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Effectiveness Of Problem-solving And Anxiety-management Training In Modifying Vocational Indecision

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EFFECTIVENESS OF PROBLEM-SOLVING AND ANXIETY-MANAGEMENT
TRAINING IN MODIFYING VOCATIONAL INDECISION

by

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Submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

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ABSTRACT

This study assessed the impact of anxiety management and problem-solving training in alleviating anxious vocational indecision of university students. Three types of dependent variables were used--vocational, i.e., exploratory behavior and knowledge of one's career plan; self-reported anxiety, both general and specific to decision-making concerns; and problem-solving variables, i.e., self-reported decision-making difficulty and overall proficiency in using problem-solving skills. Thirty-two volunteers were randomly assigned to five treatment conditions: (a) anxiety-management training (AMT), (b) problem-solving training (PST), (c) a combination of anxiety-management and problem-solving training (CT), (d) a placebo procedure, and (e) a no-treatment condition. The same therapist, who was not the experimenter, group-administered the treatment and placebo procedures. The experimental design was mainly a repeated-measures paradigm involving pre- and post-treatment assessment of dependent measures. It was found that the three experimental treatments were differentially effective with respect to controls. The main finding was that CT was significantly more effective than PST, AMT and control conditions in influencing three areas of performance--vocational exploratory behavior, awareness of career plans and problem-solving behavior. The AMT was next in effectiveness, its influence being confined to the first two areas: The PST was more effective than controls in the problem-solving

area, especially regarding the discrimination of concrete information. It was concluded that vocational indecision exhibited by subjects of the study appears to be due to both defective problem-solving skills as well as defective execution of chosen alternatives. The results also suggest that the combination of anxiety management and problem-solving was uniquely effective in comparison to either procedure alone. Finally, the results confirmed that the clinical strategy for treating ineffectiveness in handling situational problems proposed by D'Zurilla and Goldfried (1971) has therapeutic potential.

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CHAPTER I

INTRODUCTION

This study attempted to devise and evaluate procedures to treat ineffective responding to problematic vocational situations. According to D'Zurilla and Goldfried (1971), responding effectively involves identifying what the effective response is and then carrying it out. This study evaluated procedures for promoting these two behaviors in anxious clients beset with vocational indecision. The clients were university students. The purpose of the study was to evaluate the impact of anxiety management and problem-solving training on them.

The general area to which the present research has relevance is the role of human problem-solving in daily living. People are faced continuously with situational problems to which they must respond and select a course of action. Whether they respond effectively or ineffectively can have implications for their mental health. D'Zurilla and Goldfried (1971) have stressed the need for training clients to cope with real-life problems. Developing appropriate methods of giving this sort of training has become important in view of the current search in the mental health field for techniques that are preventive and directly relevant to human concerns (Bennet, 1965; London, 1972). The effective response and problematic situation are defined in the

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present study according to formulations of D'Zurilla and Goldfried (1971). The effective response is the one that is likely to maximize positive consequences to the individual and minimize negative ones. The problematic situation (or set of related situations) is one in which the individual does not know which response alternative is likely to be effective.

The responses of university students to vocational problems were chosen as the specific area of interest for several reasons. First, the dilemma of vocational choice is a frequent problem in the campus population and, hence, easily sampled. According to Pollock (1971), crises involving a decision between alternatives are among the more difficult ones faced by college students. Finally, experience of campus counseling centres suggests that vocational indecision is a readily identifiable problem which clearly involves deciding between alternatives and is generally characterized by diffuse anxiety, anxiety regarding a course of action that is aversive, ignorance and doubt regarding what course of action to take, or a combination of these.

Problem-Solving Training

Theories of vocational decision-making (e.g., Ginzberg, Ginzberg, Axelrod & Herma, 1951; Super, 1953; Tiedeman & O'Hara, 1963) have dealt with the process of making a vocational choice from a developmental and dynamic point of view. Based on correlational evidence, for the most part, they have described stages in planning that occur sequentially over adolescence and early adulthood. According to Thoresen and Mehrens (1967), these theories are incomplete because

they have not offered an explanation, based on experimental research, of the specific behavior of individuals in real-life vocational situations. Similarly, in the area of traditional vocational counseling, there has also been a lack of emphasis on client decision-making behaviors. Counseling in schools has, to a large extent, consisted of giving clients accurate educational and occupational information. It appears, however, that it is not enough to give clients information and hope they will use it to make wise decisions. They need to be trained in organizing and synthesizing information so as to make "good" decisions and implement them (Clarke, Gelatt & Levine, 1965).

In this study, the terms problem-solving and decision-making are used interchangeably. Problem-solving or decision-making refers to behaviors that lead to identifying what the effective response in a problematic situation should be. The aim of problem-solving training is to increase the probability of identifying the effective response by training the client to use appropriate problem-solving behaviors. Two important conceptualizations of what behaviors are important in effective problem-solving are those of Bross and Gelatt (Bross, 1953; Gelatt, 1962; Clarke, Gelatt & Levine, 1965), and D'Zurilla and Goldfried (Goldfried & D'Zurilla, 1969; D'Zurilla & Goldfried, 1971).

Gelatt (1962) has adopted a systematic method for decision-making originally proposed by Bross (1953), as a conceptual frame of reference for counseling. According to this, decisions in school guidance are considered typically to involve an individual about whom

a decision is required, two or more alternatives for action, and a payload of relevant information. The process of deciding is thought to consist of a predictive system, a value system and a decision criterion. The predictive system consists of defining objectives, collecting data, generating alternatives and predicting outcomes and their possibilities. The value system consists of weighing the desirability of the outcome or consequences. The decision criterion serves to select a course of action. If the course of action selected calls for additional information or is itself a means of achieving a future goal the above problem-solving process can become cyclical and will have to be applied again.

Evans and Cody (1969) compared the extent to which male and female eighth grade students learned the Bross-Gelatt decision-making strategy described above in counselor-guided groups as well as non-guided groups. In the guided condition the counselors met individually with students and gave cues, prompts and verbal reinforcement, to ensure that all phases of problem-solving were covered. In the non-guided condition, the role of the same counselors consisted of reflecting on student responses and requesting elaborations with no assistance being given in the use of the decision-making strategy. Seventeen written problems of heterogeneous content were used in training sessions. Training in the guided and nonguided conditions consisted of an oral tape-recorded group presentation of the problem-solving strategy, followed by video-taped presentation of a male student model working through a problem with the guidance of a male adult. The phases of this strategy were then explained on a chalk

board. It is not clear whether in the practice sessions that followed subjects worked individually or in groups. There was a no-treatment control but no placebo group. It was found that guided practice was significantly superior to nonguided practice in facilitating use of the decision-making strategy when learning was measured immediately after training and after a 13-day delayed posttest. The effect of sex of students on learning the decision-making strategy was not significant. No attempt was made to measure transfer of learning to problems of a different type than those used in the training sessions or to behaviors in subjects' daily lives. The criterion measure was a judgement made by five male counselors (on the basis of ratings of tape-recorded responses) that the decision-making strategy was used, without prompting, in three consecutive training problems. Subjects' scores, however, did not result from a dependent measure common to all subjects since different subjects reached criterion on different problems.

In another study, Smith and Evans (1973) compared the effects of vocational group guidance, individual counseling and a no-treatment control on college students' vocational decision-making as assessed by Harren's (1964) vocational decision-difficulty checklist. Experimental treatments lasted five weeks and were ostensibly equivalent in content. Group guidance was found to be more effective than individual counseling and both were superior to the control condition. Students in the individual counseling condition, however, did not receive feedback on their performance while their peers in the group guidance condition did. A more important criticism is that experimental

treatments contained too many ingredients; training in the Bross (1953) problem-solving strategy as well as feedback from completing instruments for assessing occupational interests, values and life goals. It is unclear which of these was effective in producing therapeutic change. No placebo group was employed.

The Bross problem-solving strategy has found its main application in the area of school guidance counseling. It has stressed behaviors that influence a person's decision to select a course of action. On the other hand, it has a tendency to be overly theoretical. Its systems approach to decision-making also contains an emphasis on actual mathematical probabilities associated with outcomes and their subjective estimation by the decision-maker in real life.

In contrast, D'Zurilla and Goldfried (1971) have presented a view of problem-solving which is less theoretically complicated and has clinical applicability to a wider range of human problems. They have considered problem-solving to be a behavioral process, consisting of overt and cognitive operations. People go through this process in response to situational problems, in which they are faced with a variety of alternative courses of action. The goal of training in problem-solving is to help clients select more easily the effective response alternative. Following selection of a response, its performance or execution should result in an effective response to the problematic situation. Hence, according to D'Zurilla and Goldfried (1971), the effective response has two components, discovering a solution and executing it. D'Zurilla and Goldfried have identified a set of four cognitive operations which most researchers agree are

involved in the process of identifying a solution (Goldfried & D'Zurilla, 1969). These include (a) a careful definition of all aspects of the situation in operational terms, (b) generation of possible alternative solutions, (c) selection of the best alternative as a result of screening all alternatives on the basis of possible consequences, (d) verification of the solution through observation of consequences resulting from actual behavior. The last operation could possibly occur in conjunction with overt execution of the selected response.

There have been no controlled investigations of the effectiveness of the training scheme suggested by D'Zurilla and Goldfried. The literature, however, contains several examples of training methods involving one or other of the above problem-solving steps. Uhlemann (1968) found that defining and formulating behavior-change goals before therapy was begun produced behavioral change in couples who had volunteered for marathon group therapy. Varenhorst (1969) devised a training program in which sorting through possible alternatives and identifying consequences were the target skills. Symbolic behavior rehearsal or a simulation approach was used to assist students in using effective vocational planning. Training consisted of a decision making team-game in which high school students were required to plan the most satisfying life over a span of eight to ten years of a fictitious person, whose profile was provided. The counselor took an active role in teaching skills by selective reinforcement and role-playing. Stone, Hinds and Schmidt (1973) established that third, fourth and fifth grade elementary school children could be taught to

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pick out relevant facts, to generate alternatives and find appropriate solutions when supplied with video-taped vignettes of real-life nonvocational problem situations. Their performance was superior in these tasks when compared to untrained controls. Training consisted of exposure to modeling tapes, and a simulation game. This well-controlled study, however, needed some unobtrusive measure of transfer of training into the real-life behavior patterns of the children.

The above studies suggest that it is possible to train clients to use a strategy made up of specific cognitive skills using usual behavior modification techniques. Behavior rehearsal appears to have been the most frequent technique used. It appears that the training should also be viewed as a procedure whereby the individual develops a "learning set" or method of solving problems. He will thus increase his effectiveness since he will have learned general procedures for coping with problematic situations.

Four main methodological improvements seem to be called for in future investigations of problem-solving training. First, an attempt should be made to control for the effect of subjects' expectancies of treatment effect. Second, the dependent measures should include some behavioral measure of subjects' performance in real-life as well as laboratory measures of problem-solving ability. Third, the ingredients of problem-solving training ought to have as little similarity as possible to the contents of the dependent measure used. Finally, the ingredients ought to be unified around a theoretical position concerning their potential in effecting change. An attempt was made to incorporate these improvements in the present study.

Anxiety Management Training

Individuals often experience anxiety when faced with problematic situations. When an individual is unable to deal effectively with a problematic situation his experience of the inadequacy of his efforts may be accompanied by anxiety (D'Zurilla & Goldfried, 1971). On the screening instrument used in the present study, subjects reported experiencing overt symptoms of anxiety such as feeling tense and anxious, lack of sleep, poor appetite as well as covert symptoms such as feeling pessimistic, inadequate and helpless while wrestling with specific vocational problems. The stimuli evoking these symptoms appear to be characteristically of two types: cognitions or disruptive thoughts that have a unifying theme (e.g., the vocational problem) and stimuli external to the individual coming from the variety of situations in which anxiety is experienced.

Experimental data suggest that anxiety could reduce the efficiency of performance on complex learning tasks (Martin & Sroufe, 1970). Anxiety could conceivably interfere with a client's effective response by inhibiting its component behaviors: problem-solving activity and execution of the effective response (Goldfried & D'Zurilla, 1969). In fact, self-verbalizations that are derogatory or evaluative of a client's efforts have been found to have the effect of directing attention away from the task at hand and adversely influencing performance (Meichenbaum, 1972; Wine, 1972).

It appears that modified systematic desensitization designed to provide the client with a generalized skill for coping with emotional arousal in a number of different situations, is an

appropriate treatment for anxiety accompanying indecision. Such a technique has been proposed by Suinn and Richardson (1971) and Goldfried (1971). Typically, it consists of getting the client to rehearse in therapy sessions the relaxation skills he will use in vivo by involving him in the following steps: (a) imagining stimulus situations, (b) deliberate arousal of anxiety, (c) reacting to this anxiety with relaxation or success feelings. For desensitizing anxiety accompanied by disruptive self-verbalizations or "disruptive thoughts" (Ullmann, 1970), it would seem more appropriate to use coping imagery with relaxation in step (c). In using coping imagery, the client imagines himself handling the anxiety and uses self-instructions to handle the task at hand and avoid ruminating about himself (Meichenbaum, 1972).

It was decided in the present study to administer the above treatment in groups in order to economize on effort and hours of therapy contact. An added advantage of group administration is that interaction among group members has been found to assist acquisition of skills for coping with anxiety. Paul and Shannon (1966) combined the group application of systematic desensitization with group discussion of treatment effects, difficulties encountered during sessions and similarities between clients' problems and experiences. They suggested that this "combined" desensitization helped clients to recognize areas of stress by themselves and acquire a "how to cope" orientation.

Results of previous investigations suggest that the type of modified systematic desensitization described above has potential for

treating anxiety associated with indecision. Both generalized as well as specific treatment effects were reported in a number of studies. For example, Paul and Shannon's (1966) combined group desensitization treatment of speech anxiety resulted in reduction of self-reported performance anxiety, some reduction of general anxiety, as measured by the IPAT Anxiety Scale (Cattell, 1957), and improvement of grade-point average. Also, Meichenbaum's (1972) cognitively-oriented desensitization treatment resulted in a significant decrease in self-reported test anxiety and an increase in test performance and grade point average. Meichenbaum, Gilmore and Fedoravicious (1971) found that, for subjects whose anxiety was confined to formal speech situations, desensitization was more effective than a cognitive treatment in dealing with anxiety producing self-verbalizations. The reverse held for subjects whose speech anxiety was pervasive in a variety of social situations.

The Present Study

The present study was designed to evaluate the efficacy of anxiety management and problem-solving training in alleviating anxious indecision of clients faced with a vocational problem. The treatment rationale is as follows. It was conceptualized that a subject's ineffective response to his vocational problem was due to the poor quality of two sorts of behaviors--problem-solving behaviors leading to identifying the effective response and the actual execution of the effective response (Goldfried & D'Zurilla, 1969). His ineffective response could result from a deficit or an inhibition by anxiety of cognitive problem-solving operations. It could also result from an inhibition by anxiety of the execution of a selected course of action.

This means that the client's presenting problem has two components-- defective problem-solving skills and anxiety. Hence, one treatment of the presenting problem consisted of teaching problem-solving skills and teaching anxiety management. This combination treatment (CT) was given to one group of subjects. It could also be argued that anxiety alone or defective problem-solving alone was responsible for the subject's ineffective responding. Hence, to ascertain separately the effects of the two ingredients of the combination package, anxiety management training (AMT) was administered separately to another group and problem-solving training (PST) to a third group of subjects. Two control groups were also included in the design--a discussion placebo group (D) to control for treatment effects attributable to interaction among clients and therapist and to clients' expectancy of relief, and a no-treatment group (NT) to control for treatment effects attributable to the passage of time.

It was expected that alleviation of vocational indecision would result in an increased performance of exploratory behaviors, a greater awareness of details of individual career plans, a decrease of anxiety and an improvement of problem-solving ability. Since treatments were designed so that subjects would acquire coping skills, which could be applied to a variety of problems, specific and generalized effects were expected with respect to the last two indices of change.

Specifically, the dependent variables included: (1) frequency and variety of vocational exploratory behavior; (2) the extent to which subjects could give written details of designated aspects of

their vocational plan; (3) self-reported anxiety, specific to the individual vocational problem; (4) self-reported general trait anxiety; (5) self-reported decision-making difficulty with respect to individual vocational problems; (6) self-reported decision-making difficulty experienced in other areas of student behavior; and (7) problem-solving skills assessed in three types of tasks--discrimination of concrete from vague information, generation of alternatives and choice behavior.

Hypotheses

The dependent variables listed above fall into three broad categories of assessment--vocation, anxiety and problem-solving ability. As a general hypothesis, it was expected that the treatment groups would do better than the controls with respect to each of these three categories. The main questions asked of the data were: Is CT more effective than AMT or PST? Is AMT more effective than PST? Are the treatment conditions more effective than D or NT?

It was not clear at this stage of the study whether either defective problem-solving ability or anxiety was the important component or whether both were equally important components of the anxious indecision exhibited by subjects of this study. Hence it was not possible to hypothesize how the performances of AMT, PST and CT groups would compare with one another. If anxiety was the important component, then CT and AMT groups would be expected to do better than the PST group. If defective problem-solving skill was the important component, CT and PST groups would be expected to do better than the AMT group. If both anxiety and defective problem-solving skills were crucial components of anxious indecisions, then the CT group would be expected to do better than AMT and PST groups.

CHAPTER II

METHOD

Subjects

Thirty-two anxious first and second year undergraduates, 22 male and 10 female, ranging in age from 18 to 25 years, participated in the study. The subjects volunteered in response to a class announcement that decision-making training groups for people with career problems would be held during three weeks in March 1973. All prospective subjects were required to attend a group screening session and provide a deposit of \$5.00 as a guarantee that they would attend all seven therapy sessions. It was agreed that the deposit would be refunded after the posttest session if attendance was regular. The deposit would be forfeited if attendance was irregular and the money donated to the Cancer Research Fund or a charity of the subject's choice.

Subjects were included in the study if, on the screening instrument, i.e., the Inventory of Anxiety in Decision-Making (IADM), (a) they indicated the vocational decisions that were of concern to them, (b) they gave evidence that they experienced anxiety connected with these decisions (IADM \geq 25). On this basis, 35 out of 72 volunteers were chosen for the study and randomly assigned to five experimental groups. Three subjects dropped out while the study was in

progress. Their deposits were donated to the Cancer Research Fund..

Therapist

The therapist who was not the experimenter was an advanced graduate student specializing in Counseling Psychology who had completed all the course and practicum but not the dissertation requirements for the Ph.D. degree. The practicum training had been received at the University of Western Ontario Educational and Vocational Counseling Service. He had also successfully completed supervised practicum experiences in behavior therapy. Prior to the commencement of this study, he received practice in group-administering a combination of AMT and PST to four anxious students, troubled with vocational indecision, in five one-hour sessions conducted on five consecutive days..

Information on the therapist's general orientation, based on the questionnaires developed by Paul (1965), revealed that techniques he favored were reflection and clarification of content, attentive listening, warmth and understanding. The schools of psychotherapy he felt most related to were Rogerian and rational-emotive. The above information refers to his general style in the therapeutic relationships outside of the present study. Manuals containing instructions and materials specific to the treatments used in this study were prepared and made available to him. To overcome the potential biasing effect of a single therapist, the procedures used in treatment were automated as much as possible.

Procedure

The experimental design (see Tables 1 and 2) was mainly a repeated measures paradigm consisting of pre- and post-treatment assessment of variables in the self-report and performance domains. The subjects were randomly assigned to three treatment and two control groups, which are described below. All treatments were group-administered by the same therapist, who was not the experimenter. The experimental treatments were time limited to seven one-hour sessions spread out over 18 days.

Dependent Measures

1. Vocational Exploratory Behavior. One indication that subjects had resolved their indecision was the extent to which they initiated investigatory activity regarding vocational alternatives selected by them. This is considered to be the final concluding step in the problem-solving process (D'Zurilla & Goldfried, 1971). For this reason, vocational exploratory behavior was chosen as a dependent measure. The number of vocational exploratory behaviors (e.g., people talked to, writing a college or firm for information, on the job visits) performed during the treatment period and one week following the last treatment sessions was recorded by subjects on a checklist (see Appendix I). Its format resembled very closely the Vocational Exploratory Behavior Inventory used by Jones and Krumboltz (1970). The veracity of self-reported exploratory activities has been corroborated in a number of studies using this measure (Thoresen & Krumboltz, 1967; Thoresen & Krumboltz, 1968; Thoresen, Krumboltz & Varenhorst, 1967).

