00 am to 6:00 pm Can't Come _____

III. Post-test: Please check all the times you could attend. It would be preferred if you could come the 17th.

Feb. 17th 7:00 pm to 11:00 pm ___ Feb. 20th 7:00 pm to 11:00 pm ___

Feb. 18th 7:00 pm to 11:00 pm ___ Feb. 21st 7:00 pm to 11:00 pm ___

Feb. 19th 7:00 pm to 11:00 pm ___ Feb. 22nd 7:00 pm to 11:00 pm ___

IV. Follow-up test: Please check all the times that you could attend.

March 25th 7:00 pm to 11:00 pm ____

26th 7:00 pm to 11:00 pm ____

27th 7:00 pm to 11:00 pm ____

28th 7:00 pm to 11:00 pm ____

29th 7:00 pm to 11:00 pm ____

30th 9:00 am to 1:00 pm ____

2:00 pm to 6:00 pm ____

7:00 pm to 11:00 pm ____

31st 9:00 am to 1:00 pm ____

2:00 pm to 6:00 pm ____

7:00 pm to 11:00 pm ____

APPENDIX E

LISTENER PERFORMANCE SCALES

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LISTENER PERFORMANCE SCALES

Empathic Response Scale

Level 1. At this level the verbal and behavioral expressions of the listener do not attend to the feelings, attitudes or values of the speaker. The listener is either ignoring or unaware of the speaker's present and obvious feelings. The listener:

a. points out conflicts in the speaker's presented material in a judgemental way;

b. reacts to the material presented by the speaker in a negative manner;

c. uses personal examples or personal feelings that take the focus away from the speaker.

Level 2. The listener may be sensitive to the obvious material presented by the speaker and yet misunderstands much of what the speaker has communicated. The listener blocks off or misdirects the speaker. At this level the listener:

a. responds with platitudes or simple solutions;

b. responds using abstract and general terms;

c. identifies the speaker's feelings, attitudes or values but uses examples outside of the speaker's here-and-now experience;

d. responds using questions about the speaker's experience or responds by only "summarizing" the presented situational material;

e. identifies a feeling, attitude or value and "hammers" at the speaker preventing the speaker from moving to other material.

Level 3. The responses at this level show understanding and reflect present, obvious feelings, attitudes or values. But the listener does not respond accurately to how the speaker feels beneath the expressed material. The listener:

a. consistently reflects the speaker's stated feelings, attitudes or values in a non-judgemental way;

b. aids the speaker in exploring the depth of feelings but allows the speaker freedom to move to new material.

Level 4. The listener consistently uses straight reflective statements and is also able to add to the speaker's self-understanding by identifying underlying feelings, attitudes and values not named by the speaker. The listener:

a. is able to focus on those feelings, values and attitudes that are central to the speaker's problem;

b. responds to contradictions with examples out of the speaker's stated experience;

C. is able to show the relationship between the speaker's feelings, attitudes and values; "You're really angry about your son smoking grass because you feel that it is dangerous and you're afraid he will get hurt."

Level 5. At this level the listener can consistently use straight reflective statements in conjunction with consistently identifying underlying feelings, attitudes and values. The listener communicates a full awareness of what the speaker is experiencing.

Listener's Genuineness Scale

Level 1. The listener is clearly defensive. There is consistent overt evidence of a very considerable discrepancy between what is said by the listener and what the listener admits to experiencing. Examples are:

a. the listener who says in a strained voice that he is not bothered by the speaker's presented material;

b. the listener who does not admit to confusion about what the speaker is presenting.

Level 2. There is evidence of defensiveness or presence of a facade in the listener's responses. The listener may respond in a contrived or rehearsed way rather than in a personal manner. The listener consistently avoids reflecting or exploring the depth of certain emotions. The listener who:

a. identifies "hurt" without exploring the need to cry;

b. uses a monotone voice when speaking and fails to match tone with the speaker;

c. avoids obvious verbal and non-verbal signs of anger.

Level 3. There is no evidence of defensiveness or presence of a facade in the listener's response.

a. the listener admits to being confused in order to clarify the presented material.

b. there is minimum appropriate physical contact, i.e. holding the speaker's hand while the speaker cries.

c. the listener reveals his feelings when they are interfering with his ability to listen to the speaker.

Level 4. The listener is open to experiences of all types, both pleasant and unpleasant. The listener is able to reflect and explore the depth of all emotions. However, extensive interaction with deeper feelings is tiring to the listener because the listener is uncomfortable experiencing the depth of the emotions.

a. there is appropriate physical contact, i.e. holding and/or stroking the speaker when the speaker cries.

b. the listener is able to control his innate uneasiness in dealing with the speaker's presented material.