TABLE 1

DESIGN OF STUDY

PHASES

<u>Groups</u>	<u>Pretest</u>	<u>Treatment</u>	<u>Posttest</u>
Group I (n=7)	X	Anxiety Management Training (AMT)	X
Group II (n=6)	X	Problem-Solving Training (PST)	X
Group III (n=6)	X	Combination: AMT and PST	X
Group IV (n=7)	X	Discussion Placebo	X
Group V (n=6)	X		X

TABLE 2

DEPENDENT MEASURES AT PRETEST AND POSTTEST

<u>Dependent Measures</u>	<u>Pretest</u>	<u>Posttest</u>
1. Vocational Exploratory Behavior		X
2. Test of Vocational Standing	X	X
3. Inventory of Anxiety in Decision-making	X	X
4. IPAT Anxiety	X	X
5. Rating of Individual Decision-Difficulty	X	X
6. Decision-Difficulty Checklist	X	X
7. Problem-Solving Test	X	X

To control for bias due to demand characteristics, all subjects, including controls, were given the checklist of exploratory behaviors at the conclusion of the pretest and before commencement of the treatment phase. They were told that it would be collected at the conclusion of the training sessions. At that time, each subject's record was scrutinized during a 5-minute interview, so as to ensure that every exploratory response recorded was accompanied by supportive information, which included specification of the dates during which the responses were made. Only those exploratory responses which were accompanied by such data contributed to the subject's score. Two scores were obtained--the frequency of vocational exploratory behavior and the variety of such behaviors. For example, discussing plans with two professors, applying for a job, writing to two different universities for information would constitute three different varieties of exploratory behavior, although the frequency would be five.

2. Test of Vocational Standing. The effective decision is considered to be one made after collecting relevant information and foreseeing the consequences of carrying out a selected alternative (Gelatt, 1962; D'Zurilla & Goldfried, 1971). This implies that the effective decision-maker is aware of details relevant to his choice and his knowledge of them is specific rather than vague. Hence, this test was designed to measure the extent to which subjects were aware of their career plans. They were asked to write down as many concretely expressed details as possible regarding six different aspects of their occupational choice--name of occupation, education or training required, the extent to which their abilities supported

their choice, the extent to which their interests supported their choice, employment outlook and details of the occupation itself. There was a time limit of 15 minutes, a warning buzzer being sounded three minutes before the end.

Subjects' responses in each of the above categories were then rated on a 5-point scale for the amount of relevant information they contained. The ratings were made by two experienced persons, both employed at the University of Western Ontario's Educational and Vocational Counseling Service. One had a master's degree of psychology and three years of experience as an occupation resource specialist. The other had a doctorate in psychology and ten years of counseling experience in a variety of settings. The mean ratings for six categories were summed up to obtain a total score. Inter-rater agreements with respect to the total score was .81. The coefficient Alpha value for the internal consistency of the total scores was .71. Further details of test content, rating criteria and psychometric properties have been inserted in Appendix II.

3. Inventory of Anxiety in Decision-Making (IADM). This measure of anxiety specific to the subjects' individual decision-making concerns was modeled after the S-R Inventory of Anxiousness (Endler, Hunt & Rosentein, 1962). The latter measure has been found to be effective in measuring "state" anxiety because of its emphasis on clearly defined situations as well as clearly defined anxiety responses in these situations.

In the first part of the IADM (Appendix III), each subject was required to indicate as clearly as possible the career decisions that troubled him.

In the second part, the subject rated on a 5-point scale the anxiety responses he might experience, while in the process of wrestling with his problem. The item content of the IADM was inspired by other scales that have been found useful in assessing "state" anxiety--Zuckerman's (1960) Anxiety Adjective Checklist, Husek and Alexander's (1963) Anxiety Differential, and Maddi's (1966) description of symptoms of existential anxiety. True and false-keyed items, tapping overt as well as cognitively-oriented symptoms were included. Some examples are: "Able to eat normally", "Feel nervous, on edge", "Feel lack of energy for most things", "Feel listless, bored by most things", "Feel I have little to look forward to".

A score obtained on the IADM was based on a set of 16 items, having an endorsement frequency below .90 and above .10, reasonable variance, item-total correlations above .30 and an overall internal consistency reliability of .85. More detailed psychometric information is found in Appendix III.

4. IPAT Anxiety Scale (Cattell, 1957). The purpose of this measure was to assess the level of generalized anxiety. This has been considered to be a contributing factor in chronic indecision which is of the type that pervades several areas of a person's life (Goodstein, 1965). The IPAT Anxiety Scale was chosen because it has a high total-scale construct validity (.85-.91). It contains items that tap overt symptomatic anxiety as well as covert cognitively expressed anxiety. It correlated .65 with the IADM and .48 with the Decision-Difficulty Checklist (DDC) (see Appendix IV).

5. Individual Vocational Decision-Difficulty. The purpose of this measure was to obtain from each subject a global index of difficulty felt in dealing with his vocational decisions. After indicating in Part 1 of the IADM what his particular career concerns were, subject also showed on a 5-point scale the extent of difficulty these decisions caused him. The ratings were added up to obtain a total score. After treatment, subject was asked to again rate the degree of difficulty the same career decisions still caused him and another total score obtained. Hence, each subject was his own control with respect to the number of career decisions that troubled him.

6. Decision-Difficulty Checklist (DDC). This was a measure of the extent of general decision-difficulty experienced by each subject. On a 5-point scale, the subject rated the degree of difficulty or ease experienced by him in making each of 61 decisions students are commonly confronted with in four areas--school, dating-marriage, career and interpersonal. The checklist was constructed by the author using the responses of 150 subjects from a community college (N = 42), a university (N = 51) and a high school (N = 57). The final selection of items from an initial pool of 140 was based on Jackson's (1970) strategy for scale development involving the sequential evaluation of items for endorsement frequency, convergent and discriminant content saturation, desirability and correlation with the total scale. This resulted in a scale whose total scale Coefficient Alpha reliability is .94 and sub-scale reliabilities range from .80 to .84. More detailed information on the DDC is found in Appendix V.

7. Problem-Solving Test. This was intended as an analog measure of decision-making under stress. It was made up of three parts: (i) gathering concrete information, (ii) generation of alternatives, and (iii) choice behavior. Prior to this study, parallel forms were constructed for each of these parts on the basis of item characteristics according to the methods suggested by Cronbach, Rajaratnam and Gleser (1963) and Gulliksen (1968). One of the forms was used on all subjects at pretest and the other at posttest. All three parts were timed in order to introduce some stress factor into the test-taking situation. They also involved imagined behavioral role-playing (McFall & Lillesand, 1971; McFall & Marston, 1970). Subjects were presented with tape-recorded vignettes of problem situations and instructed to respond to each situation as if it were actually happening to them. The total score on the problem-solving test equalled the sum of the standardized scores on the three subtests. In order to ensure that gains on this measure at posttest were not due to prior familiarity with it, tasks contained in the measure were so designed that they bore little or no resemblance to the type of tasks used for providing training in problem-solving. Instructions for all three subtests were supplied via audiotape.

(i) Information Gathering. In this part, the technique for the study of problem-solving developed by Rimoldi (1961) was used. Rimoldi required his subjects, all medical students, to solve a given clinical problem on the basis of information they could obtain by asking questions judged necessary for arriving at a correct diagnostic solution. A set of relevant and irrelevant questions that might be

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asked were previously decided upon by a criterion group of experts and arranged on a display folder. Each question was written on a card and its answer on the back of the same card. The examiner noted the cards picked up and in what order, to obtain a sequence which indicated the successive steps followed in solving the problem.

Each form of the Information Gathering subtest in this study was made up of four problems. Each problem was made up of a vignette of a problematic situation and 15 small paper folders, one for each of 15 possible questions that could be asked about the problem of the actor in the vignette. The questions were found on the outside of the paper folders, the answers to them on the inside. Seven or eight of these folders contained concrete and relevant questions and concrete information in answer to these questions. The remainder of the 15 folders contained questions and answers that were nonconcrete or irrelevant. The folders were arranged in random order. Test materials have been incorporated into Appendix VI. Vignettes used in this subtest were based on case histories taken from Osipow and Walsh (1970).

In order to control for differential scanning rates, subjects were paced through three steps for each problem: (i) arranging the little paper folders into a display, (ii) scanning the brief description of the problem situation on the answer sheet and the questions printed on the paper folders, and (iii) at a given signal, performing the experimental task. There was a time limit of 2.5 minutes and 20 seconds before the end a warning buzzer sounded.

The general instructions for the problem-solving test stressed, first of all, the importance of the test and its purpose, namely that

of testing subjects' maturity in their approach to problematic situations. It was hoped that the introduction of this serious note along with the presence of a time limit and warning buzzer would help to create a mildly stressful climate. In the Information Gathering part, subjects were asked, within the allotted time, to select those folders from the display which yielded clear and specific information concerning the problem of the actor in the vignette and ignore folders containing vague information. Only the identifying number on each of the selected folders was to be recorded.

The score obtained on each problem of the information gathering subtest was equal to the number of concrete and relevant items of information identified minus the number of vague and irrelevant ones. Detailed psychometric data on the parallel forms of this subtest have been inserted in Appendix VI. On one form, item-total correlations ranged from .42 to .67 with a mean of .55; item-difficulty ranged from .45 to .60 with a mean of .53. On the other form, item-total correlations ranged from .42 to .66 with a mean of .55; item-difficulty ranged from .47 to .63 with a mean of .53. At the pretest, the Cronbach Alpha index for internal consistency had a value of .62.

In this study, the concrete question or answer was defined in the same way as the Counselor Tacting Response Lead used by Stone (1972) and Eisenberg and Delaney (1970). It is a response that evokes an answer that describes a particular aspect of the vignette in more operational terms--specific behaviors, specific feelings and specific environmental characteristics. A nonconcrete question or answer lacks specificity. It refers to real feelings and real aspects of



the client's concern with anonymous generalities. A relevant question or answer was considered to be one that was directly explicative of the stated concern of the actor in the vignette or of the immediate circumstances. Hence, a dichotomous rating scale was used to assess concreteness and to assess relevance.

The ratings of concreteness and relevance were obtained in the pilot stages of this study in the following way. Questions and answers were included in each Rimoldi display only after 100 percent agreement had been obtained with respect to ratings of relevance, non-relevance, concreteness and nonconcreteness from three judges. Although these ratings were made independently, disagreements were resolved by making changes in the wording of the questions and answers until complete agreement was obtained. It was at this point then that they were included in a Rimoldi display. The judges were second year doctoral students specializing in Counseling Psychology who were acquainted through lectures and practicum experiences with the role of concreteness and other facilitative variables in the counseling relationship. Their selection was also made on the basis of a short test of their ability to discriminate concreteness and relevance in stimulus statements, on which they achieved a 97 percent agreement. Details of this test and rater's instructions are found in Appendix VI.

(ii) Generation of Alternatives. The arrangement of this subtest closely paralleled the previous one. Each form had four problems in all. After each problem of the information gathering subtest, subjects were instructed to list briefly in writing as many suggestions as possible concerning what the person in the problem situation should

do to remedy his problem. They were asked to make their suggestions concrete and not vague. There was a time limit of three minutes per problem, with a warning buzzer sounding 20 seconds before the end. Models of concrete and vague suggestions were provided in the instructions prior to the first problem.

The score on this subtest was the total number of concrete alternatives produced. Two graduate students acted as raters, following the same guidelines for discriminating concreteness from nonconcreteness as in the case of the information gathering subtest. The interrater agreement was 95 percent. The raters first made their ratings individually and then resolved disagreements by mutual discussion. Details of instruction to subjects and psychometric properties of parallel forms are found in Appendix VI. On one form, the item-total correlations ranged from .62 to .89, the mean being .72; the item-difficulties ranged from .36 to .63, the mean being .47. On the other form, the item-total correlations ranged from .61 to .79, the mean being .71; the item-difficulties ranged from .34 to .59, the mean being .46. At pretest, the Cronbach Alpha index for internal consistency had a value of .75.

(iii) Choice Behavior. Each form of this subtest was made up of six tasks. In each task, subjects went through three steps: (a) they read a description of a problematic situation, typical of campus life; (b) they were asked to imagine themselves being actually in this situation and confronted with nine possible courses of action, subjects being given 30 seconds to read them; and (c) they were then asked to rank these alternatives in order of preference, giving a rank

of 1 to the most preferred response and a rank of 9 to the least preferred response. A time limit of one minute was assigned for the task of ranking and two seconds before the end a warning buzzer was sounded. Instructions were given by audiotape.

The problem situations were taken from among 58 academic and interpersonal situations of the Behavior Analytic Test of Competence (BATC) constructed by Goldfried and D'Zurilla (1972). These had been judged to have a high frequency of occurrence by a standardization sample of 84 high school students and 280 freshmen. Based on responses of the latter, Goldfried and D'Zurilla have produced for each situation a set of typical response strategies for resolving issues in the problematic situation, each strategy being accompanied by a mean rating of judged effectiveness. Adequate attention was given by these authors to training raters, ensuring a common frame of reference regarding the meaning of the effective response (i.e., one that maximizes positive consequences and minimizes negative ones) and ensuring inter-rater reliability.

In the above study, strategies were rated on a percentage scale of effectiveness of 0 to 100. For the present study with respect to each stimulus situation, a subset of nine strategies representative of the range of effective alternatives originally provided in the BATC was selected. The strategies were rank ordered on the basis of their effectiveness rating provided by Goldfried and D'Zurilla. Having thus assigned them criterion ranks, the alternatives were then randomly arranged in the test format.

The score on each problem was obtained by first computing for each alternative the difference between the ranks assigned by subjects and the criterion rank. The difference scores were then transferred so that subjects with the smaller deviations obtained higher scores. Finally, the transformed scores on the nine alternatives were added up to obtain the score on each problem. A total score on the subtest was computed by adding the score obtained on the six problems. Parallel forms of the subtest based on item characteristics had initially been constructed during the pilot stages of this study. On one form, the item-total correlations ranged from .30 to .66, the mean being .48; the item-difficulties ranged from .40 to .59, the mean being .57. On the other form, the item-total correlations ranged from .29 to .65, the mean being .46; the item-difficulties range from .48 to .62, the mean being .57. Details of psychometric properties, test items, test instructions and scoring method are found in Appendix VII.

Treatments

Anxiety Management Training. This form of training resembled the group desensitization procedure of Paul and Shannon (1966). The training consisted of presentation of rationale, group relaxation training, group hierarchy construction, group imagery training and group desensitization in the same order as followed by Paul and Shannon. These techniques were also conducted in the context of group discussion and sharing of experiences as used in that study. The aim of the discussion was to increase subjects' skills in going through treatment procedures, their awareness of stimuli and their typical responses to these stimuli in various situations. The techniques used

included generalizing from one client's remarks, emphasizing similarities between experiences and emotions, and applying general statements to the concrete real-life experiences of the group. Certain innovations in the group desensitization procedure were made, however, in order to adapt the procedure for the purpose of teaching clients general skills of coping with anxiety.

First, a tape-recorded treatment rationale was presented to subjects. It stressed that anxiety reactions interfered with decision-making. Some people habitually reacted with anxiety to a problem because they had learned to react in the past to certain situations and self-verbalizations by becoming tense. These reactions could be unlearned. This could be accomplished by taking note of a number of upsetting situations connected with the vocational problem and arranging these hierarchically; then starting with less stressful situations, the technique involved trying to imagine the situations and evoke the worry and tension that was involved in them; and finally, for each situation the technique involved practising to relax away the worry and tension as it is built up.

Second, tape-recorded progressive relaxation instructions were used according to the muscle tension-contrast method (I) used by Paul (1965), slow deep breathing along with tension-contrast (II) and a method involving concentrating on different muscle groups and relaxing away the tension (III). Practice in the three methods was spaced over the sessions so that as subjects acquired facility in each of them in turn, they learned to relax more easily and with increasing speed.

Third, as in the Paul and Shannon procedure, hierarchy

construction was done through group discussion but in the following way. In the second session, subjects were provided with a 15-item model hierarchy of situations in which they might get anxiety-arousing feedback about their vocational plans. All subjects were asked to submit individual hierarchies at the third session. A 10-item hierarchy was formed in this session through discussion out of most frequently mentioned items of individual hierarchies. In order to make the stimulus situations as life-like as possible, subjects were asked to include in them some self-verbalized material that might also be anxiety-provoking for them. Items were worded so that subjects could privately include aspects unique to each one's experience. In later sessions, changes were made in the anxiety hierarchy or new hierarchies were constructed based on feedback obtained from group discussion of problem areas.

Fourth, during actual desensitization, subjects were instructed to maintain the image of the situation and experience, if possible, the anxiety associated with it. They were then to stop imagining the situation, to try to relax away the tension and, while relaxing, use coping imagery, i.e., visualize themselves handling this anxiety with deep breaths and self-instructions. The following is an example of a stimulus situation and subsequent desensitization.

Imagine you have just got back your midterm in class. You look at your paper and find you have received a C-. You had expected at least a B+. You are getting anxious and you tell yourself, 'I may not be meant for this program' (10 seconds pause). Now relax and, while relaxing, imagine you are trying to relax with deep breaths as you leave class and telling yourself 'Relax, maybe you should discuss with the professor what went wrong'.

The first treatment session began with ten minutes of personal introductions, statement by each client of his personal expectations of the treatment and an indication by him of the extent, degree and duration of his decision-making anxiety. Presentation of the rationale took up the next five to ten minutes. The second half of the session (30-35 minutes) was taken up by relaxation training followed by a discussion of feelings and difficulties encountered during relaxation. Subjects were instructed to practise relaxation for 15 minutes twice a day between sessions focusing on muscle groups which had not responded. The second session began with a 10-minute discussion of the success of relaxation practice and correction of any misconceptions, if present. The next 15 minutes were occupied with discussions concerning constructions of the first hierarchy. This was followed by 25 minutes of hierarchy construction and the test of imagery.

Succeeding sessions were quite similar in format. They began with about ten minutes of discussion regarding problem areas and changes in anxiety hierarchies, if needed. Then followed about 15 to 20 minutes of relaxation training and about 15 minutes spent on discussion of reactions during desensitization. Full details of the treatment schedule and therapist instructions are found in Appendix VIII.

Problem-Solving Training. Training consisted mainly of group presentation of the rationale and group practice in using specific problem-solving skills on vignettes of real-life problematic situations presented by audiotape or on printed handouts. The practice occurred in the context of group discussion conducted on lines similar to that of Paul and Shannon (1966).

The first treatment hour began with ten minutes devoted to personal introductions, personal expectations and a statement as to the degree, duration and extent of decision-making difficulty experienced by each client. The next five to ten minutes were spent in listening to a tape-recorded presentation of the treatment rationale and clarifying any questions that might arise in the group about it. The rationale stated briefly that a major reason why individuals are unable to act effectively in a problematic situation is that they cannot decide what course of action has the most advantages for them and the least inconveniences. Once they are able to identify the effective line of action to be taken, they are usually able to carry it out. Hence, the need for learning to use procedures of effective problem-solving so as to develop a systematic approach to making decisions. The steps in effective problem-solving were then very briefly described.

The rest of the first session and succeeding sessions were devoted to training subjects in the use of the following techniques or "steps":

(1) Problem definition and formulation: This involved defining all aspects of a situation, gathering relevant information and formulating goals.

(2) Generation of alternatives: In this step the brainstorming method of "idea" finding (Clark, 1958) was used. The need for clarity and concreteness was stressed, i.e., subjects were taught to describe strategies not in general terms but in terms of specific behaviors.

(3) Screening of alternatives: This step consisted of use of "rough" screening to eliminate "inferior" alternatives. Screening of remaining ones was done in terms of possible concrete consequences in four categories: personal (effect on subject's feelings and desires), social (effect on significant others), short-term (immediate life situation) and long-term. The purpose of this step was to be able to discern the course of action that would maximize the likelihood of positive consequences and minimize the likelihood of negative ones.

(4) Decision-making: This step consisted of selection of one course of action, generation of concrete behavioral alternatives for implementing it and selection of the most effective alternative.

Training in each step began with an audiotaped description of the rationale of the step and an audiotaped presentation of a problem situation. Subjects recorded their answers on a handout. The narrator on the audiotape then coached subjects regarding the appropriate response or approach to the situation. Following this audiotaped portion, the therapist then led the group in practicing the particular problem-solving step in question with the use of other examples, one of which, at least, was of a vocational nature.

As in AMT, the techniques utilized by the therapist in discussion included generalizing from one client's remarks, referring questions to the group, structuring the interaction by emphasizing similarities between experiences and, in general, interpreting and reflecting on subjects' statements to help them become more concrete in their approach to problem situations.

Most of the material for exercises used in PST was taken from

problem situations and solution strategies described in the BATC (Goldfried & D'Zurilla, 1972) rater's manual. This ensured that the stimuli and solution models presented for subjects imitation had been found, on a statistical basis, to be typical of the concerns faced by college students.

The training schedule was arranged as follows. The first session was devoted to initial introductions and presentation of rationale (15 to 20 minutes) and training in "step 1" (40 minutes). The second session was again taken up with "step 1"; the third, fourth and fifth sessions with steps 2, 3 and 4 respectively. In the sixth session problems were worked out covering "steps 1-4". The seventh session was devoted to repeating problems in "steps 3 and 4" for 40 minutes the rest of the time being given to a concluding "wrap up" of the treatment package (see Appendix IX for further details).

Combination Training. This treatment condition contained all the main ingredients of the AMT and PST treatments of this study. The rationale presented to the subjects stated that there are two main reasons why people cannot cope with problematic situations. One reason is that they become tense or preoccupied with worry whenever they think of or are involved in activities associated with the problem. The other is that they cannot decide which course of action has the most advantages for them and the fewest inconveniences. Hence, there was a need for learning skills in anxiety management and problem-solving. The basic constituents of training in those skills were then briefly described.

The training schedule was arranged as follows:

Session 1 contained the same elements as the first session of the AMT package; subjects were given the sample hierarchy of anxiety-provoking situations to take home and asked to bring their own the next session. The test of imagery was covered in the course of the discussion following relaxation exercises.

Session 2 involved relaxation induced by Method I followed by discussion of success in practising relaxation and the composite hierarchy (30 minutes) and step 1 of PST (30 minutes).

The first half of the succeeding sessions consisted of relaxation by Method II or Method III, desensitization and a brief discussion of individual feedback obtained from these techniques. The second half in sessions 3 to 7 was occupied by training in "step 2", "step 3", "step 4", "steps 1 and 2", "steps 3 and 4" respectively.

The session by session time allocations for the various elements of the combination treatment were based on feedback obtained from a pilot administration of this treatment to a group of five subjects. It was established that there was enough time to cover the anxiety-management and problem-solving techniques in seven sessions. The following precaution was taken to ensure that the AMT and PST therapies did not gain an "edge" over the combination package with respect to time spent on various techniques. The therapist was instructed to refrain from introducing new anxiety hierarchies in sessions 6 and 7 of the AMT therapy and to refrain from practising problem-solving on fresh problems in sessions 6 and 7 of the PST therapy.

Instructions to the therapist concerning the scheduling of

treatment and a transcript of the rationale have been inserted in Appendix X.

Discussion Placebo. This treatment was designed to assess improvement resulting from expectation of relief and other non-specific factors like suggestion, therapist-client and client-client relationships.

Subjects were told that one of the ways of resolving their career indecision would be to arrive at a clearer understanding of how career biases developed or whether they were rationally or emotionally based. In this way it would be possible to gain some insight into their own deficiencies and be motivated to correct them.

Since it was important to maintain within each of our subjects a sense of expectancy of relief and treatment credibility throughout the seven sessions (Borkovec & Nau, 1972), each session consisted of listening to tape-recorded material and/or seeing documentary films relevant to vocational development followed by an unstructured discussion of this material.

The tape-recorded materials consisted of excerpts from Crites' (1969) review of vocational psychology, covering the following topics: nature of vocational choice, theories of vocational choice, dimensions of vocational choice, problems in vocational choice. To reduce boredom, whenever the tapes were used, sessions would consist of alternately listening to them for five minutes and then conducting a discussion until participant interest seemed to wane.

Three documentary films were shown--Personality (CRM Publications, 1971), The Job (CTV News, 1971), and The Clerk (National Film Board, 1958).

Personality is an indepth study of the life style of a young man, the roles he plays in different situations and methods of assessing his personality. The Job is a study of work as it is presently constituted, with only about ten percent of the population actually enjoying their jobs. It predicts a future world where work will be made more challenging, stimulating and responsible. The Clerk explores the conflict between what a man wants from his job and what his job wants from him. It studies how far an industry ought to go in relieving dull work for job satisfaction.

Appendix XI contains details of instructions given to the therapist, the treatment rationale given to subjects and material recorded on audiotapes.

No-Treatment Control. This group served to control for changes resulting from the administration of dependent measures and the passage of time. The subjects in this group were assessed with the dependent measures at the same times as other subjects. After the pretest session, they were informed by mail that due to the unavailability of a therapist and scheduling difficulties they would not be accommodated in the treatment groups for at least a month. An opportunity, however, was given to them after the posttest to avail themselves of a short version of the combination treatment.

Summary of Design

In the present study a repeated measures design was used consisting mainly of pre- and post-treatment assessment of dependent variables. There were five treatment conditions: anxiety-management training, problem-solving training, a combination of the two,

discussion placebo and a no-treatment control. The effect of treatment on the resolution of subjects' vocational problems was assessed with respect to two variables--exploratory behavior and knowledge of one's career plan. It was also decided to ascertain whether treatment effect on the above variables was accompanied by alleviation of anxiety and improvement of problem-solving ability. Hence, levels of "state" and "trait" anxiety were assessed with the IADM and IPAT anxiety scales, respectively. Problem-solving ability was assessed in two ways: by means of self-reports of decision-making difficulty, both generalized and specific to the client's concern and by means of a measure consisting of laboratory tasks tapping three major problem-solving skills.

CHAPTER III

RESULTS

The general method of statistical analysis involved analyses of variance and covariance for the overall treatment effect followed by comparisons of group means using Duncan's new multiple range test (Kirk, 1968). The latter was performed when the treatment effect was significant at least at the .05 level. For the anxiety and decision-difficulty scales, Test of Vocational Standing and the Problem Solving Test, analyses of covariance were performed, the covariates being the pretest scores on these instruments. Data on the performance of vocational exploratory behaviors were subjected to one-way analysis of variance following a posttest-only model (Campbell & Stanley, 1963). For the sake of clarity, these results have been presented in a summary table. Detailed tabular presentations of analyses of variance/covariance are found in Appendix XII and post hoc analyses in Appendix XIII. Treatment means and standard deviations have been included in Appendix XIV and summarized in Figure 1 and Figure 2.

Changes on Vocational Measures

Exploratory Behavior. The group means for this measure are shown in Figure 1. The CT and AMT, in that order, resulted in higher mean scores in comparison to the other treatment conditions with respect to the frequency and variety of exploratory behaviors. As

indicated in Table 3, overall F-ratio values for treatment effect were found to be significant for frequency ($F = 4.37$, $df = 4$, $p < .01$) and variety ($F = 7.26$, $df = 4$, $p < .001$) of exploratory behaviors performed. The results of pairwise comparisons of group means by Duncan's test are summarized in Table 3. With regard to frequency and variety, the CT group gave significantly more exploratory responses than the PST and controls. On both the above indices, the differences between the performance of CT and AMT groups were nonsignificant. Anxiety management training resulted in the performance of a greater variety of exploratory behavior than PST at the .05 level. No significant differences were observed between the performances of AMT, PST and the control groups on this dependent variable.

Test of Vocational Standing. The mean group standings on this measure are given in Figure 1. Inspection of these group means shows that the performance of the CT and AMT groups in comparison to controls was in the predicted direction. The overall F-value for the treatment effect did not reach the accepted level of significance ($F = 2.40$, $df = 4$, $p < .07$).

Changes on Anxiety Measures

The scores achieved on these measures are shown in Figure 1. Analyses of covariance of IADM and IPAT anxiety scores produced nonsignificant F-ratios (as shown in Table 3) suggesting that treatment had little or no effect in alleviating subjects' general and specific self-reported anxiety.

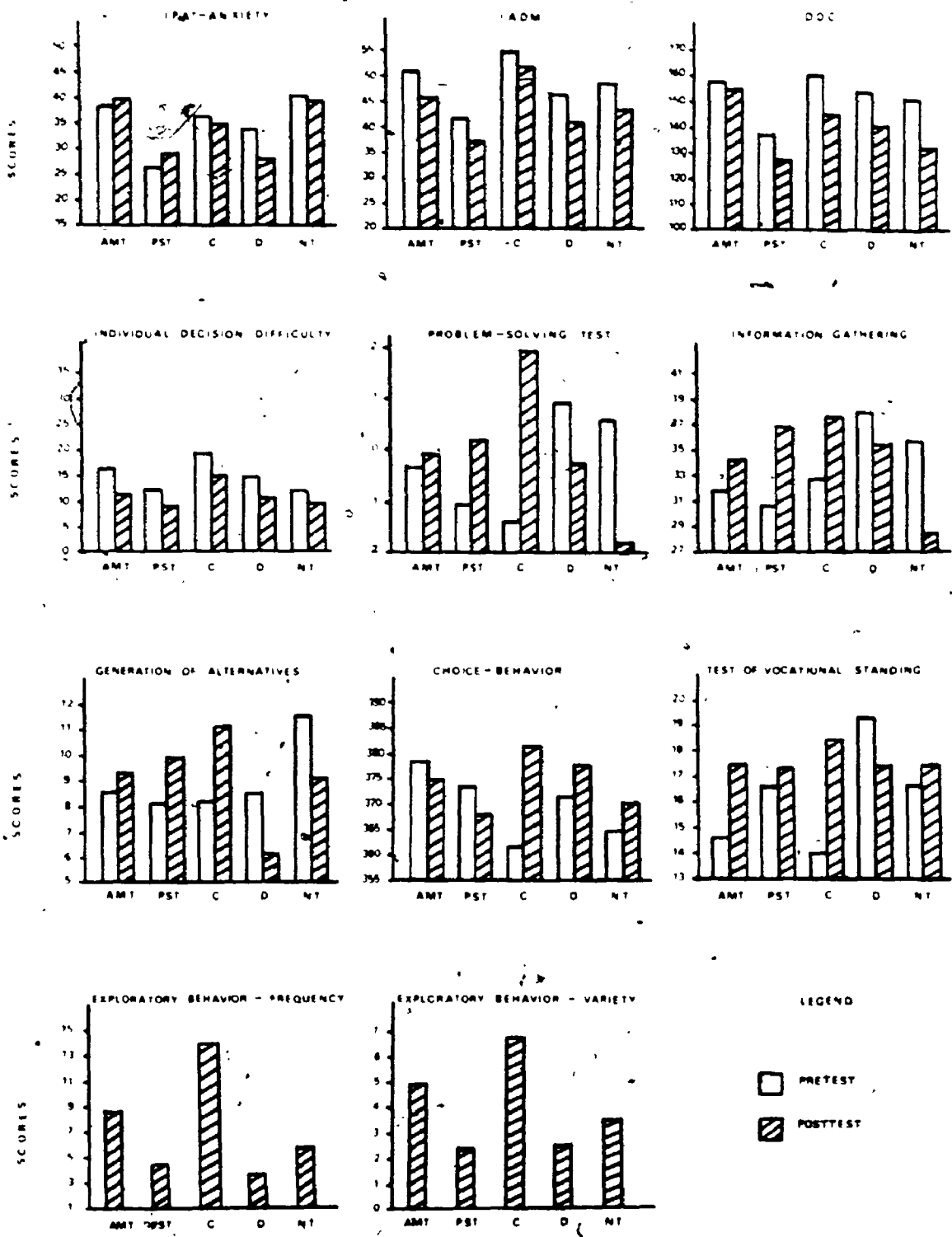


FIG 1 PRETEST AND POSTTEST MEANS FOR FIVE TREATMENT GROUPS

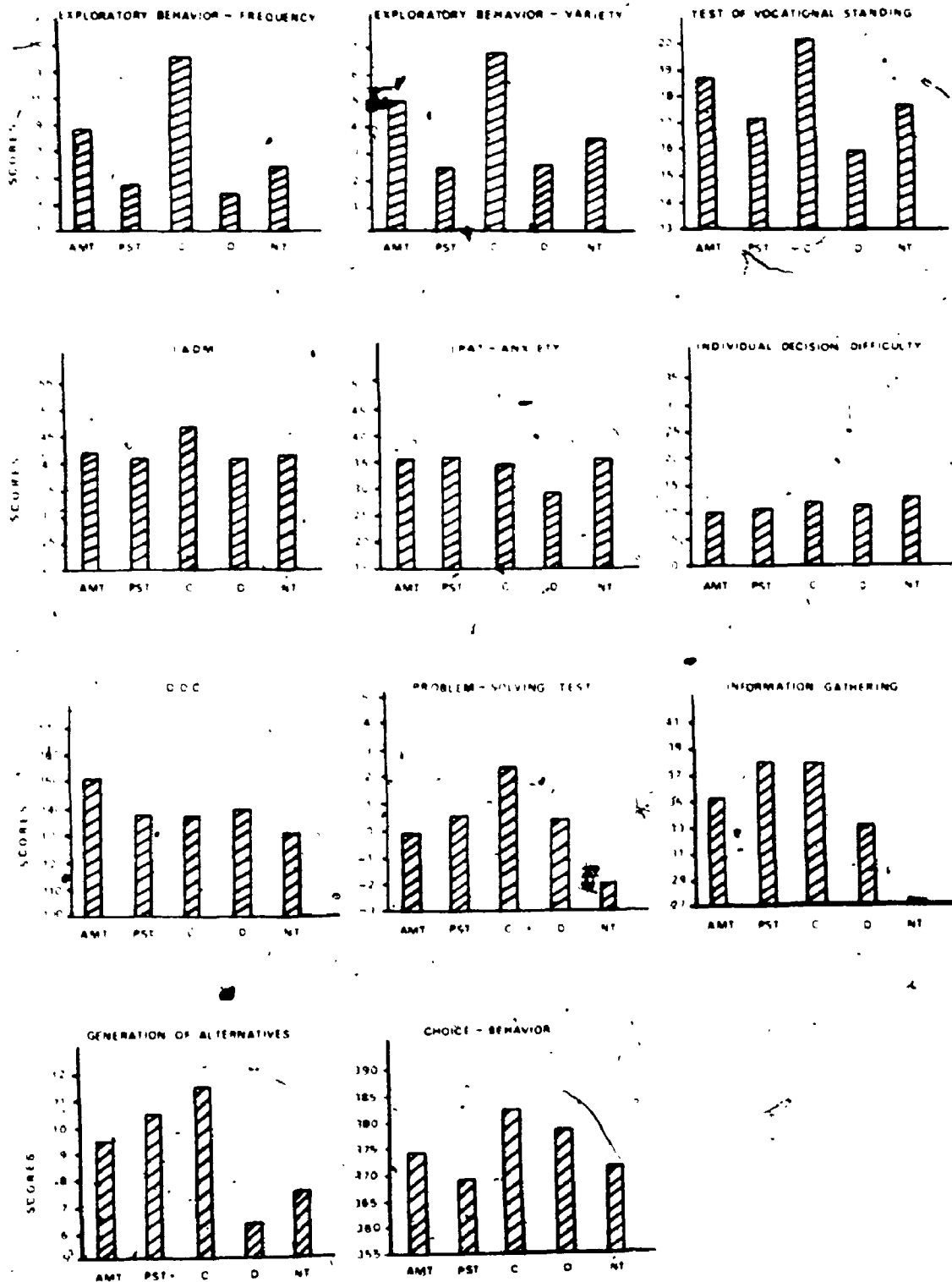


FIG 2 ADJUSTED MEANS FOR FIVE TREATMENT GROUPS (EXPLORATORY BEHAVIOR SCORES ARE UNADJUSTED POSTTEST MEANS)

TABLE 3

SUMMARY OF TREATMENT EFFECTS AND SIGNIFICANT PAIRWISE COMPARISONS

Measure	Treatment Effect F-test Values	Pairwise Comparisons Found Significant by Duncan's Test	
		At $p < .01$ level	At $p < .05$ level
Exploratory Behavior			
- frequency	4.37**	CT > PST, CT > D	CT > NT
- variety	7.26***	CT > PST, CT > D, CT > NT	AMT > PST
Test of Vocational Standing	2.40		
IADM	.40		
IPAT Anxiety	1.76		
Individual Decision- Difficulty	1.34		
DDC	.56		
Problem-Solving Test	6.06**	CT > AMT, CT > PST, CT > D, CT > NT, AMT > NT, PST > NT, D > NT	PST > D
Problem-Solving Subtests			
Information Gathering	13.88***	CT > D, CT > NT, AMT > NT, PST > AMT, PST > D, PST > NT, D > NT	
Generation of Alternatives	3.28*	CT > D	CT > NT, PST > D
Choice Behavior	1.65		

*
 $p < .05$ **
 $p < .01$ ***
 $p < .001$

Changes on Measures of Problem-Solving Ability

Self-Reported Decision-Difficulty. Inspection of group means in Figure 1 suggests that alleviation of initial levels of decision-difficulty regarding individual career concerns occurred for all groups. Similar alleviations of generalized decision-difficulty as reflected by means of DDC scores also occurred. The F-values for overall between groups treatment effect (as shown in Table 3) with respect to individual decision-difficulty and the DDC were non-significant.

Problem-Solving Test. Mean group performances on this measure at pre- and posttest are shown in Figure 1. There was an overall treatment effect ($F = 6.06$, $df = 4$, $p < .01$) and the a posteriori comparisons clearly showed that the CT group did better at the .01 level than every other group (see Table 3). The performance of the PST group was better than the NT group ($p < .01$) and the D group ($p < .05$). The AMT group performed better than the NT group ($p < .01$).

A more informative picture of performance on the problem-solving test was obtained by analyzing the results with respect to its component subtests. Table 3 indicates an overall treatment effect in the case of the Information Gathering ($F = 13.88$, $df = 4$, $p < .01$) and Generating Alternatives subtests ($F = 3.28$, $df = 4$, $p < .05$) only. When pairwise comparisons between group means were investigated, PST training was found to show greater gains at the .01 level on Information Gathering than AMT, D and NT; on the same subtest, the CT group did better than controls and the AMT group better than NT at the .01 level. On the Generating Alternatives

subtest, the CT training was more effective than the D ($p < .01$) and NT ($p < .05$) conditions while PST resulted in greater gains than the placebo condition ($p < .05$).

Summary of Results

The main points of interest in the investigation of results were: (1) the performance of the treatment groups versus the NT and D control groups, and (2) the efficacy of the AMT, PST and CT treatments when compared to one another. On these two points, clear indications as to the direction of results were available on the vocational and problem-solving indices only.

With respect to frequency and variety of vocational exploratory behavior, the performance of the CT group only was significantly superior to both control groups; the performance of the AMT group versus the controls was in the hypothesized direction but statistically nonsignificant while the PST group fared no better than controls. On the same indices, CT was found to be significantly superior to PST and not significantly more effective than AMT in getting clients to perform a variety of vocational exploratory behaviors.

With respect to measures of general and specific anxiety, none of the treatment groups was more effective than controls. Inspection of treatment means suggested that within-group alleviations of "state" anxiety occurred in treatment and control conditions.

With respect to measures of problem-solving ability, two sorts of results were obtained--one concerning self-report measures of decision-difficulty and the other concerning performance measures. No significant treatment effect was observed with respect to measures

of decision-making difficulty either in connection with subjects' individual vocational concerns or in connection with generalized difficulty experienced in a variety of areas. Inspection of treatment means suggested that within-group alleviations of self-reported individual decision-making difficulty occurred for all groups. On the Problem-Solving Test, all treatment groups were significantly superior to the NT group, with CT and PST also being more effective than the D condition. Among the treatment groups, it was found that, on the same test, CT was superior to PST and AMT while there was no notable difference between the performances of PST and AMT. As regards performance on component subtests, the effect of CT was significantly superior to control conditions on Information Gathering and Generation of Alternatives while PST was more effective than AMT and controls on Information Gathering.

CHAPTER IV

DISCUSSION

The purpose of this study was to investigate the efficacy of anxiety management and problem-solving training in helping indecisive university students to respond effectively to vocational problematic situations. It was found that the three experimental treatments--AMT, PST and CT--were differentially effective in comparison to controls. The main finding was that a combination of anxiety management and problem-solving training was more effective than either ingredient alone and control conditions in influencing mainly two areas of performance--vocational exploratory behavior (frequency and variety) and problem-solving behavior. The CT also resulted in an increased knowledge of career plans in the hypothesized direction but not at the accepted level of statistical significance. The AMT package was found to be next in effectiveness to CT with respect to the first two areas of performance. The PST package was more effective than the NT control as regards to overall performance on the problem-solving tests and more effective than NT and D controls in discriminating concrete information.

These results raise three issues of theoretical importance. The comparative effectiveness of CT, AMT and PST has implications for the model of effective responding (D'Zurilla & Goldfried, 1971).

Considerations on the usefulness of problem-solving training constitute another area of discussion. Finally, the role of anxiety in effective responding also merits examination. Each of these areas will be considered in turn.