Level 5. The listener is freely and deeply himself without retarding the growth of the speaker. The listener need not express personal feelings but whether he is clarifying or sharing experience, it is clear that he is being himself so that his verbalizations match his inner self.

Listener's Nonpossessive Warmth Scale

Level 1. At this level the listener is offering advice or giving negative regard. The listener actively approves or disapproves of the speaker's behavior. Through such action the listener is making himself, not the speaker, the center of attention.

Level 2. The listener communicates to the speaker that his behavior matters in the sense that the listener is concerned about the outcome of the speaker's problem. There is little evaluation of the thoughts and feelings of the speaker. However, the listener may communicate that he wants the speaker to be more mature, not quite so emotional or that he wants the speaker to confine the conversation to feelings.

Level 3. The listener communicates to the speaker that his behavior matters in the sense that the listener is concerned about the speaker. There is no overt negative evaluation and very little positive evaluation of the presented material. However, the listener still communicates a desire that the

speaker talk only about feelings, attitudes or values.

a. the listener does not smile or nod when the speaker gives what the listener considers to be a correct answer;

b. the listener does not show skeptism or approval when the speaker advances a tentative solution to their problem.

Level 4. The listener communicates warmth and respect for the speaker. The listener may communicate a desire for less sustained heavy emotionalism. There is neither negative or positive approval of the speaker's presented material. However, the listener may communicate the desire that the speaker present only personally relevant material.

Level 5. The listener communicates warmth without restriction. There is a deep respect for the speaker as a person and his rights as a free individual. At this level the speaker is free to be himself even if it means regressing or even disliking the listener.

Receiving and Using Feedback

Level 1. The receiver is clearly defensive. Feedback is consistently met with explanations as to "why" they did what they did. The receiver is unable to summarize and identify major themes of feedback. Further interactions reveal no learning from the feedback.

Level 2. The receiver is sometimes defensive. Questions and discussions often stem from the receiver attempting to find some instance where their behavior would have been correct. Often the person uses self-criticism to avoid negative feedback from others. Further interactions reveal that some feedback is being used to improve their performance.

Level 3. The receiver may still be apprehensive (as indicated by their hearing only the negative feedback) but questions and discussion stem from a need to clarify the feedback not to "prove" they were right. The receiver is able to summarize and identify major themes of feedback. However, their acceptance of feedback is based either on their understanding of theory or the authority of the giver. Further interactions reveal that most feedback is being used to improve their performance.

Level 4. The receiver is most often comfortable in receiving feedback and is able to hear both positive and negative feedback. The receiver often can understand the feedback as it relates to their

own emotional experience. (They can recall the experience of being hindered in speaking by the listener asking questions.) Also, the receiver has some insight into their values, attitudes and feelings that have resulted in the behavior for which they are receiving feedback. Almost all feedback is used to improve their performance.

Level 5. The listener is clearly at ease and eager for feedback as a method of improving their performance. Questions and discussion are used to clarify feedback with the receiver owning feelings of confusion or disagreement. The receiver is able to summarize and identify major themes of feedback. Further, the receiver is able to identify his values, attitudes or emotions that are producing his behavior. Further interactions show a progressive use of feedback.

Ability to Give Feedback

Level 1. Gives general feedback that does not communicate things that the receiver might be expected to be able to do something about. Often uses feedback as a method of satisfying emotions that are not being openly expressed (such as "beating up" the receiver). Conveys the feeling that the feedback is about what the person is as a person, not about specific behavior of the person.

Level 2. There is some general feedback but the giver also talks about some specific behavior that the receiver might be expected to be able to do something about. Some typical behavior at this level is:

a. not speaking directly to the person receiving the feedback;

b. using feedback to show how clever they are, i.e. "I got that he was feeling....";

c. giving only positive feedback when negative feedback was clearly called for.

Level 3. Gives specific feedback about things that the receiver might be expected to be able to do something about. Never gives general feedback. However, feedback is based on theory and does not reveal the emotions of the giver. Clearly communicates that the feedback is about the person's behavior not what the person is as a person. Gives both positive and negative feedback although there might still be a tendency to cushion the negative feedback. Checks to make sure that the feedback has been clearly communicated and understood.

Level 4. Begins to include examples of possible changes in behavior. Sometimes the feedback is based on the giver's emotions and experience. Begins to determine the emotional impact of the feedback on the receiver.

Level 5. Gives specific feedback about specific behavior that is based on the feelings of the giver. Readily supplies helpful examples of possible change. Gives negative feedback in a non-threatening manner. Consistently checks to make sure that the feedback has been communicated and the nature of the emotional impact of the feedback.