Implications for the Model of Effective Responding

It was conceptualized that the client's presenting problem had two main components--defective problem-solving skills and/or anxiety. Treatments were, therefore, devised to directly counteract these deficiencies. Treatment resulted in counteracting the adverse effect of these deficiencies on problem-solving behavior and on initiating action on vocational alternatives. The generally superior response obtained from the combination training suggests that both defective problem-solving skills and anxiety were important components of the anxious indecision exhibited by clients of this study. One could not maintain that anxiety alone or poor problem-solving skills alone was the crucial component. Compared to controls, AMT resulted in only moderate gains on vocational indices (exploratory behavior and knowledge of career plans) and problem-solving measures; PST produced negligible gains on vocational and sizable gains on one problem-solving subtest only.

Another point to be noted is that the effect of CT was vastly superior to and could not be deduced from the separate effects of PST or AMT. This was the case even though exactly the same anxiety-coping and symbolic problem-solving procedures present in AMT and PST respectively were also included in the CT package. For example, on the Problem-solving Test, the PST group was significantly more improved

than control groups only as regards their ability to discriminate concrete information. AMT had little or no effect on the three problem-solving skills. In contrast, the CT group's efficacy on this measure surpassed the controls with respect to overall performance on the three skills.

The foregoing observations on the efficacy of the CT package would seem to validate the strategy of modifying ineffective responding to problematic situations by paying attention to cognitive as well as performance variables as suggested by D'Zurilla and Goldfried (1971). Social learning theorists (Bandura, 1969; Ullmann, Krasner, 1969) have generally considered ineffective behavior, i.e., any behavior that results in negative consequences to the client, as being due to a lack of successful learning experiences with specific situations. Hence, therapy has usually consisted of discrete response training through operant and respondent conditioning, prompting and social reinforcement, and modeling. D'Zurilla and Goldfried have raised the possibility that ineffective behavior may also, in addition, be due to a generalized inability to discover what should be done in these situations. The importance of problem-solving training in the behavior modifier's armamentarium is that it is a form of self-control training for situations in which the "correct" response is not known in advance. This is in contrast to most other behavior modification techniques (e.g., assertive training) in which the response to be manipulated is known in advance.

For example, a situation calling for assertive action could be conceptualized as a problematic one requiring a decision as to which,

among several possible alternative responses, is appropriate for that situation. Assuredly, this would not apply to those clients who generally know what they should do but are unable to perform. But impulsive clients, with tendencies to act too quickly in difficult situations, or overdependent clients who can perform easily only as long as their therapist tells them exactly what to do, could be taught how to problem solve, i.e., generate alternatives for action, foresee possible consequences and choose the effective one from among them.

Efficacy of Problem-Solving Training

The goal of skill training in this study was to develop in the subjects the ability to identify the effective response in problematic situations. It appears that subjects in the CT group were especially improved with respect to this ability. They showed marked gains on the test of problem-solving skills; especially the discrimination of concrete information and the generation of concrete alternatives. They were also quite effective with respect to performance of investigatory behavior and becoming aware of their vocational plans, either of which presume a facility in identifying a definite course of action. The association of concreteness with therapeutic outcome has also been emphasized in other studies. Truax and Carkhuff (1964) found in a study of the verbal interaction of patients in group psychotherapy that progress in therapy was correlated with the expression of feelings and experiences in concrete terms. Such expression seemed to encourage specificity in the client's efforts. Platt, Scura and Hannon (1972) and Platt and Spivack (1972) have also found that youthful

heroin addicts and psychiatric patients compared with normals showed a cognitive deficiency with regard to generating concrete alternatives for solving typical real-life problems.

The success of subjects in acquiring cognitive skills lends support to the view that cognitions may be modified using principles arising out of a functional analysis of behavior. According to Skinner (1953), "when we discover an independent variable which can be controlled, we discover a means of controlling the behavior which is a function of it" (p. 227). In this study, problem-solving training was based on the principle that the probability of a specific cognitive behavior (i.e., identification of the effective response) occurring could be increased by altering the variables of which it was a function (Skinner, 1953). These variables were represented by the problem-solving steps indicated by D'Zurilla and Goldfried (1971). The steps could be considered as forming a "chain" of response leading to the selection of the effective response.

It is not clear from existing research, however, which of the prerequisites for identifying the effective response are necessary or sufficient. Most investigators appear to have considered "generation of alternatives" and "foreseeing consequences" as important (Clark, 1958; D'Zurilla & Goldfried, 1971; Stone, Hinds & Schmidt, 1972; Platt & Spivack, 1972). On the other hand, other researchers have also emphasized the usefulness of "initial orientation" (D'Zurilla & Goldfried, 1971), "information gathering" and "estimation of personal values and goals" (Gelatt, 1965) in decision-making. The comparative usefulness of these problem-solving steps would, therefore, merit investigation in future research.

The feasibility of training clients in specific problem-solving skills is the finding that is in agreement with the result of previous studies (Evans & Cody, 1969; Stone, Hinds & Schmidt, 1971). These results, however, should be viewed with caution. In the present study, such training when given by itself resulted in gains in the area of problem-solving skills only and not with respect to exploratory behavior and awareness of career plans. The conclusion that arises out of the above finding is that symbolic practice of problem-solving steps on hypothetical situations may sharpen subjects' ability to solve vocational and other situational problems symbolically without contributing to a transfer of this ability to actual decision-making concerns. This defect could be remedied by increasing the similarity of the stimulus situations, used in training, to the actual situations in real life. One way of accomplishing this would be to use the simulation techniques involving live role-playing of a situation in the training procedure (Maier & Hoffman, 1964; Friedman, 1971).

Self-Reported Anxiety and Decision-Difficulty

It is striking that treatment conditions, including AMT, failed to reduce self-reported anxiety or decision-difficulty when compared to controls. Several reasons may have accounted for this. First, the very minimal changes in general anxiety levels of treatment and control groups suggest that "trait" measures of anxiety are not reliably sensitive to changes in felt anxiety evoked by a specific set of stimuli (Allen, 1970). Second, there is research evidence that "state" measures like the IADM, DDC and self-report of individual-vocational decision-difficulty are sensitive to the demand to show improvement

due to therapeutic intervention (Allen, 1970). Anxiety relief has also been known to occur as a result of attitudinal changes such as manipulated by effective placebo treatments (Davidson & Valins, 1968). This seems to have happened in the case of individual decision-difficulty. On this measure, there were sizable within-group alleviations in treatment as well as control groups.

A more important reason for this weak treatment effect is that subjects could show an improvement in coping behavior as a result of treatment even while experiencing a persistence of felt-anxiety and decision-making difficulty. This fact has received corroboration from studies (e.g., Carlson, 1970) employing cognitive and physiological measures. It has been found in these studies that complete reduction of anxiety arousal may not occur in anxious subjects who, after desensitization treatment, are able to perform the feared act: Treatment appears to have increased their ability to cope more effectively with felt-anxiety.

It is interesting that subjects receiving AMT showed no improvement on the anxiety measures but performed exploratory and problem-solving behaviors effectively. Originally, the anxiety felt by subjects possibly involved automatic arousal as well as the inability to attend to task-relevant cues due to cognitive concern or "worry" (Wine, 1971). The anxiety-coping responses fostered in AMT and CT seem to have been more successful in counteracting "worry" and teaching subjects to attend to activity-relevant cues. It is possible, therefore, that CT was especially effective because subjects learned how to construct and evaluate concrete strategies and were,

as well, supplied with the orientation to specific activity.

The above considerations also stress the importance of the "performance" variable in the behavioral model for effective responding (D'Zurilla & Goldfried, 1971). It has been noted that clients need to acquire an effective strategy of decision-making for solving vocational problems (Clark, Gelatt & Levine, 1965). It is not enough, however, for clients to select a course of action. They must be able to execute it. Some clients have difficulty with respect to the latter. Thoresen and Mehrens (1967) note that even after subjects appear to have explored a vocational choice-problem rationally, they make irrational decisions. They cling to subjective estimations of how feasible their career choices are with little support from objective probabilities of success. The authors suggest that these individuals must be influenced by factors as yet unidentified by research. The present study suggests that one such factor could involve inattention to task-relevant variables due to anxiety. There also is a need for investigating other factors, besides anxiety, that might inhibit "performance" and factors that would appear as deficits in "performance".

Some points of methodological significance for future research remain to be made. Quite large error terms and standard deviations of means were observed in the analyses of data obtained from the self-report measures of anxiety and decision-difficulty. This would imply that changes occurring as a result of treatment may have been obscured by within-group variances. There is also the possibility that the effect of treatment was not easily discernible because the pretest levels of anxiety and decision-difficulty were not high enough. Perhaps

a factorially designed study with anxiety level as one of the independent variables should be used in future research into the role of anxiety in the proposed model of effective responding.

The absence of a treatment effect on the test of Vocational Standing in spite of a strong trend in the hypothesized direction constituted a setback for the study. In future replication of the study, the researcher would be advised to use a more structured untimed version of the test. It is suspected that the present open-ended timed version was sensitive to extraneous sources of variance which obscured the effects of valid variance brought about by changes in subjects' knowledge of career plans.

Concluding Remarks

The conclusions to be drawn from this study are the following.

First, the vocational indecision of college students, represented by the sample used in this study, appears to be due to both defective problem-solving skills as well as defective "performance". This conclusion is warranted by the fact that superior gains were realized by the treatment group which focussed on both deficits.

Second, it appears that training in problem-solving and anxiety management possesses special effectiveness when used in combination, which cannot be explained away as being due to the additive strength of each type of training.

Third, the findings lend support to the clinical strategy proposed by D'Zurilla and Goldfried (1971). It is suggested that for treating ineffectiveness in handling situational problems, two types

of therapeutic procedures are potentially useful--procedures that would increase the probability of identifying the effective response and procedures aimed at facilitating performance of that response.

Fourth, this study has also confirmed a thesis proposed by previous less well-controlled studies, namely that in the area of educational psychology, training clients to organize information so as to make and execute good decisions, is feasible. It has also confirmed that such training would be more effective than advice-giving through talks and films, procedures contained in the placebo condition.

Three cautions ought to be observed in future extensions and replications of this study. The role of anxiety in effective responding ought to be investigated by means of a factorial design, with one factor containing clearly identified levels of situational anxiety. Second, problem-solving training and measures involving procedures that are highly similar to real-life situations, like live role-playing, ought to be used. Third, an assessment of the effectiveness of the individual steps in problem-solving is necessary. Each of these steps has much support in the literature for their role in "good" decision-making. It is not clear, however, which of them are necessary or sufficient.

REFERENCES

- Allen, G. J. Effect of three conditions of administration on "trait" and "state" measures of anxiety. Journal of Consulting and Clinical Psychology, 1970, 3, 355-359.
- Allen, G. J. Effectiveness of study counseling and desensitization in alleviating test anxiety in college students. Journal of Abnormal Psychology, 1971, 77, 282-289.
- Bandura, A. Principles of behavior modification. New York: Holt, Rinehart, & Winston, 1969.
- Bennet, C. C. Community psychology: impressions of the Boston conference on the education of psychologists for community mental health. American Psychologist, 1965, 20, 832-835.
- Borkovec, T. S. & Nau, S. D. Credibility of analogue therapy rationales. Journal of Behavior Therapy and Experimental Psychiatry, 1972, 3, 257-260.
- Bross, I. D. Design for decision. New York: Macmillan, 1953.
- Campbell, D. T. & Stanley, J. C. Experimental and quasi-experimental designs for research on teaching. In N. L. Gage (Ed.), Handbook of research on teaching. Chicago: Rand McNally, 1963.
- Carlson, P. M. Modeling, systematic desensitization and talking therapy: a comparison of motor, cognitive and physiological effects. Unpublished doctoral dissertation. University of Washington, 1970.
- Cattell, R. R. The IPAT anxiety scale. Champaign, Ill.: Institute for Personality and Ability Testing, 1957.
- Clark, C. H. Brainstorming. New York: Doubleday, 1958.
- Clarke, R., Gelatt, H. B. & Levine, L. A decision-making paradigm for local guidance research. Personnel and Guidance Journal, 1965, 44, 40-51.
- Crites, J. O. Vocational psychology. New York: McGraw-Hill, 1969.
- Cronbach, L. J., Rajaratnam, N. & Gleser, G. C. Theory of generalization: a liberalization of reliability theory. The British Journal of Statistical Psychology, 1963, 16, 137-163.

- Davidson, G. C. & Valins, S. Maintenance of self-attribution and drug attributed behavior change. Journal of Personality and Social Psychology, 1969, 11, 25-33.
- D'Zurilla, T. T. & Goldfried, M. R. Problem-solving and behavior modification. Journal of Abnormal Psychology, 1971, 78, 107-126.
- Eisenberg, S. & Delaney, D. J. Using video simulation of counseling for training counselors. Journal of Counseling Psychology, 1970, 17, 15-19.
- Endler, N. S., Hunt, J. McV. & Rosenstein, A. J. An S-R inventory of anxiousness. Psychological Monographs, 1962, 76 (17, Whole No. 536).
- Evans, J. R. & Cody, J. J. Transfer of decision-making skills learned in a counseling-like setting to similar and dissimilar situations. Journal of Counseling Psychology, 1969, 16, 427-432.
- Friedman, P. H. The effects of modeling and role-playing on assertive behavior. In R. D. Rubin, A. Lazarus, H. Fensterheim, & C. M. Franks (Eds.), Advances in behavior therapy. New York: Academic Press, 1971.
- Gelatt, H. B. Decision-making: A conceptual frame of reference for counseling. Journal of Counseling Psychology, 1962, 9, 240-245.
- Ginzburg, E., Ginsburg, S. W., Axelrad, S. & Herma, J. L. Occupational choice. New York: Columbia University Press, 1951. Cited in J. O. Crites, Vocational psychology. New York: McGraw-Hill, 1969.
- Goldfried, M. R. Systematic desensitization as training in self-control. Journal of Consulting and Clinical Psychology, 1971, 36, 228-233.
- Goldfried, M. R. & D'Zurilla, T. J. A behavioral-analytic model for assessing competence. In C. D. Spielberger (Ed.); Current topics in clinical and community psychology, Vol. I. New York: Academic Press, 1969.
- Goldfried, M. R. & D'Zurilla, T. J. Assessment and facilitation of effective behavior in college freshmen. Final Report, 1972, Grant No. MH-15046, National Institute of Mental Health.
- Goodstein, L. D. Behavior theoretical views of counseling. In B. Steffire (Ed.), Theories of counseling. New York: McGraw-Hill, 1965, 140-192.
- Gulliksen, H. Methods for determining equivalence of measures. Psychological Bulletin, 1969, 70, 534-544.

- Harren, V. A. The vocational decision-making process among college males. Journal of Counseling Psychology, 1966, 13, 271-277.
- Husek, T. R. & Alexander, S. The effectiveness of the Anxiety-Differential in examination stress situations. Educational and Psychological Measurement, 1963, 23, 309-318.
- Jackson, D. N. A sequential system for personality scale development. In C. D. Spielberger (Ed.), Current Topics in Clinical and Community Psychology, Vol. 2. New York: Academic Press, 1970.
- Jones, G. B. & Krumboltz, J. D. Stimulating vocational exploration through film-mediated problems. Journal of Counseling Psychology, 1970, 17, 107-114.
- Kirk, R. E. Experimental design: procedures for behavioral sciences. Belmont, California: Brooks/Cole Publishing Co., 1968.
- London, P. The end of ideology in behavior modification. American Psychologist, 1972, 27, 913-920.
- Maadi, S. R. The existential neuroses. Journal of Abnormal Psychology, 1967, 72, 311-325.
- Maier, N. R. F. & Hoffman, L. R. Financial incentives and group decision in motivating change. Journal of Social Psychology, 1964, 64, 369-378.
- Martin, B. & Sroufe, L. L. Anxiety. In C. G. Costello, Symptoms of psychopathology. New York: John Wiley & Sons, 1970.
- McFall, R. M. & Lillesand, D. B. Behavior rehearsal with modeling and coaching in assertion training. Journal of Abnormal Psychology, 1971, 77, 313-323.
- McFall, R. M. & Marston, A. R. An experimental investigation of behavior rehearsal in assertive training. Journal of Abnormal Psychology, 1970, 76, 295-303.
- Meichenbaum, D. Cognitive modification of test anxious college students. Journal of Consulting and Clinical Psychology, 1972, in press.
- Meichenbaum, D., Gilmore, B. & Fedoravicius, A. Group insight vs. group desensitization in treating speech anxiety. Journal of Consulting and Clinical Psychology, 1971, 36, 410-421.
- Osipow, S. H. & Walsh, W. B. Strategies in counseling for behavior change. New York: Appleton-Century-Crofts, 1970.
- Paul, G. L. Insight versus desensitization in psychology: An experiment in anxiety reduction. Stanford: Stanford University Press, 1965.

- Paul, G. L. & Shannon, D. T. Treatment of anxiety through systematic desensitization in therapy groups. Journal of Abnormal Psychology, 1966, 71, 124-135.
- Platt, J. J. & Spivack, G. Social competence and effective problem-solving thinking in psychiatric patients. Journal of Clinical Psychology, 1972, 28, 3-5.
- Platt, J. J., Scura, W. C. & Hannon, J. R. Problem-solving thinking of youthful incarcerated heroin addicts: Unpublished manuscript, Department of Mental Health Sciences, Hahnemann Medical College and Hospital, Philadelphia, 1972.
- Pollock, D. Crisis and response in college students. Journal of Abnormal Psychology, 1971, 78, 49-51.
- Rimoldi, H. J. A. A technique for the study of problem-solving. Educational and Psychological Measurement, 1961, 21, 450-461.
- Skinner, B. F. Science and human behavior. New York: Macmillan, 1953.
- Smith, R. D. & Evans, J. R. Comparison of experimental group guidance and individual counseling as facilitators of vocational development. Journal of Counseling Psychology, 1973, 20, 202-208.
- Stone, G. L. Effect of simulation methods on counselor training. Counselor Education and Supervision, in press.
- Stone, G. L., Hinds, W. C. & Schmidt, G. Teaching mental health behaviors to elementary school children. Professional Psychology, in press.
- Suinn, R. M. & Richardson, F. Anxiety management training: a non-specific behavior therapy program for anxiety control. Behavior Therapy, 1971, in press.
- Super, D. E. A theory of vocational development. American Psychologist, 1953, 8, 185-190. Cited in J. O. Crites, Vocational psychology. New York: McGraw-Hill, 1969.
- Thoresen, C. E., Krumboltz, J. D. & Varenhorst, B. Sex of counselors and models: Effect on client career exploration. Journal of Counseling Psychology, 1967, 14, 503-508.
- Thoresen, C. E. & Krumboltz, J. D. Relationship of counselor reinforcement of selected responses to external behavior. Journal of Counseling Psychology, 1967, 13, 140-144.
- Thoresen, C. E. & Krumboltz, J. D. Similarity of social models and clients in behavioral counseling. Journal of Counseling Psychology, 1968, 15, 393-401.

- Thoresen, C. E. & Mehrens, W. A. Decision theory and vocational counseling: important concepts and questions. Personnel and Guidance Journal, 1967, 96, 165-171.
- Truax, C. & Carkhuff, R. Concreteness: A neglected variable in psychotherapy. Journal of Clinical Psychology, 1965, 24, 3.
- Tiedeman, D. V. & O'Hara, R. P. Career development: Choice and adjustment. Princeton, N.J.N. College Entrance Examination Board, 1963. Cited in J. O. Crites, Vocational Psychology. New York: McGraw-Hill, 1969.
- Uhlemann, M. R. Behavioral change outcomes and marathon group therapy. M.A. dissertation, Colorado State University, Fort Collins, Colorado, 1968.
- Ullmann, L. P. On cognitions and behavior therapy. Behavior Therapy, 1970, 1, 201-204.
- Ullmann, L. P. & Krasner, L. A psychological approach to abnormal behavior. Englewood Cliffs, N.J.: Prentice-Hall, 1969.
- Varenhorst, B. B. Learning the consequences of life's decisions. In J. D. Krumboltz & C. E. Thoresen (Eds.), Behavioral Counseling: Cases and techniques. New York: Holt, Rinehart and Winston, 1969.
- Wine, J. Test anxiety and direction of attention. Psychological Bulletin, 1971, 76, 92-104.
- Winer, B. J. Statistical principles in experimental design. New York: McGraw-Hill, 1971.
- Zuckerman, M. The development of an effect adjective checklist for the measurement of anxiety. Journal of Consulting Psychology, 1960, 24, 457-462.

APPENDIX

VOCATIONAL EXPLORATORY BEHAVIOR RISK HD

This record asks you questions about what you will be doing during the next month to explore different occupations or vocations.

This record will be discussed during the interview which will be scheduled at the end of the eight group sessions.

All of the questions will concern your activities since Wed., March 14, 1973.

If you wish to check on a specific date, use the following calendar.

MARCH

S	M	T	W	T	F	S
			14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

APRIL

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14

Vocational Exploratory Behavior Record

SECTION A

HAVE YOU TALKED WITH ANY OF THE FOLLOWING PEOPLE SINCE WEDNESDAY MARCH 14, 1973?

	<u>YES</u>	<u>NO</u>
1. Persons <u>now working</u> at the types of occupations you are considering? If you answered "Yes", with how many persons did you talk?	—	—
2. Persons who <u>have worked</u> in the past at the types of occupations you are considering? If you answered "Yes", with how many persons did you talk?	—	—
3. Persons who know about the types of occupations you are considering (persons other than those mentioned above), even though they have never worked at these occupations? If you answered "Yes", with how many persons did you talk?	—	—
4. Persons <u>attending or who have attended</u> schools or colleges you are interested in attending in order to receive the training and education you need for the types of occupations you are considering? If you answered "Yes", with how many persons did you talk?	—	—
5. Persons who <u>know about</u> these schools or colleges, even though they did not attend them? If you answered "Yes", with how many persons did you talk?	—	—
6. If you have not mentioned them already, during the month have you talked with high school counselors, teacher advisers, business teachers or other school persons about the types of occupations you are considering? If you answered "Yes", with how many persons did you talk?	—	—

Section A - continued

YES

NO

7. If you have not mentioned them already, during the month have you talked with parents, family members and relatives, close friends or neighbors about the types of occupations you are considering?
 If you answered "Yes", with how many persons did you talk?

—

—

8. Are there any other persons to whom you have talked during this time about the types of occupations you are considering?
 If you answered "Yes", with how many persons did you talk?

—

—

Now complete Form A, page 7

Vocational Exploratory Behavior Record

SECTION BHAVE YOU DONE ANY OF THE FOLLOWING SINCE WEDNESDAY, March 14?YES NO

9. Have you written any place for information (pamphlet, bulletin, catalog) on occupations or on schools or colleges where you could get training and education for these occupations?

If you answered "Yes", how many letters did you write? — —

10. Have you looked at or read any books, magazines, bulletin board posters, or pamphlets about the types of occupations you are considering?

If you answered "Yes", how many different things did you look at or read? — —

11. Have you looked at or read similar things about types of occupations other than ones you are considering?

If you answered "Yes", how many different things did you look at or read? — —

12. Have you bought, borrowed or checked out of the library any reading material about the types of occupations or the schools and colleges you are considering, but you have not read this material yet?

If you answered "Yes", how many things did you obtain? — —

13. Have you watched attentively any T.V. programs, fair exhibits, or movies, or heard any radio programs since Tuesday, April 26, about the occupations or schools and colleges that interest you?

If you answered "Yes", how many things did you listen to or see? — —

Now complete Form B, page 8.

Vocational Exploratory Behavior Record

SECTION C

HAVE YOU VISITED OR MADE PLANS TO VISIT ANY OF THE FOLLOWING SINCE
MARCH 11, 1973.

- | | <u>YES</u> | <u>NO</u> |
|--|------------|-----------|
| 14. Have you <u>made on-the-job visits</u> to see what the types of occupations you are considering are like?
If you answered "Yes", how many places did you visit? | — | — |
| 15. Have you <u>made definite plans to make on-the-job visits</u> to see what the types of occupations you are considering are like, but have not yet made these visits?
If you answered "Yes", how many places did you make definite plans or visit? | — | — |
| 16. Have you <u>visited any of the schools or colleges</u> where you could get training and education for these occupations that you are considering?
If you answered "Yes", how many schools or colleges did you visit? | — | — |
| 17. Have you <u>made definite plans to visit any schools or colleges</u> where you could get training and education for these occupations that you are considering?
If you answered "Yes, how many places did you make definite plans to visit? | — | — |

Now complete Form C, page 9.

Vocational Exploratory Behavior RecordSECTION D

OTHER IMPORTANT INFORMATION

- | | <u>YES</u> | <u>NO</u> |
|---|------------|-----------|
| 18. Since Wednesday, March 14, have you <u>looked into or made definite plans to look into getting a summer or part-time job that is connected with the types of occupations you are considering?</u> | — | — |
| If you answered "Yes", how many jobs have you looked into or made definite plans to look into? | | |
| 19. Since Wednesday, March 14, have you <u>looked into or made definite plans to look into getting a summer or part-time job to make money for future training or education expenses?</u> | — | — |
| If you answered "Yes", how many jobs have you looked into or made definite plans to look into? | | |
| 20. Since Wednesday, March 14, have you <u>taken or made definite plans to take any tests (other than regular classroom tests) in order to find out more about your interests, abilities or achievements?</u> | — | — |
| If you answered "Yes", how many tests have you taken or made definite plans to take? | | |
| 21. Since Wednesday, March 14, have you <u>had a change in your occupational interests</u> that has led you to consider probably changing your course of study in high school? | — | — |
| If you answered "Yes", how many times has this occurred during this last month? | | |

22. What does your father (or guardian) do at work? _____

Does your mother work? _____ If so, what does she do? _____

Now complete Form D, page 10

Vocational Exploratory Behavior Record
Page 7

Form A

With whom have you talked?

Name	Address, where can he be reached	What did you talk about? * careers? schools? occupations?	By telephone or in person?	How long?	When did you talk? date?
1.					
2.					
3.					
etc.					

Vocational Exploratory Behavior Record

Page 8

Form B

What have you written for, looked at, read or obtained

Name or title of material	Author	Where did you receive the material: Library, your own sent for by mail, etc.	When did you get the material: Date.	What important fact(s) did you learn from the material?

Vocational Exploratory Behavior Record

Page 9

Form C

Visits made or planned

Person or place you visited or plan to visit	Date of visit whether made or planned	Address of person or place visited	What facts did you learn (hope to learn) from the visit	Is your visit related to occupations or to education or both
1.				
2.				
3.				
etc.				

Vocational Exploratory Behavior Record
Page 10

Form D

(Section D: Questions 18-21)

A. If you are using this form for Questions 18 and/or 19, answer the following questions. If you are using it for other questions, go on to the next page.

1. Did you get the summer or part-time job? _____ or do you have definite plans to obtain one? _____ or did you look and have not been successful so far? _____

2. Will you be paid for your work? _____ or are you volunteering?

3. Are you interested in the job because it is connected with the types of occupations you are considering? _____ or is it to make money for your future training or education, expenses? _____ or both? _____

4. What will you be doing on the job?

5. Who did you contact for the job or do you hope to contact?

Name: _____

Address: _____
(or how they can be reached)

6. When did you first talk to this person about the job or make definite plans to talk to this person?

Date: _____

7. What is (or will be) the place at which you have (or hope to have) the job?

Name: _____

Address: _____

8. How, if at all, is the job connected with your occupational interests?

Vocational Exploratory Behavior Record

Page 11

Form D. - continued

B. If you are using this form for Question 20, answer the following questions:

1. What tests did you take or make definite plans to take?

2. When did you take them or make definite plans to take them?

Date: _____

3. With whom did you make the arrangements for these tests?

Person: _____ Position: _____

Address: _____

4. What is the purpose of taking these tests?

5. Did you take them (or do you hope to take them) in order to help you make decisions about certain occupations?

If so, which ones? _____

C. If you are using this form for Question 21, answer the following questions:

1. What was the change in your occupational interests that you have had during this time?

2. When did this occur? Date: _____

3. With whom have you talked concerning the possibility of changing your course of study?

Person: _____ Position: _____

Address: _____

4. What has caused this change in your occupational interests?

APPENDIX II

TEST OF VOCATIONAL STANDING

Contents	Page
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2. Rating criteria-----	78
3. Item characteristics-----	80

This is a test of your vocational maturity i.e. of the extent to which you are aware of your career plan.

You are asked, in this test, to name the occupation for which you think or guess, at the present time, you are best suited and then give as many details as you can about this occupation and your reasons for choosing it.

Besides the number of facts you can give us about your vocational plan, we would like to have these facts expressed as concretely as possible and for you to avoid being vague about them.

Example of a concrete fact:

I think I will be a successful engineer because I get A's in Math and I like to design structural things like model plans and bridges.

Example of the same fact stated vaguely:

I think I will be good in the mechanical field because I am doing O.K. in my work and I like to build things.

To sum up then, in the test, you are required to write down **AS MANY CONCRETELY EXPRESSED DETAILS** as you can about an occupation which currently you consider to be a possible choice. There will be a time-limit to this test.

4

PART I: FOR WHAT SORT OF OCCUPATION

ARE YOU BEST SUITED?

1. Name of occupation:

2. Give details of the education or training required for this occupation. (name of course(s), how long, final degree, admission requirements, where taught, certification, etc.)

3. Do you have the ability to handle the education or training required? _____

Be realistic when giving your reasons for facts; we are interested in finding out whether you are clearly aware of your weaknesses as well as your strengths. Explain how you think your academic performance supports your choice: present average, "weak" and "strong" subjects, etc.

4. With respect to your interests, what makes you think you are going to be satisfied in this occupation?

(Give reasons. For example, since when did this occupation attract you; what do you find attractive about the occupation; whether you have had your interests measured by an interest-test; whether your work experience has told you something about your strengths for this job; whether people already working in this occupation field itself have told you something that has aroused your interest; any other "hints" you have been able to pick up about what your interests really are).

5. What is the present employment outlook for that occupation?

(Give details. For example job availability, major industries or institutions that hire such personnel, competition)

6. Describe what is involved in this occupation?

(Give details. For example: different lines or specialities in the field, equipment used, does the work involve: things, people or ideas?)

RATING METHOD

In assessing subjects' answers, the raters made use of global judgements of the extent to which subjects were aware of information requested in each category. In making these judgements, the raters relied mainly on their experience in occupational counseling rather than on the prior definition of levels on a 5-point scale. The following are broad definitions of the discriminations used by them.

Subjects were requested to make their answers as concrete as possible and avoid vagueness to facilitate the raters task of assessing their informatinnal content. Concreteness was not per se used as a rating criterion.

Question 1. Name of occupation (3-point scale)

Level 1 = appears to be giving academic area of interest (e.g. "biology" "history") rather than occupational area (group of similar occupational areas).

Level 2 = gives title of occupational area

Level 3 = gives title of specific occupation or speciality within occupational area.

Question 2. Give details of the education or training required for this occupation.

Level 1 = Unsure of educational or training preparation.

Level 2 = Initial preparation indicated in sketchy form - no awareness of post BA/B.Sc. requirements.

Level 3 = General idea of preparation indicated but without details.

Level 4 = Clear about pre-B.A./B.Sc preparation. Unclear, but seems aware of, possible post-B.A. or - same as Level 5 but with some misunderstanding.

Level 5 = Seems aware of all programs, requirements methods or preparing for occupation.

Question 3. Do you have the ability to handle the education or training required.

Level 1 = Discrepancies in statements about strengths and weaknesses - misperceives his chances or likelihood of being accepted for education or training required.

Level 2 = Makes general statements only, no specific view of strengths and weaknesses. (makes statements about performance in high school, that are unrelated to University work program or training/educational requirements).

Level 3 = Makes clear statements about strengths, weakness and chances of being accepted for training/education without giving adequate reasons.

Level 4 = Level 3 plus adequate reasons for strengths and weakness given. Relevance to training and educational requirements still inadequately indicated.

Level 5 = Makes clear assessment of strengths and weaknesses in relation to University work or program and as they relate to chances of being accepted for education and training requirements.

Question 4. With respect to your interests, what makes you think you are going to be satisfied in this occupation?

Level 1 = Statements which indicate conflicting concepts about work and interests.

Level 2 = Statements about attractiveness of occupation only, without reference to any other personal data regarding interests.

Level 3 = Level 2 plus some personal data vaguely indicated.

Level 4 = Level 2 plus personal data e.g. regarding academic and work experiences, test data, though their relation to chosen occupation not indicated.

Level 5 = Statements which relate broad self-statements based on experience of work, life, test data, to the occupational choice.

Question 5. What is the present employment outlook for that occupation?

Level 1 = General statement not indicating much awareness or thought about this question yet.

Level 2 = Generally incorrect statement but indicates S knows how to find out.

Level 3 = Generally accurate statement but some inaccuracy present or seems to lack details.

Level 4 = Generally accurate statement plus a few details.

Level 5 = Level 4 plus indication of detailed knowledge.

Question 6. Describe what is involved in this occupation.

The global 5-point rating assessment made in this category was dependent on the number of relevant details given.

TABLE A

ITEM CHARACTERISTICS OF TEST OF VOCATION STANDING* (N=35)

	Mean	Variance	$p(4+5)$	$p(3+4+5)$	r_t
Question 1	2.21	.52		$p(3) = .39$.39
Question 2	3.38	1.47	.51	.60	.55
Question 3	2.76	1.09	.18	.63	.42
Question 4	2.62	1.18	.27	.48	.66
Question 5	3.03	1.62	.39	.65	.60
Question 6	2.99	1.20	.26	.61	.74
Total score score	16.13	13.46			

*Coefficient Alpha = .71

APPENDIX III

INVENTORY OF ANXIETY IN DECISION MAKING (IADM)

Contents	Page
IADM questionnaire-----	82
Item characteristics-----	85

INVENTORY OF ANXIETY IN DECISION-MAKING

This inventory represents a means of studying people's reactions towards a decision or decisions which they are in the process of resolving and which are of concern to them.

PART I

You will find listed below a list of 10 common vocational decisions which students are confronted with. Please read them carefully.

1. Deciding what my vocational interests really are.
2. Deciding whether I should give a doubtful vocational choice some further thought or consider some other alternative.
3. Deciding between a less interesting career in which I have a chance of succeeding and a more interesting one in which progress is slow.
4. Deciding whether it is necessary for me to make a vocational choice at this time.
5. Deciding whether to leave school and take up a job or continue in school.
6. Deciding between further education which I value and a job opportunity that seems promising.
7. Deciding what courses or subjects to take next term.
8. Deciding what area or program or major to specialize in.
9. Deciding what to do when courses are unstimulating.
10. Deciding what to do when courses are not helpful in directing me to a career.

Now, in the space provided below, write the particular form of vocational decision or combination of decisions that constitutes your problem. You may use items from the above list or write in some of your own. Kindly indicate the degree of difficulty these decisions cause you. Be as specific as possible in describing your problem.

	never diffi- cult	seldom diffi- cult	somewhat diffi- cult	usually diffi- cult.	very diffi- cult.
1.					
2.					
3.					
etc.					

PART II

On this page certain common types of personal reactions and feelings are listed, which you may experience WHILE in the process of wrestling with your vocational problem.

Indicate the extent to which you show these reactions and feelings.

For example:

Feel down-hearted	1	2	3	4	5
	Not at all				Very much

If your problem makes you feel very downhearted circle alternative 5! if it makes you feel somewhat downhearted you would circle either 2, 3, or 4 depending on how much; if you do not feel downhearted at all then you would circle 1.

Feel tense as I think over my concerns	1	2	3	4	5
	Not at all				Very much

Get a calm feeling	1	2	3	4	5
	Not at all				Very much

Feel exhilarated and thrilled.	1	2	3	4	5
	Not at all				Very much

Want to avoid making this decision	1	2	3	4	5
	Not at all				Very much

Able to eat normally	1	2	3	4	5
	Not at all				Very much

Able to sleep well	1	2	3	4	5
	Not at all				Very much

Keep worrying	1	2	3	4	5
	Not at all				Very much

Feel desperate.	1	2	3	4	5
	Not at all				Very much

Feel carefree.	1	2	3	4	5
	Not at all				Very much

Able to concentrate on studies	1	2	3	4	5
	Not at all				Very much

Feel downhearted and despondent. 1 2 3 4 5
 Not at all Very much

REMEMBER: Your answers represent your reactions and feelings while you keep trying to solve your vocational problem.

Feel nervous, on edge. 1 2 3 4 5
 Not at all Very much

Feel inadequate and helpless. 1 2 3 4 5
 Not at all Very much

Feel secure. 1 2 3 4 5
 Not at all Very much

Feel lack of energy for most things. 1 2 3 4 5
 Not at all Very much

Feel listless, bored by most things. 1 2 3 4 5
 Not at all Very much

Feel anxious. 1 2 3 4 5
 Not at all Very much

Look at future optimistically. 1 2 3 4 5
 Not at all Very much

Feel I have little to look forward to. 1 2 3 4 5
 Not at all Very much

Spirits stay high. 1 2 3 4 5
 Not at all Very much

Feel generally happy. 1 2 3 4 5
 Not at all Very much

Feel contented. 1 2 3 4 5
 Not at all Very much

Please check again: Your answers above represent your reactions and feelings while you keep trying to solve your vocational problems.

TABLE A

ITEM CHARACTERISTICS OF IADM
N=72

ITEM NO.	ITEM	MEAN	VARIANCE	χ^2 (1+5)	χ^2 (3+1+5)	r^2
1.	Feel tense as I think over my concerns	3.31	1.15	.39	.77	.50
2.	Get a calm feeling	2.34	1.00	.11	.23	.31
3.	Feel exhilarated and thrilled	2.11	1.76	.33	.67	.40
4.	Able to sleep well	3.03	1.13	.57	.91	.52
5.	Keep worrying	3.07	1.19	.40	.80	.51
6.	Feel desperate	2.33	1.70	.26	.39	.57
7.	Able to concentrate on studies	3.32	1.20	.32	.88	.53
8.	Feel downhearted and despondent	2.16	1.40	.25	.47	.73
9.	Feel nervous, on edge	2.59	1.26	.23	.51	.57
10.	Feel inadequate and helpless	2.36	1.11	.22	.60	.51
11.	Feel secure	2.51	1.13	.23	.47	.65
12.	Feel lack of energy for most things	2.31	1.57	.18	.33	.41
13.	Feel listless, bored by most things	2.13	1.18	.14	.30	.57
14.	Feel anxious	3.32	1.32	.51	.77	.46
15.	Feel I have little to look forward to	1.32	1.32	.12	.26	.42
16.	Feel contented	2.17	1.48	.18	.42	.66
*	Want to avoid making this decision	2.68	1.76	.32	.56	.22
*	Able to eat normally	1.33	1.03	.84	.91	.45
*	Feel carefree	2.12	.95	.31	.28	.53
*	Look at future optimistically	3.42	.95	.51	.83	.67
*	Spirits stay high	3.14	.96	.39	.72	.65
*	Feel generally happy	3.19	.93	.35	.75	.61

* These items were omitted after sequential evaluation of item characteristics (Jackson, 1970)

APPENDIX IV

INTERCORRELATIONS BETWEEN DEPENDENT VARIABLES.

Contents	Page
TABLE A: Correlation Matrix of Anxiety Scales and Decision Difficulty Checklist-----	86
TABLE B: Correlation Matrix of Dependent Measures at pretest-----	87

2

OF/DE

3



TABLE A

CORRELATION MATRIX OF ANXIETY SCALES
AND DECISION-DIFFICULTY CHECKLIST

N=72

	1	2	3	4	5	6
1. IPAT-Anxiety						
DDC subscales:						
2. School	.43**					
3. Career	.49**	.36**				
4. Dating-Marriage	.30*	.26	.40**			
5. Interpersonal	.27*	.34*	.56**	.57**		
6. DDC Total	.48**	.68**	.70**	.76**	.80**	
7. IADM	.65**	.41**	.58**	.20	.38*	.45**

Note: The number at the head of each column corresponds to the scale numbers given on the right of each row.