APPENDIX F

RAW SCORES OF THE TOTAL SAMPLE ON THREE ADMINISTRATIONS OF THE FIVE MEASURES

APPENDIX F

Table 12. Raw Scores of the Total Sample on Three Administrations of the Five Measures

Group	Code Number	S.A.S. Type I			S.A.S. Type II			S.A.S. Type III			Transactional Analysis Cognitive Tests			Affective Sensitivity Scale		
		T_1	T_2	T_3	T_1	T_2	T_3	T_1	T_2	T_3	T_1	T_2	T_3	T_1	T_2	T_3
CG	1301	27	26	26	14	14	13	26	26	26	22	25	22	46	48	44
	1555	23	24	23	10	11	11	19	19	18	28	28	33	36	35	32
	2193	26	23	22	15	14	12	21	23	22	23	23	19	28	26	32
	6008	29	28	30	18	13	15	22	21	22	27	31	36	40	41	42
	6673	36	34	32	17	17	19	33	33	21	36	38	27	48	53	50
	8893	23	28	28	16	15	15	18	19	23	24	22	23	37	42	40
	9419	30	30	32	18	17	22	22	22	22	37	37	33	40	28	44
	9837	24	22	32	12	15	11	20	21	28	31	31	31	42	43	46
TAS	1050	21	27	26	11	16	16	18	22	21	28	42	41	32	36	35
	1234	17	27	26	11	18	17	20	24	22	32	43	41	28	29	31
	1984	18	29	25	10	16	17	14	21	21	25	41	32	40	44	45
	3691	23	27	25	10	14	12	18	23	21	21	43	33	36	32	31
	5342	29	31	37	14	19	22	24	29	27	36	47	45	45	43	43
	7211	29	35	34	17	20	12	18	23	21	31	42	41	36	37	40
	7585	20	24	31	14	21	11	18	18	22	26	38	41	28	27	27
	7913	23	31	31	16	18	11	19	22	20	26	40	35	20	23	30
	8098	22	28	28	14	17	17	18	21	22	22	39	37	43	38	45
	8697	17	28	30	10	18	15	19	20	22	27	40	37	33	40	43
IPR-1	0138	24	30	28	16	15	17	21	22	23	41	39	39	44	44	51
	1465	26	27	26	18	17	18	18	20	20	32	34	26	47	24	38
	3625	26	26	26	13	13	14	21	21	20	26	36	33	40	37	32
	3855	21	29	27	13	16	16	18	20	21	29	32	34	47	45	50

	4588	28	31	30	17	16	19	18	20	19	30	35	31	39	40	39
	6376	20	24	21	15	15	15	21	22	20	28	25	29	41	45	45
	7777	23	24	28	12	14	11	20	20	20	10	09	15	37	39	37
	9701	24	35	32	12	17	18	17	23	25	36	38	37	49	43	39
IPR-2	1225	21	37	31	13	17	17	18	21	20	25	32	34	40	44	43
	1530	23	27	29	16	17	12	23	24	21	30	34	34	40	48	38
	4998	21	25	21	12	13	13	20	20	22	26	33	28	40	46	43
	5144	28	36	31	15	16	12	16	20	20	33	37	33	50	57	57
	8157	24	28	27	12	13	17	25	23	24	31	28	28	15	42	44
	8357	27	32	35	22	24	27	21	21	23	37	40	39	40	48	31
	8548	23	30	35	13	15	13	19	19	20	29	29	35	41	56	55
	9758	26	33	34	14	16	14	28	21	25	42	33	42	52	48	50
TAP-1	0541	26	34	28	13	21	16	19	25	22	31	45	37	41	47	47
	1066	25	35	42	14	20	30	22	32	38	40	48	48	47	48	46
	1955	21	35	37	21	21	28	26	34	35	27	40	38	38	45	45
	3769	20	37	39	13	20	20	18	30	30	24	41	39	42	52	43
	4337	23	38	36	17	21	20	19	32	24	30	44	42	39	50	45
	5053	22	32	29	12	21	21	20	29	29	32	47	46	36	48	43
	5654	24	33	36	15	23	13	16	26	26	25	43	40	29	41	41
	7289	23	31	34	18	20	20	21	35	35	29	41	38	36	41	41
	8936	23	32	39	14	21	26	17	26	34	32	42	42	40	48	51
TAP-2	0361	21	33	32	12	22	20	19	30	26	29	41	35	40	47	47
	0599	21	32	27	11	21	21	16	25	25	33	45	44	25	46	42
	2155	24	36	33	15	21	20	28	31	26	32	46	47	47	53	48
	2221	27	38	32	25	25	20	30	32	36	25	38	39	39	48	41
	3886	23	33	33	11	17	19	21	28	28	26	40	41	39	46	47
	5727	21	31	37	14	20	18	14	30	27	27	42	41	41	47	43
	8476	25	35	32	14	20	21	18	26	26	32	46	47	33	45	45
	8821	22	34	34	12	21	22	17	30	26	26	41	34	42	49	42

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