*p < .05
**p < .01

No. Key

6. 1 Did Bart's present poor academic performance date back to high school days? (C, R)

No. In high school Bart was an honor student. (C, R)

He graduated 35th in his senior class of 100. (C, R)

His American College Entrance Test score was typical of an above average student. (C, R)

7. 0 Did Bart have a girlfriend? (C, NR)

Yes. He did have a steady girlfriend, Sue, age 18, whom he had been dating for two years. (C, NR)

Sue, a hometown girl, was also a freshman majoring in Home Economics. (C, NR)

8. 1 How many hours, daily, did Bart study? (C, R)

Bart studied about three hours on most days and about six on weekends. (C, R)

9. 0 Were Bart's surroundings supportive for study in a general sort of way? (NC, NR)

No, generally speaking, there was interference. (NC, R)

One needs quiet for concentration. (NC, R)

A good study method is also helpful. (NC, R)

10. 0 Did Bart see a medical doctor about his dilemma? (NC, R)

Bart did not go to a doctor, because there was nothing wrong with him physically. (C, NR)

A recent physical examination indicated that he was in good health. (C, NR)

11. 0 How did Bart get along socially? (NC, NR)

Bart was well-liked by his friends and classmates. (NC, NR)

He was a good 'mixer' and attended social events on campus. (NC, NR)

12. 1 What grades did Bart obtain in his present year? (C, R)

APPENDIX V

DECISION-DIFFICULTY CHECKLIST (DDC)

Content	Page
Psychometric properties-----	90
DDC questionnaire-----	91

PSYCHOMETRIC PROPERTIES

1. Criterion of endorsement frequency used in item selection:
p (ratings of 4 and 5) .14
2. Mean item correlation with Desirability Scale of the Personality Research Form (Jackson, 1968) = -.10
3. Corrected Item-total correlations range from .30 to .57 for the total scale and subscales.
4. Internal Consistency Reliabilities:

	Number of Items	Example	Coefficient Alpha
Total Scale	6		.94
Sub Scales:			
School	13	Deciding whether I should work by myself or ask for help to improve my weak background in some subjects.	.84
Career	15	Deciding what my vocational interests really are.	.84
Dating-Marriage	15	Deciding whether I should marry the person I love or wait till I'm more sure of him/her.	.83
Interpersonal- (relations with parents, teachers, friends)	15	Deciding whether to disagree with parents who are old-fashioned in their ideas or just not say anything that will upset them.	.80

The total scale also contains a group of 6 items of heterogeneous content which correlate substantially with the total scores of two or more subgroups but has high endorsement frequencies, low correlation with the desirability scale and substantial item-total scale correlations.

Decision-Difficulty Check List

Instructions

You will find on the following pages a list of decisions with which a student may be confronted at some time or other. You may be dealing with some of these decisions at the present time. Others may have concerned you in the past. Still others may occur in the future.

What is asked of you in each of the items listed in the booklet is to indicate, by ticking off (✓), in the appropriate column, the degree of difficulty or ease you would experience if you were making that decision.

Try to be realistic in your answers. In some items the desirable course to be followed is obvious, in others it is not. Most of us, at one time or other, find difficulty in following the ideal course of action. Sometimes, we are not even sure what the ideal or appropriate alternative is.

The purpose of this check-list is to find out the ease or difficulty with which you arrive at decisions; whatever the course of action may be, it is NOT important for the purposes of this checklist.

Example

Deciding whether to stock to my desk & continue studying or go out for a short walk with my girl/boy friend	Very easy or never difficult	Usually easy or seldom diffi- cult	Somewhat easy or somewhat diffi- cult	Seldom easy or us- ually diffi- cult	Never easy or very diffi- cult
--	------------------------------------	--	---	---	---

The person who answered the above example finds making that decision seldom easy or usually difficult and, therefore, put a check mark in the fourth column. In this example, deciding to continue studying may have been the ideal alternative. However, this is irrelevant here. What is relevant is that he thought it was a fairly difficult decision to make and gave a realistic answer.

Work quickly; first impressions usually give the more realistic and sincere answers.

1. Deciding whether to go steady or wait till I'm sure of him/her.
2. Deciding from whom to seek advice for a personal problem: a friend, teacher, or a counsellor.
3. Deciding between what I want to do and what my parents want me to do.
4. Deciding on which topic to do my essay or project, when all the possible alternatives require the same amount of work.
5. Deciding between marriage and a career.
6. Deciding what my vocational interests really are.
7. Deciding what sort of gift to get for a friend.
8. Deciding whether to speak up in class discussions.
9. Deciding whether to leave school and take a job or continue in school. (Assume you dislike attending school and the job is available).
10. Deciding what to say when my parents criticize me. (Assume you feel close toward them).
11. Deciding whether I should give a doubtful vocational choice some further thought or consider some other alternative.
12. Deciding whether to break up with my boyfriend/girlfriend.
13. Deciding whether poor answering technique or inadequate knowledge cause me to do poorly in exams.
14. Deciding whether a particular way of doing things is likely to be popular with my friends or is likely to hurt them.
15. Deciding whether I should work by myself or ask for help to improve my weakness in some subjects.
16. Deciding whether to keep dating someone my friends won't accept.
17. Deciding whether I should give more time to my friends or to my studies.
18. Deciding whether I should tolerate the affections of someone or discourage them at the expense of hurting him/her.
19. Deciding whether to stick to a career I like or follow a career my parents like. (Assume you feel very friendly toward your parents).
20. Deciding what courses or subjects to take next term.
21. Deciding what changes to make in study habits when my grades cause me concern.

22. Deciding whether to try harder with courses I don't like or concentrate on others that are more tolerable.
23. Deciding what to say when my parents criticize me. (Assume you feel distant from them).
24. Deciding on ways of getting enough money to go to school.
25. Deciding whether to ask the teacher's help or work by myself when work in some courses continues to be difficult.
26. Deciding whether to get engaged to someone.
27. Deciding whether to keep dating someone my family won't accept.
28. Deciding whether to leave school and take a job or continue in school. (Assume you dislike attending school and you will have to search for a job).
29. Deciding how to deal equally with parents who have recently had a sharp disagreement. (Assume you love them both).
30. Deciding between a less interesting career, in which I have a chance of succeeding and a more interesting one, in which progress is slow.
31. Deciding whether it is necessary for me to make a vocational choice at this time.
32. Deciding what area or program to major or specialize in.
33. Deciding how to deal fairly with two family members who quarrel between themselves. (Assume you love them both).
34. Deciding whether I should marry the person I love or wait till I'm more sure of him/her.
35. Deciding whether to apologize to a person I have hurt or just make it up to him some other way.
36. Deciding whether to drop a subject.
37. Deciding whether to talk to a teacher who incorrectly estimates my abilities or just learn to live with this problem.
38. Deciding whether to go out on a date with a certain boy/girl.
39. Deciding on what is a good balance between studies and social activities.
40. Deciding between helping my parents, and attending to my school work.

41. Deciding whether I should approach a guidance counsellor about my career problems or spend some more time thinking about them.
42. Deciding whether to ask a question in class or wait for somebody else to ask it.
43. Deciding whether I should get married early or wait till my partner and I are somewhat older.
44. Deciding whether I should continue to go steady for a little while longer or should start breaking up the friendship now.
45. Deciding which one of a choice of questions to answer in a test when all the alternatives are equally easy or difficult.
46. Deciding which of two of three plans for getting a part-time job is likely to pay off.
47. Deciding whether to volunteer answers to the teacher's questions.
48. Deciding whether to see the teacher after class about my work or wait till the next time I need help.
49. Deciding which courses will best prepare me for my career.
50. Deciding how to react toward a teacher I don't get along with.
51. Deciding whether a certain boyfriend or girlfriend is "my type".
52. Deciding exactly now to ask a certain girl out on a date or to get asked out by a certain boy.
53. Deciding whether to disagree with parents who are old-fashioned in their ideas or just not say anything that will upset them.
54. Deciding whether I should help an acquaintance I dislike or put up with his tales of my selfishness.
55. Deciding on the best way of coping with my financial problem.
56. Deciding on ways of dealing with a certain habit (e.g., day dreaming, nervousness, moodiness, laziness).
57. Deciding whether I should go to college (assume you dislike studying) or search for a job (assume job opportunities are few).
58. Deciding whether to give up a particular ideal or hold on to it.
59. Deciding between further education which I value and a job opportunity that seems promising.
60. Deciding between a convenient but ethically wrong course of action and an inconvenient but ethically tolerable one.
61. Deciding whether to question societal rules and regulations or learn to live with them.

APPENDIX VI

PROBLEM SOLVING SUBTEST I AND SUBTEST II

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Discrimination test for raters and rating instructions-----	96
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Information Gathering Subtest-----	103
Method of transforming scores on subtest I-----	124
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DISCRIMINATION TEST FOR RATERS

You will find here a list of thirty frames. Some are questions, others are statements.

The questions may be considered to be of the type usually asked by a counselor in an interview. They are preceded by a brief mention of a concern or difficulty, as a client might typically refer to it.

The statements are similar to responses typically made by clients.

In Part I, you are asked to classify these frames as either concrete (C) or non-concrete (NC).

In Part II, you are asked to classify these frames as either relevant (R) or non-relevant (NR). The frames in Part II are always preceded by a mention of the client's concern.

Concrete

The concrete question or answer is similar to the Counselor Tacting Response Lead used by Stone (1972) and Eisenberg and Delaney (1970).. It is a response that evokes an answer that describes a particular aspect of the vignette in more operational terms: specific behaviors, feelings and specific environmental characteristics.

A non-concrete question or answer lacks specificity. It refers to "real" feelings and "real" aspects of the client's concern using anonymous generalities.

Relevant

Questions and answers that are directly explicative of the stated concern of the actor in the vignette or of the immediate circumstances will be considered relevant. (There should be no more than one inferential stop between the concern and the relevant question).

Hence a dichotomous and not a 5-point rating, will be used to assess concreteness and relevance.

Examples

Regarding Sue who has a tendency to become anxious and tense.

- | | |
|---------------------------|---|
| Concrete
and relevant, | What does Sue feel in her body when she gets anxious? |
| Irrelevant | What does Sue want from life? |
| Non-concrete
(vague) | How does Sue view her anxiety? |

If a client were to say: "I just can't seem to concentrate. It's really affecting my school work",

a concrete response: "Tell me what you mean when you say you are unable to concentrate".

or if a client were to say: "Why do I get into fights? Every day it seems - another fight. I don't really want to fight",

a concrete response: "Tell me about the most recent fight you have been involved in".

PART I: Concrete-Non-Concrete

Now, when I have to give a presentation or something, all these feelings build up inside me.. (NC)

Something happens I guess between me and other people, I don't seem to fit in too good. (NC)

(Client's concern: constant nervousness)
Tell me what you start doing when you feel nervous? (C)

(Client's concern: I am down in the dumps)
Tell me more about it? (NC)

I live alone by myself, have no friends and only talk to Peter and John. (C)

(Client's concern: cannot interact with girls)
What difficulties do you have when you talk to girls or try to date them? (C)

I am History major and I will be applying to the College of Education when I graduate. (C)

(Client's concern: feel "lost" in University)
Are you aware of the maturing and fulfilling things available in a University? (NC)

(Client's concern: I want to know more about myself)
Do you find the way you live satisfying? (NC)

(Client's concern: I don't seem to "fit in" well with others)
What do you do when you are in a group that makes you think you don't fit in? (C)

(Client's concern: Insomnia affecting school work)
What difficulties are you experiencing in attending lectures and doing home-work? (C)

I am worried that when I ask people in a loud voice to do me favours I make them irritated. (C)

People disgust me because of the way they carry on so, and the way they treat you all the time. (NC)

(Client's concern: getting into trouble with teachers)
Describe one of your dealings with a teacher that you think did not please her. (C)

I have these funny feelings sometimes when I think something is going to happen. (NC)

(Client's concern: feeling guilty for long periods after an incident)
Describe some thoughts that run through your head after you have done something you feel you shouldn't. (C)

By going to University, I missed an interesting opportunity to work as a part-time librarian. (C)

(Client's concern: poor social adjustment)
Does this difficulty have any bearing on your personality? (NC)

(Client's concern: cannot resolve a quarrel he had with best friend)
Why can't you straighten out this interpersonal problem? (NC)

I fear social rejection, being rejected by and alienated from others. (NC)

PART-II: Relevant-Non-relevant

(Client's concern: nervousness)
Tell me what you start doing when you feel nervous? (R)

(Client's concern: disagreements with family)
My parents do not share my views concerning an occupational choice (R)

(Client's concern: difficulty in mixing with girls)
Do you have a car? (NR)

(Client's concern: feeling depressed)
In which situations do you feel sad and downcast? (R)

(Client's concern: he is withdrawn and apathetic)
I think maybe I had a happy childhood. (NR)

(Client's concern: cannot study well)
What happens to you when you cannot concentrate on your homework? (R)

(Client's concern: overwhelmed by academic courses)
I find that I cannot follow the lectures in Math. (R)

(Client's concern: gets anxious in the company of peers)
Are you an "outdoors" man? (NR)

(Client's concern: cannot assert himself)

Do you like mixing with people and socializing with them? (NR)

(Client's concern: he may have taken the wrong major)

Are you anxious in exams? (NR)

TEST INSTRUCTIONSIntroduction to problem-solving test

Because of the complex demands of our society, modern man finds himself confronted continuously by situational problems with which he must cope. The life of a student on a university campus has its share of situational problems which he ~~she~~ must solve in order to maintain an adequate level of maturity or effective functioning. The degree to which a person is effective clearly varies from person to person.

In this session you will undergo a test of your ability to react maturely and effectively when faced with problematic situations.

A problematic situation will be described and you will have to imagine yourself as being in that situation.

You will then be assessed for three qualities a person should have in order to handle a problem effectively:

first, the ability to gather information about the problem which is clear, specific and relevant as opposed to information that is vague and irrelevant;

second, the ability to come up with as many ideas as possible concerning what one should do in order to solve the problem;

third, the ability to choose one of these ideas as the most effective one in that particular situation.

For the first problem of subtest 1 and 2

Let us begin with the first task.

The steps that we will go through for each problem are:

1. Arranging the little paper folders into a display for your convenience, like so:

1	2	3	4	5		1	5	9
6	7	8	9	10	or	2	6	10
						3	7	etc.
						4	8	

2. Scanning the description of the problem on the answer-sheet and the questions printed on the paper folders.
3. At a given signal, answering the question. There will be a time limit, and 20 secs. before the end of the assigned time, a warning buzzer will sound.

For each problem situation there are fifteen possible questions you could ask. The questions are found on the outside of the paper folders, the answers to them on the inside.

Your first task is to find out as much clear and specific information as possible concerning the problem of the person in the situation described by choosing and opening the appropriate paper folders on display.

Please do not make any mark on the small paper folders as they will have to be used again.

Do not begin as yet.

Now let us take problem 1. First read the problem situation in your booklet: "Sue a 19 year old freshman reported to her counsellor that she was concerned about her tendency to become extremely anxious and tense. I want to find myself said Sue."

Next arrange the information display. You have half a minute for this.

Now read the questions on display as the number are called out: 1..., 2..., 3..., 4..., 5..., 6..., 7..., 8..., 9..., 10..., 11..., 12..., 13..., 14..., 15...

Next, at the given signal select those folders which yielded clear, relevant and specific information concerning the problem at hand and ignore information that is vague. There are two ways of doing this. You may open all the folders and read what is inside and then make your selection - you may not have enough time with this method. Or you may open only those folders which you feel have relevant and concretely worded questions printed on them and read what is inside them.

Record on the answer sheet only the number of folders you feel yielded clear and specific information. You have two and a half minutes for this. Now start.Stop.

Your second task is to list briefly and in point form if possible, as many ideas as you possibly can concerning what the person in the problem situation should do to remedy his or her problem.

Avoid analyzing the person's problem further or giving long explanations for your suggestions.

Make your suggestions concrete and not vague.

A vague suggestion is something like: Sue should have more confidence. Make this concrete stating what Sue should do to have more confidence. Suggest things like: Sue should talk to more people or take up public speaking to have more confidence.

Now start. You have three minutes for this.....Stop.
For each of problems 2, 3 and 4 of subtests 1 and 2

Next problem. First read the problem situation. (Pause)

Now arrange the folders into a display. (Pause)

Please read the questions on display. 1..., 2..., 3..., 4...,
5..., 6..., 7..., 8..., 9..., 10..., 11..., 12..., 13..., 14...,
15...

Now according to the instructions given before obtain as much
clear and pertinent information regarding the difficulty of the
person in the problem situation. Note only the numbers of the
folders you select. You have two and a half minutes for the task.
Start.Stop.

Turn the page.

Now write down as many concrete and specific suggestions as
you can think of, of things that the person should do to solve his
or her problem. Avoid vagueness or long explanations. Start.
You have three minutes.Stop.

SUBTEST I: INFORMATION GATHERINGNote

With respect to the key of the information display, "1" refers to a concrete and relevant question or answer. "0" refers to a non-concrete and/or non-relevant question or answer.

Rating assigned to each question and answer in the display have been indicated as follows: concrete (C), non-concrete (NC) relevant (R), or non-relevant (NR).

FORM I: PROBLEM - SITUATION 1

Ann, a college junior, studying in the College of Education, experienced considerable anxiety about going off campus to fulfill the student teaching requirement. She did not specify any particular reasons for these fears to her advisor.

Information Display

- | <u>No.</u> | <u>Key</u> | |
|------------|------------|---|
| 1. | 1 | What does Ann feel physically in her anxious moments?
(C, R) |
| | | Her anxiety about student teaching was accompanied by frequent periods of stomach flutters, a dry tongue and throat and considerable difficulty in falling asleep at night. (C, R). |
| 2. | 1 | Why is Ann afraid to go off campus to teach? (C, R) |
| | | Ann never had the opportunity to manage the day-to-day affairs of a person living on her own, away from daily and friends (C, R). |
| 3. | 0 | Does Ann appear to be in some way accepting of her faults as well as her assets? (NC, NR). |
| | | Generally, yes, but she has problems deciding whether being in the teaching program is an asset. (NC, R) |
| 4. | 0 | Does Ann have some sort of appreciation for teaching? (NC, NR) |
| | | Ann finds the teaching career quite fulfilling. (NC, R) She finds that other careers also have exciting possibilities (NC, R). |
| 5. | 1 | What does Ann say she feels when she teaches/speaks before groups? (C, R). |

No. Key

Ann has always felt a lot of anxiety, i.e. stomach flutters, a dry mouth and throat) when speaking before groups of people. (C, R)

The anticipation of having to speak before groups also made her dislike the idea of going away to teach. (C, R)

6. Does Ann have an asocial personality? (NC, R)

No. Ann is sociable and personable. (NC, R)

7. 1 Would Ann miss somebody on campus by going away to student teach? (C, R)

Ann did not also like to leave campus because she would be separated from her boyfriend. (C, R)

The separation was difficult to bear because he was to graduate and leave campus when she returned from student teaching. (C, R)

8. 0 Are there reasons why Ann liked teaching in spite of her anxiety? (NC, R)

There are:

She performed well academically, being a B+ average student. (C, R)

She likes the approval of her parents and teachers. (C, R)

Her teachers have said students would like to listen to Ann because of her verbal fluency. (C, R)

9. 0 What is Ann's general experience of her teaching supervisor's? (NC, R)

Ann kind of gets worried about the way they carry on when a presentation is being given. (NC, NR)

They seemed to her to be, in a way, quite critical. (NC, R)

10. 0 Did Ann feel any guilt about some sort of inadequacy? (NC, R)

The only sort of guilt that Ann felt was over the degree of sexual intimacy that had passed between her and her boyfriend. (NC, R)

No. Key

11. 0 Did Ann's upbringing at home have any connection with her feelings of anxiety about practice teaching? (C, R)

Yes, being an only child, she was overprotected by her parents in that they tried to make decision for her (C, R) Ann was worried about displeasing her parents if they learned that she disliked to student teach. (C, R)

12. 0 Did Ann have the typical parent-daughter feelings towards her mother and father? (NC, NR)

Ann was typically friendly. (NC, NR)

She felt close to them. (NC, NR)

,and did not want to disappoint them. (NC, NR)

13. 0 Did Ann receive that kind of emotional support which is helpful in difficult times? (NC, NR)

Her boyfriend was generally supportive and concerned. (NC, NR)

14. 1 Does Ann say she likes the teaching career? (C, R)

Ann says she likes to continue in teaching for the following reasons: her parents approve of this career, her instructors think she would make a successful teacher. (C, R)

On the other hand, she has also been thinking of other career possibilities like librarian, personnel officer. (C, R)

15. 1 How far away does Ann have to go to fulfill her teaching requirements? (C, R)

Ann has to go to Brantford which is a town of about 11,000 people about 60 miles, east of London, (C, R)

FORM I: PROBLEM SITUATION 2

Bart was an eighteen-year old male college freshman attending university in a general Arts program. He reported to his counselor that he was confused and overwhelmed by academic courses.

Information DisplayNo. Key

1. 1 What was the matter with Bart's academic performance that made him feel confused and overwhelmed? (C, R)
- Bart's academic performance was below his previous years average. (C, R)
- He did not know how to study and prepare his course work. (C, R)
2. 0 Did Bart perceive himself as kind of ineffective? (NC, R)
- Bart thought he was generally inadequate and unworthy. (NC, NR)
- He was also developing feelings of guilt. (NC, NR)
3. 0 Was Bart's study efficiency of the right kind: (NC, R)
- Bart's study efficiency was mediocre but improvable. (NC, R)
- He was generally motivated to do good work. (NC, R)
4. 1 What were some of the deficits in Bart's study skills? (C, R)
- Bart did not assign a regular time for studying. (C, R)
- He did not plan for his assignments ahead of time. (C, R)
- When he studied, he did not know to differentiate important issues from non-important details. (C, R)
5. 1 Describe the place where Bart studied. Was Bart able to do his course work there? (C, R)
- Bart studied mainly at home. (C, R)
- There usually was a lot of distracting conversation and activity around. (C, R)
- His brother, a sophomore on academic probation, often had friends over or used to play records all evening. (C, R)

- | <u>No.</u> | <u>Key</u> | |
|------------|------------|--|
| 6. | 1 | Did Bart's present poor academic performance date back to high school days? (C, R)

No. In high school Bart was an honor student. (C, R)

He graduated 35th in his senior class of 100. (C, R)

His American College Entrance Test score was typical of an above average student. (C, R) |
| 7. | 0 | Did Bart have a girlfriend? (C, NR)

Yes. He did have a steady girlfriend, Sue, age 18, whom he had been dating for two years. (C, NR)

Sue, a hometown girl, was also a freshman majoring in Home Economics. (C, NR) |
| 8. | 1 | How many hours, daily, did Bart study? (C, R)

Bart studied about three hours on most days and about six on weekends. (C, R) |
| 9. | 0 | Were Bart's surroundings supportive for study in a general sort of way? (NC, NR)

No, generally speaking, there was interference. (NC, R)

One needs quiet for concentration. (NC, R)

A good study method is also helpful. (NC, R) |
| 10. | 0 | Did Bart see a medical doctor about his dilemma? (NC, R)

Bart did not go to a doctor, because there was nothing wrong with him physically. (C, NR)

A recent physical examination indicated that he was in good health. (C, NR) |
| 11. | 0 | How did Bart get along socially? (NC, NR)

Bart was well-liked by his friends and classmates. (NC, NR)

He was a good 'mixer' and attended social events on campus. (NC, NR) |
| 12. | 1 | What grades did Bart obtain in his present year? (C, R) |

No. Key

- Bart obtained a low grade point average (between and F and a D grade). (C, R)
- He obtained an A in college algebra, an F in English and French and low D's in the other subjects. (C, R)
13. 0 What did some of Bart's teachers have to say of his ability to get a university education? (C, NR)
- Bart's English instructor advised him to leave college (C, NR)
- His high school guidance counselor and his college basketball coach thought Bart had the ability to earn a general Arts degree. (C, NR)
14. 0 Did Bart have worthy values in life? (NC, NR)
- Bart wanted a secure future for himself and his girlfriend (NC, NR)
- He valued a College education and also happiness for his parents. (NC, NR)
15. 1 Did Bart's poor academic progress have any immediate consequence? (C, R)
- Yes, he was placed on probation. (C, R)
- He was also dropped from freshman basketball. (C, R)

FORM I: PROBLEM SITUATION 3

Harry, a 22 year old English major, has recently encountered a great deal of difficulty related to poor social adjustment.

Information Display

No. Key

- 1 0 Has Harry any educational aspirations? (NC, R)
- Harry thinks he would find fulfillment in the Art's area. (NC, NR)
- He is not yet clear about his vocational goals. (NC, NR)
- He is somewhat interested in taking up something in the coaching line. (NC, NR)
2. 1 Do Harry's difficulties in talking with people interfere with his studies? (C, R)

No. Key

Yes. Everytime Harry sits down to do school work he is distracted by gloomy thoughts about his inability to mix with people. (C, R)

3. 1 What does Harry do when he deals with people? (C, R)

When he deals with people, Harry either talks to them aggressively or anticipates ridicule or coldness from them and keeps away. (C, R)

4. 0 What general attitude does Harry have to people? (NC, R)

Generally, Harry would like to feel good about people and be sort of friendly. (NC, R)

But he does not relate well to them. (NC, R)

5. 0 Is Harry thinking of asking a counselor about all this? (NC, R)

Not yet, but he intends to do so since, it appears his problem is of the troublesome type. (NC, NR)

6. 1 Has Harry any friends at his place of residence? (C, R)

Harry lives alone in a rooming house near campus. (C, R)

He has three or four acquaintances, whom he meets about once a week. (C, R)

7. 1 Has Harry dated any girls? (C, R)

Harry had dated one girl for a brief period during the last year of high school. (C, R)

He has had three or four other dating and sexual experience. (C, R)

8. 0 Does Harry mix somewhat with anyone at the place where he lives? (NC, R)

Not really. But he would like to interact with more people. (NC, R)

9. 0 What sort of "place" does Harry have for girls of his life? (NC, R)

Harry would like to relate to them but he has not been successful in forming any worthwhile companionships. (NC, R)

- | <u>No.</u> | <u>Key</u> | |
|------------|------------|---|
| 10. | 1 | Does Harry meet anyone when he has fun and relaxation.
(C, R) |
| | | Harry's recreational activities are solitary. (C, R) |
| | | They usually are listening alone to music and reading.
(C, R) |
| 11. | 1 | What personal skills does Harry have that could come in use for increasing his social contact? (C, R) |
| | | Harry is intelligent, articulate and well read. (C, R) |
| | | He has theoretically-related interests and talents like stage-crafts and stage direction. (C, R) |
| 12. | 0 | Is Harry in some way or other inclined to recreational activities? (NC, R) |
| | | Harry is not generally disposed to having fun. In fact he does very little that one could call recreation.
(NC, R) |
| 13. | 0 | Does Harry have any confidence? (NC, NR) |
| | | Harry has some valuable qualities that should give him a lot of confidence. (NC, R) |
| 14. | 1 | Does Harry spend a lot of time with his parents? (C, R) |
| | | Harry has kept away from them. (C, R) |
| | | He does not visit them. (C, R) |
| | | He feels that they cannot understand the social difficulties he is having on campus. (C, R) |
| 15. | 1 | Has Harry's nervousness in being with people disrupt his academic performance? (C, R) |
| | | Yes. His grades are now at a C average. (C, R) |
| | | He has noticed that his classwork has increasingly received D-F grades over the past three months. (C, R) |

FORM I: PROBLEM SITUATION 1

Ed came to University as a freshman in September wondering about how his first term away from home would turn out. After the first two weeks, Ed's residence hall counselor noted that he was becoming increasingly apathetic and withdrawn.

111

Information Display

- | <u>No.</u> | <u>Key</u> | |
|------------|------------|---|
| 1. | 1 | What did Ed do that made him appear withdrawn? (C, R)

Ed took to missing meals, staying by himself, cutting classes and remaining in his room for most of the day. (C, R)

He was sleeping as much as 10-12 hours a day. (C, R) |
| 2. | 0 | Was Ed withdrawn because of an inferiority complex or because he found the world threatening? (NC, R)

Though there is little to suggest the presence of any "complex", Ed did feel unable to cope with certain factors or events in his world. (NC, R) |
| 3. | 1 | Was Ed able to keep up with his school work? (C, R)

No. Ed found that school tasks of his engineering courses were either difficult to perform, uninteresting or both. (C, R)

He also did not know how to study: how to take notes in class, and how to assign study time to various courses (C, R) |
| 4. | 0 | How was Ed with respect to academic work? (NC, NR)

Ed had abilities that could enable him to function effectively scholastically. (NC, NR)

He was not, however, a studious type. (NC, NR) |
| 5. | 1 | Was Ed able to talk with people and make friends? (C, R)

Ed missed his old friends and felt timid about making new friends. (C, R)

He thought they would not like him if he tried to be friendly. (C, R)

He also lacked skills in talking and meeting with girls. (C, R) |
| 6. | 0 | How did Ed get along in the social-sexual realm? (NC, R)

Ed knew few people and did not feel confident associating with girls. (NC, R) |
| 7. | 1 | Whom did Ed miss at the University? (C, R) |

No. Key

- His sisters, with whom he was very friendly and from whom he got a lot of encouraging remarks about his work. (C, R)
8. 0 Did Ed realize that there were aspects in the University that were maturing and worth having? (NC, NR)
- No. Though he had abilities for a University Education, Ed did not find scholastic life gratifying. (NC, NR)
9. - 1 Was Ed interested in his courses? (C, R)
- No. He did not find the school tasks of the engineering program he was enrolled in interesting nor was he able to perform them. (C, R)
- He had chosen the engineering field because it seemed to have wage-prospects, that were better than those available in farming. (C, R)
10. 0 What sort of attitude to girls did Ed have? (NC, NR)
- Ed's attitude to girls was nice. He was conservative in his relations. (NC, NR)
11. 1 Did Ed miss some activity at the University he used to perform at home? (C, R)
- Ed missed a very enjoyable part-time job working for a brother-in-law in the retail business. (C, R)
12. 0 Was Ed an "outdoors" man? (C, NR)
- Ed liked hunting, fishing and engaging in sports. (C, NR)
13. 1 Did Ed think he would eventually learn to like going to University? (C, R)
- No. Ed thought he would fail at the University since he did not like studying, (C, R)
- He felt lonely and did not know how to go about preparing his school work. (C, R)
14. 0 How supportive was Ed's family? (NC, NR)
- His parents related to Ed in a distant manner. They thought well of his college career. (NC, NR)
15. 1 Did Ed have the ability for University education? (C, R)

His academic performance in the past, as well as his scores on academic aptitude tests indicated that he possessed the minimum intellectual qualities to complete a university education but not a curriculum as heavy as engineering.
(C, R)

FORM II: PROBLEM SITUATION 1

Sue, a nineteen-year-old freshman, reported to her counselor that she was concerned about her tendency to become extremely anxious and tense. "I want to find myself", said Sue.

Information Display

No. Key

1 0 How does Sue explain her misgivings about life? (NC, NR)

Sue would like to really find out who she is. (NC, NR)

At present she is searching for a deeper meaning in life. (NC, NR)

2 1 What does Sue feel in her body when she gets anxious? (C, R)

She gets cramps and a feeling of tightness in her stomach. (C, R)

She starts sweating at her palms and her lips tremble. (C, R)

3 1 In what situations does Sue get anxious? (C, R)

Sue gets anxious whenever she meets a group of girls and boy friends and she thinks they are criticizing her. (C, R)

4 0 What is Sue's attitude to her anxiety feelings? (NC, NR)

They are making life impossible for her. (NC, NR)

She would like to be free once again. (NC, NR)

5 0 What does her family doctor have to say? (NC, NR)

She has only consulted him in an offhand sort of a way. (NC, NR)

He has not recommended anything. (NC, NR)

6 1 In what locations does Sue experience anxiety? (C, R)

Sue's anxiety is not restricted to any one setting. (C, R)

It is most often at school that she thinks people are evaluating her and gets anxious. (C, R)

7 1 Have Sue's anxiety feelings disrupted her academic performance? (C, R)

No Sue's grades are satisfactory: B average. (C, R)

She thinks she could improve this performance. (C, R)

No. Key.

8. 0 Has Sue found any meaning in a vocational goal? (NC, R)
Somewhat. She has not yet identified an occupation in which she could entirely involve herself. (NC, R)

9. 1 What different thoughts does Sue have when she feels tense? (C, R)
She feels that people criticize her, sometimes. (C, R)

At other times, she also feels she cannot express her anger or irritation openly. For example, if she strongly disagreed with the comments written on her work by an instructor, rather than point this out to him, she would just keep quiet. (C, R)

10. 0 Has Sue told her parents about her problems? (C, NR)
Not really, though they have some idea. Her mother actively supports Sue's educational efforts. (C, NR)

11. 0 Is Sue's anxiety normal or abnormal? (NC, NR)
At times Sue reports feeling acutely sad. (NC, NR)
But her anxiety is something she could learn to cope with. (NC, NR)

12. 1 Does Sue always feel tense when there are people around her? (C, R)
No. Sue has many friends and acquaintances. (C, R)
She enjoys being dated by two young men in particular. (C, R)

She has three or four girlfriends with whom she plays badminton and discusses academic problems. (C, R)

14. 0 Does Sue often have pessimistic thoughts? (NC, R)
Not often. But at times she allows herself to become overconcerned about small events, and will not view these events within their general context. (NC, R)

13. 0 How does Sue feel about University? (NC, NR)

No. Key

Sue would like to broaden her mind at University and has enrolled in a variety of courses. (NC, NR)

15. Describe Sue's study habits? (C, R)

Sue spends at least 5 hours a day in studying by herself. (C, R)

She tries to assign her time to various subjects according to their importance in the curriculum. She also spends one hour daily in fun and recreation. (C, R)

FORM II: PROBLEM SITUATION 2

Clem was an eighteen-year-old freshman, majoring in Chemistry, when he first saw a counselor. Though, a good-looking man, of average dress and grooming he said he felt insecure about relating to the opposite sex.

Information Display

No. Key

1. 1 What did Clem say he felt in the company of girls? (C, R)

In the company of girls Clem felt flushed, his hands perspired and he found it difficult to talk. (C, R)

2. 0 What was the quality of Clem's interpersonal life before coming to University? (NC, NR)

Clem's interpersonal life had little variety. (NC, NR)

It was not fully developed even though he was a personable individual. (NC, NR)

3. 1 Did Clem attend social activities before coming to the University? (C, R)

Clem attended only one high school dance before coming to University. (C, R)

He did not date, studied hard and was not active in sports. (C, R)

4. 0 How insecure did Clem feel with girls? (NC, NR)

Clem felt very insecure before girls. (NC, NR)

He considered himself socially inadequate and did not seem to fit in too good. (NC, NR)

- | <u>No.</u> | <u>Key</u> | |
|------------|------------|--|
| 5. | 1 | Since he did not date girls, what sort of recreation did Clem take part in at present? (C, R)

For recreation, Clem studied the stock market and listened to popular music. (C, R) |
| 6. | 1 | What sort of thoughts went through Clem's mind when he thought of dating someone? (C, R)

Clem felt that no girl would be interested in him. (C, R)

When he rehearsed in his imagination all the steps that were involved in keeping up a conversation with a girl or asking her out, he became anxious. (C, R) |
| 7. | 0 | What interpersonal attitudes did Clem have? (NC, NR)

Clem wanted to expand his contacts with everybody. (NC, NR)

He felt a need for female companionship. (NC, NR) |
| 8. | 0 | Was Clem suffering from an inferiority complex? (NC, NR)

It is not clear whether he had a complex. (NC, NR)

He had inferiority feelings, at times. (NC, NR) |
| 9. | 0 | Did Clem love to boast? (C, NR)

One guesses that Clem did speak about his accomplishments occasionally. (C, NR)

He certainly did not boast about his heterosexual prowess. (C, NR) |
| 10. | 1 | Besides being unable to date girls, how did Clem spend time with people? (C, R)

Clem's activities were largely solitary. (C, R)

He rarely went out even with his male friends to a pub or movie. (C, R)

He generally kept company with two of his classmates. (C, R) |
| 11. | 1 | Was Clem competent in his academic area? (NC, R) |

No. Key

- In general, Clem was a good student. He worked hard. (NC, R)
12. 1 Were there any social skills that Clem learned in high school? (C, R)
- In high school, Clem studied hard, did not date and did not take part in sports. (C, R)
- All his free time was devoted to helping out on his parents farm. (C, R)
13. 1 Was Clem's fear of girls influenced by his parents' social behaviors? (C, R)
- Yes. His parents rarely attended social activities except home and church activities. (C, R)
- They did not believe in having fun but only in hard work. (C, R)
14. 0 Besides being unable to relate to females, did Clem have any other social "block"? (NC, R)
- Clem was not inhibited towards male companionship because he did, on the whole, have a subdued social life. (NC, R)
15. 1 Were there any dating experiences Clem had had before? (C, R)
- Clem had had one date in high school. (C, R)
- In the company of another couple she called him a social slob and she left the dance alone. (C, R)
- This experience severely embarrassed Clem. (C, R)

FORM II: PROBLEM SITUATION 3

Ray was a nineteen-year-old 2nd year student in electrical engineering. Ray realized that he should change his major to Law or Business. Information from an interest test and other kinds of evidence had led him to come to this conclusion. However, he was 'scared' and could not bring himself to make the decision to change his major. He was just not able to decide for himself.

Information DisplayNo. Key

- 1 1 What did Ray do and feel when he became 'scared'? (C, R)

No. Key

- When he felt anxious Ray could not sleep, kept away from people and repeatedly put off making decisions. (C, R)
2. 1 What was Ray 'scared' of? (C, R)
- Ray was afraid that making the decision to switch majors would involve defying his parents. (C, R)
- He avoided the anxiety associated with expressing his own preference for a major by not making the decision. (C, R)
3. 0 Did Ray feel he was in a bad position having to make such a momentous decision? (NC, R)
- Ray felt unprepared and insecure. He was worried about certain things that lay ahead of him if he did switch to another major. (NC, R)
4. 1 Did Ray have the abilities necessary for admission to the Law or Business school? (C, R)
- Yes. Ray's scholastic aptitude was above average as inferred from his American College Test percentile score of 85. (C, R)
- Currently he was carrying a B+ average, with an 'A' in business law. (C, R)
5. 0 What were Ray's parents like. (NC, NR)
- Ray's father was a demanding, dominant person, employed as a professional engineer and earned approximately \$25,000/yr. His mother was very socially-oriented. (NC, NR)
- Both parents valued higher education. (NC, NR)
6. 1 Did Ray make academic decisions for himself? (C, R)
- No. His father and his faculty advisor made such decisions like what courses Ray should take, how many hours he should study. (C, R)
7. 1 Why did Ray take up the Electrical Engineering program in the first place? (C, R)
- Ray majored in Engineering, because pressure had been on him for a number of years to do so by his parents. (C, R)
- His father was a professional engineer and both parents preferred that he get an education in the applied field. (C, R)

No. Key

8. 0 Did Ray enjoy the educational environment?

Ray found his stay at the university particularly satisfying. He liked the atmosphere and enjoyed his independence. (NC, NR)

9. 0 Was Ray sort of vocationally-undecided? (NC, NR)

Yes. His career-choices had not crystallized, partly because of a lack of information and partly because he could not take a stand. (NC, NR)

10. 1 Was Ray able to make decisions about his day-to-day chores in residence? (C, R)

Both of Ray's roommates, Richard and Fred, tended to make decisions for him or about him. For example, they made decisions about where to eat, studying hours in the room, time for lights to be out without consulting Ray. (C, R)

11. 1 Was Ray able to make decisions for himself in the past, before coming to University? (C, R)

No. In the past, his parents had frequently made decisions for Ray. (C, R)

For example, Ray had not been permitted to play football in high school; he was allowed to date only on Saturday nights, he was required to study Sunday through Thursday night. (C, R)

12. 0 Did Ray consider that living independently on campus was something positive? (NC, NR)

Yes. His academic dissatisfaction, however, offset this contentment. (NC, NR)

13. 0 How did Ray analyse the factors in his situation?

Ray was aware of those perseverative avoidant tendencies in decision-making situations. (NC, NR)

He realized his anxiety and pattern of thinking was ineffective. (NC, NR)

14. 0 What were the negative and disturbing effects of poor decision-making for Ray? (NC, R)

In a decision-making situation, Ray's behavior was characterized by procrastination, perseveration, and withdrawal. (NC, R)

No. Key

Ray had not learned those adaptive responses involved in decision-making. (NC, R)

15. 1 Give details of Ray's present academic performance. (C, R)

At present Ray was performing at a B+ average. (C, R)

At the previous term exams he had obtained an 'A' in business law, 'B's in Calculus, Physics, Chemistry, and 'A' in Statics and Mechanics. (C, R)

FORM II: PROBLEM SITUATION 4

Carol was a 2nd year student at the University majoring in History. She was an attractive young woman, nineteen years old, from a well-to-do family. She complained to an older friend, whose advice she often sought, that she felt mildly depressed whenever she thought a great deal about her life and her values.

Information DisplayNo. Key

1. 1 What did Carol feel when she was depressed?

When she got mildly depressed, Carol found herself sighing frequently and nothing seemed to interest her. (C, R)

2. 0 Did Carol perceive herself as somewhat ineffective? (NC, R)

Carol missed having the kind of value system that is worthwhile to live by. (NC, R)

She had many questions and few answers. (NC, R)

3. 1 What thoughts made Carol become serious and sad? (C, R)

Carol was not at all sure that she wanted to be affluent and value material things like job, house, cars and travel as she thought her parents did. (C, R)

She also was not sure whether having sex relations with her dates would have any effect on her marital life later. (C, R)

4. 0 Did Carol have somewhat worthy values in life?

Not yet. But she was trying to search for some. (NC, R)

- | <u>No.</u> | <u>Key</u> | |
|------------|------------|--|
| 5. | 0 | In what areas of life did Carol feel that way? (NC, R)

Carol was experiencing a developmental problem and hence questioned the values she was living by, in general. (NC, NR)

She also had some questions in the social and sexual realm. (NC, NR)

What difficulties did Carol have about her way of life? (NC, NR) |
| 6. | 0 | What difficulties did Carol have about her way of life? (NC, NR)

The problem was not clear. (NC, NR)

She could not accept the way of life she was used to. (NC, NR)

She was puzzled as to the changes that were needed. (C, NR) |
| 7. | 0 | Did Carol have a large allowance to play around with? (C, NR)

Carol did not have a large allowance. (C, NR)

She was given an average-sized one to cover incidental expenses. (NC, NR)

She spent her money responsibly. (NC, NR) |
| 8. | 1 | Were Carol's visits home friendly and congenial? (C, R)

No. In fact each time she went home, she had daily arguments with them about social responsibilities to slum dwellers and about living too comfortably. (C, R) |
| 9. | 1 | Besides questions about values, did any other aspect of her life make Carol have a "depressed" feeling. (C, R)

Yes. Carol was not sure whether she should be permissive about sex: Carol dated every weekend. (C, R)

Usually these dates ended with Carol slightly drunk and slightly aroused sexually. (C, R)

Sometimes she had engaged in sexual relations with her date, afterwards feeling some guilt. (C, R) |
| 10. | 0 | Did Carol have happy and fulfilling interpersonal relations on campus? (NC, NR) |

No. Key

Not entirely. (NC, NR)

She felt her friends could not be helpful to her because they were wrestling with the same problems. (NC, NR)

11. 1 Did Carol's friends say things that depressed her? (C, R)

Yes. Three or four of her friends would criticize Carol for admitting she did enjoy nice clothes, a nice house, cars, etc. (C, R)

Also, her friends would, about twice monthly, experiment with marijuana and invite Carol to join them. But so far, Carol had not accepted their invitation. (C, R)

12. 1 Did Carol question her parents about the values she was brought up with at home? What was the effect of this on her parents? (C, R)

Her father was angered to find that his daughter did not appreciate the benefits like opportunity to get an education, money for clothes and travel, that he had provided for her. (C, R)

Her mother was afraid Carol would become pregnant or experiment with drugs. (C, R)

13. 0 Did Carol find her family environment helpful? (NC, R)

No. But Carol managed the stress reasonably well by admitting to herself that they meant well and staying away from home. (NC, R)

14. 0 Was Carol's problem of the complex kind? (NC, R)

Yes. Carol's social and sexual environment also contributed some fuel to her value conflict.

15. 1 Did the thinking Carol was doing about her values interfere with her school work. (C, R)

No. Carol's grades remained at an A or B+ average. (C, R)

Thoughts about values would intrude, however, while she was studying.

Method for Transforming Scores on Subtest 1

Positive and negative difference scores on each problem were transformed into positive scores. The range of possible raw scores -7 to +7 was made equivalent to a range stretching from 0 - 14.

Raw Difference score	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-7
Transformed score	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

TABLE A

ITEM CHARACTERISTICS SUBTEST 1, FORM I

	Problem ₁	Problem ₂	Problem ₃	Problem ₄
Mean	8.52	8.42	8.45	8.85
Variance	2.55	3.27	2.46	2.37
r_{it}	.56	.42	.54	.67
item difficulty	.57	.48	.48	.60

TABLE B

ITEM CHARACTERISTICS SUBTEST 1, FORM II

	Problem ₁	Problem ₂	Problem ₃	Problem ₄
Mean	8.48	8.36	8.06	8.36
Variance	2.98	2.11	2.45	3.50
r_{it}	.59	.42	.53	.66
item difficulty	.51	.51	.47	.63

TABLE C
ITEM CHARACTERISTICS OF SUBTEST II, Form I

	Problem ₁	Problem ₂	Problem ₃	Problem ₄
Mean	3.33	3.73	4.03	4.52
Variance	1.80	2.80	2.70	2.92
r_{it}^2	.62	.71	.89	.36
item difficulty	.42	.46	.63	.36

TABLE D
ITEM CHARACTERISTICS OF SUBTEST II, Form II

	Problem ₁	Problem ₂	Problem ₃	Problem ₄
Mean	3.27	3.87	3.00	3.00
Variance	2.44	2.13	1.52	1.61
r_{it}^2	.61	.70	.75	.79
item difficulty	.42	.50	.59	.34

APPENDIX VII

PROBLEM SOLVING SUBTEST III

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2. Method for transforming scores-----	141
3. Psychometric information-----	142

SUBTEST III: CHOICE BEHAVIOR

FORM I: TASK 1

What would you do in this
Problematic Situation?

You are enrolled in introductory psychology. You have recently had your first quiz, and when you get your paper back, you see that you have received a "C".

In comparing your paper with someone else's in the class who received a "B" you're surprised and somewhat upset to find that his answers were essentially the same as your own.

Imagine that you are actually in the above situation and there are the following nine possible courses of action you could take:

	<u>KEY</u>
1. Plan to seek explanation from instructor if situation recurs in the future.....	<u>7</u>
2. Ask instructor what would qualify as a "B" paper....	<u>4</u>
3. Would not take course with this teacher in the future.....	<u>8</u>
4. Speak to classmate with higher grade, and try to use his approach in writing future quizzes.....	<u>3</u>
5. Compare papers again, ask a friend to help you find the differences between the two tests.....	<u>1</u>
6. Explain to professor that you feel you deserve a higher grade, and try to point out merits of the paper.....	<u>5</u>
7. Bring matter up to the professor and ask to have the grade changed to a "B".....	<u>6</u>
8. Ask professor to explain your mistakes on the quiz.....	<u>2</u>
9. Plan not to compare your paper with anyone else's in the future.....	<u>9</u>

Now, rank these nine courses of action open to you in order to preference. Indicate your ranking in the spaces provided on the right of each item.

Your most preferred response should have a rank of 1, your next preference a rank of 2 and so on. Your least preferred choice should have a rank of 9. Do not give the same rank to more than one item.

Remember try to be realistic and make your choices as though you, and not somebody else, were actually in the situation described above.

FORM I: TASK 2

What would you do in this Problematic Situation?

Before coming to college, you and your parents had agreed on a certain amount of money for a monthly allowance. However, after several weeks at college, you found that you just manage to get by on the allowance you receive from your parents. You have found that the money you have for miscellaneous spending (entertainment, snacks, etc.) goes very quickly and you are often broke for about a week until your next allowance. Although your parents can afford an increase in allowance, they have refused to increase it, insisting that the amount you are now getting for miscellaneous spending is enough.

You are taking a break from studying one evening, and as usual, find yourself getting very hungry. You would like to order a pizza, but as you look around for money, you find that you are broke again.

Imagine that you are actually in the above situation and there are the following nine possible courses of action you could take:

KEY

- 1. Ask parents to send you an advance on your next allowance..... 8
- 2. Invite parents to visit campus on weekends and occasionally bring food for snacks..... 6
- 3. Try to work out some sound weekly budget with the present allowance..... 4
- 4. Contact parents and again explain the need for a very small increase in allowance, and express an interest in getting a part-time job as well..... 2
- 5. Ask roommate to hold monthly allowance for you and only give you part of it each week..... 9
- 6. Present itemized spending account to parents and ask if they will increase your allowance..... 5
- 7. Ask parents to send money on a weekly rather than a monthly basis..... 3

- 8. Contact parents and again try to convince them to increase your allowance..... 7
- 9. Ask a friend to buy a pizza to share with you and promise to pay for your half at a later time..... 1

Now, rank these nine courses of action open to you in order to preference. Indicate your ranking in the spaces provided on the right of each item.

Your most..... etc. (same as Form 1: Task 1)

FORM I: TASK 3

What would you do in this Problematic Situation?

In the two months that you have been at U. W. B. you have visited home only twice. You have limited your visits because you have found it extremely difficult to get any studying done while at home. You resent your parents' tendency to tell you what to do, and also because you generally prefer to spend your weekends on campus.

You receive a phone call from your parents one evening and they tell you that they would like you to visit home more often.

Imagine that you are actually in the above situation and there are the following nine possible courses of action you could take:

KEY.

- 1. Tell parents that you enjoy yourself more on campus..... 7
- 2. Tell parents you will come home only if the "get off your back"..... 8
- 3. Ask parents if it would be all right for you to stay on campus when you have studying to do..... 5
- 4. Have friend "loudly" remind you why you must stay on campus while on phone with parents..... 6
- 5. Tell parents why you dislike home visits..... 2
- 6. Tell parents you are old enough to make these decisions yourself..... _____
- 7. Try to spend as much time as possible studying at home..... _____

KEY

8. Tell parents you have so much studying to do you can't spare one minute, but will come home for Thanksgiving..... 1
9. Tell parents that you must stay on campus on week-ends to get studying done that could not be completed during the week..... 3

Now, rank these nine courses of action open to you in order of preference. Indicate your ranking in the spaces provided on the right of each item.

Your most..... etc. (same as Form 1: Task 1)

FORM I: TASK 4

What would you do in this
Problematic Situation?

Your roommates are not as neat as you, and tend to throw their clothes and books around the room. Although you're not terribly happy about the way the room is kept, you've managed to live with it.

You are just returning from a weekend at home. You enter your room which you cleaned Friday, and become very angry to find your bed ruffled, your desk littered with crumbs and candy bar wrappers, and the floor strewn with dirty laundry.

Imagine that you are actually in the above situation and there are the following nine possible courses of action you could take:

KEY

1. Clean your area and dump the mess on your roommates bed..... 6
2. Talk to roommates separately, attempting to find out the reason for the mess, and asking them to clean it..... 3
3. Angrily demand that roommates clean up the mess... 5
4. Suggest monetary penalty for whoever creates a mess without cleaning it up relatively promptly..... 7
5. Angrily demand that roommates keep room clean in future..... 8
6. Threaten to throw roommates laundry out window in future..... 9

KEY

- 7. Try to organize division of labor with roommates for scheduled clean-up..... 6
- 8. Politely ask roommates to help you clean the mess. 3
- 9. Tell roommates they'll have to be neater if they are to get along..... 5

Now, rank these nine courses of action open to you in order of preference. Indicate your ranking in the spaces provided on the right of each item.

Your most..... etc. (same as Form I: Task 1)

FORM I: TASK 5

What would you do in this Problematic Situation?

After several weeks of your first semester, you are invited to an off-campus party by some very good friends, whom you like very much. You arrive at the party and quickly notice that all the people are smoking marijuana and that this seems to be the main activity at the party. You do not object to others smoking marijuana, but you are reluctant to begin yourself for fear that you might make a habit of it.

You are enjoying the party and the company of your friends without smoking marijuana. However, you are becoming more and more annoyed that they persist in trying to get you to join in, even though you have refused rather firmly several times.

Imagine that you are actually in the above situation and there are the following nine possible courses of action you could take:

KEY

- 1. Calmly persist in refusing them..... 5
- 2. Plan to be less friendly with these friends in the future..... 4
- 3. Leave the party, saying that you don't feel well... 7
- 4. Plan to explain to friends next day that you don't intend to smoke and would like them to respect your wishes..... 1
- 5. Tell friends you have a respiratory ailment and can't smoke..... 9

• KEY

- 6. Ask friends to accept your refusal to smoke or abandon their friendship..... 6
- 7. Tell friends you can enjoy the party without smoking..... 3
- 8. When asked again, you change the subject, rather than directly refuse..... 8
- 9. Tell friends at the party, you object to them making smoking a social prerequisite for enjoying a party..... 2

Now, rank these nine courses of action open to you in order of preference. Indicate your ranking in the spaces provided on the right of each item.

Your most..... etc. (same as Form I: Task 1)

FORM I: TASK 6

What would you do in this Problematic Situation?

Before you came to college, you were worried that, because the place and people were new, you might have difficulty making friends. You tried to comfort yourself with the thought that, once you got to know your roommates and hallmates fairly well, you'd find someone you liked.

The first day of school you are unpacking in your room when both of your roommates walk in. After having a long conversation with them you become quite disappointed to learn that their interests and opinions are radically different from your own. You are worried that you will be lonely and without friends, and that you might not even be able to get along with these roommates.

Imagine that you are actually in the above situation and there are the following nine possible courses of action you could take:

KEY

- 1. Tell yourself that you are here primarily to get an education and not just to socialize..... 9
- 2. Try to engage roommates in activities of mutual interests..... 1
- 3. Introduce roommates to your high school friends on campus and plan activities together..... 8

KEY

- 4. Merely attempt to "get along" with roommates without developing a friendship..... 4
- 5. Conceal your own opinions from roommates until you are friends..... 7
- 6. Try to be more forward in making friends (i.e., approaching new people, talking with them suggesting activities together, etc..... 3
- 7. Try to avoid discussing differences of opinion with roommates..... 6
- 8. Try to be as amiable as possible toward roommates..... 5
- 9. Try to make friends with other guys on the hall..... 2

Now, rank these nine courses of action open to you in order of preference. Indicate your ranking in the spaces provided on the right of each item.

Your most.....etc. (same as Form I: Task 1)

FORM II: TASK 1

What would you do in this Problematic Situation?

You have been very unhappy with your first semester at U.W.O. and have very few friends in the dorm. You have complained rather angrily quite often to your roommate and other guys on the hall about being quiet when you are trying to study and, as a result, they have ignored and rejected you most of the time.

It is now one week before the end of the semester and you are thinking that you would somehow like to make a new start next semester since you are often lonely and depressed without friends.

Imagine that you are actually in the above situation and there are the following nine possible courses of action you could take:

KEY

- 1. Try to transfer to a new hall or suite where you like the people and have similar interests and habits with them..... 4
- 2. Throw a party for roommate and hallmates..... 7

KEY

- 3. Look for every possible opportunity to be nicer and friendlier with others in the future..... 1
- 4. Try to initiate friendly discussions with others more often on topics of mutual interest..... 2
- 5. Invite hallmates to your room occasionally for "bull sessions"..... 3
- 6. Try to get an apartment by yourself off campus..... 8
- 7. Try to change rooms (in same dorm) to get roommate who is less noisy..... 6
- 8. Try to find a friend to room with for the next year..... 9
- 9. Try to find a student you like with whom you can share an off campus apartment..... 5

Now, rank these nine courses of action open to you in order of preference. Indicate your ranking in the spaces provided on the right of each item.

Your most.....etc. (same as Form I: Task 1)

FORM II: TASK 2

What would you do in this
Problematic Situation?

You are the first person in your family to attend college. All through high school you did "A" and "B" work. Although you thought that you could continue to pull good grades in your freshman year at Stoney Brook, you realized very quickly that the situation here is much more competitive than in high school. Although you are working very hard, it appears that you will pull only a little better than a "C" average during your first semester.

While visiting your parents during the first semester, and discussing your academic performance, they seem disappointed and concerned that you are only doing "C" level work. Even though you tell them you are doing your best, they insist that you can do better and maintain that you are probably not working hard enough.

Imagine that you are actually in the above situation and there are the following nine possible courses of action you could take:

- | | <u>KEY</u> |
|---|------------|
| 1. Seek advice from Upperclassmen..... | 3 |
| 2. Show parents your notebooks, papers, studying notes etc..... | 8 |
| 3. Tell parents that a grade of "C" is relative to grades of other very good students..... | 5 |
| 4. Tell parents that grades will go up as you learn more about college..... | 4 |
| 5. Ask them to speak to someone who has gone to college to see that it takes at least a semester to adjust..... | 6 |
| 6. Seek advice from course instructors..... | 2 |
| 7. Tell parents you haven't gotten much sleep on account of your studying..... | 9 |
| 8. Go over the exam to try to find out how studying has been wrong..... | 1 |
| 9. Have a friend tell them how hard you're working..... | 7 |

Now rank these nine courses of action open to you in order of preference. Indicate your ranking in the spaces provided on the right of each item.

Your most..... etc. (same as Form I: Task 1)

FORM II: TASK 3

What would you do in this Problematic Situation?

You arrive home for the weekend on a Saturday morning, with tentative plans to see your girlfriend that evening. You have just started dating this girl, and are really getting to like her. The last time you went out with her was the previous weekend.

Your parents tell you that they are going to visit your grandmother that evening, and since you have not seen her in over a month, they would like you to come along. You would much prefer to go out with your girl.

Imagine that you are actually in the above situation and there are nine possible ways of action you could take:

- | | <u>KEY</u> |
|--|------------|
| 1. Tell parents that you have made previous plans that evening..... | <u>2</u> |
| 2. Visit grandmother sometime that weekend without parents..... | <u>1</u> |
| 3. Tell parents you are "finding yourself" now and dislike being put under obligations by others..... | <u>9</u> |
| 4. Suggest to girlfriend that you both visit grandmother first, and then go out later..... | <u>5</u> |
| 5. Call grandmother and apologize for not coming to see her, and promise to visit her some other time.. | <u>4</u> |
| 6. Ask parents if they can visit on Sunday..... | <u>3</u> |
| 7. Ask parents not to mention to grandmother that you were home, and arrange to visit grandmother next time you come home..... | <u>6</u> |
| 8. Make definite plans to see girlfriend that next weekend..... | <u>8</u> |
| 9. Give parents "you were young once" line..... | <u>7</u> |

Now, rank these nine courses of action open to you in order of preference. Indicate your ranking in the spaces provided on the right of each item.

Your most.....etc. (same as Form I: Task 1)

K

FORM II: TASK 4

What would you do in this
Problematic Situation?

Your dormitory suite has usually been quiet enough for studying; however, one of the guys on your hall has the habit of interrupting you several times during an evening of studying to talk to you. He is a nice guy, but his interruptions are irritating you.

You are studying one evening and just getting involved in your work when he comes in to talk with you. You can feel yourself getting impatient and angry, especially since this is not the first time he has done this.

Imagine that you are actually in the above situation and there are the following nine possible courses of action you could take:

	<u>KEY</u>
1. Comment on how far behind you are in your studies...	<u>7</u>
2. Tell friend that you will get an "F" if you don't finish the assignment.....	<u>8</u>
3. Friendly tell friend that you do not want your studying to be interrupted for the rest of the evening...	<u>1</u>
4. Tell friend that you must study now, and then reassure him that you mean nothing personal in not wanting to talk.....	<u>2</u>
5. Tell friend that he should also be working.....	<u>9</u>
6. Visibly show annoyance, but then politely ask friend to leave.....	<u>5</u>
7. Just listen to friend briefly, tell him you must study, and then reassure him that you mean nothing personal in your desire not to talk.....	<u>3</u>
8. Tell friend that you can talk after you finish studying.....	<u>6</u>
9. Jokingly ask friend to leave.....	<u>4</u>

Now, rank these nine courses of action open to you in order of preference. Indicate your ranking in the spaces provided on the right of each item.

Your most..... etc. (same as Form I: Task 1)

FORM II: TASK 5

What would you do in this
Problematic Situation?

You have become friendly with a hall mate who is taking a math course with you, but recently you've noticed that he has become ~~more~~ ~~very~~ dependent, continually asking you for advice and help ~~with~~ his math homework. His dependency disturbs you, but for fear of losing him as a friend, you have said nothing.

Your friend, looking very worried and upset, comes into your room while you are studying. He asks if he can borrow all of this week's homework to copy it because he couldn't understand it.

Imagine that you are actually in the above situation and there are the following nine possible courses of action you could take:

- | | <u>KEY</u> |
|---|------------|
| 1. Tell friend that you will accompany him if he will go to seek help from his instructor..... | <u>4</u> |
| 2. Tell friend to get the homework from someone else in the class..... | <u>9</u> |
| 3. Tell friend to do his own homework and not to ask you for homework anymore in the future..... | <u>5</u> |
| 4. Warn friend that copying homework won't help him pass the course..... | <u>2</u> |
| 5. Tell friend you will discuss homework with him in the future if he works on it by himself first..... | <u>1</u> |
| 6. Tell him you are busy and offer to explain homework when you have some free time..... | <u>8</u> |
| 7. Discuss friend's problem with course instructor, and tell friend about instructor's suggestions..... | <u>7</u> |
| 8. Imply that you are disturbed by friend's dependency through tone of voice and facial expression... | <u>6</u> |
| 9. Tell friend that you are only doing what you think is best for both of you in not giving him the homework..... | <u>3</u> |

Now, rank these nine courses of action open to you in order of preference. Indicate your ranking in the spaces provided on the right of each item.

Your most.....etc. (same as Form I: Task 1)

FORM II: TASK 6

What would you do in this Problematic Situation?

In high school you had good study habits and had little difficulty in completing assignments on time. During your first year at U.W.O., however, you have not been able to keep up with the greater amount of time and work required to complete assignments.

It is halfway through the semester and you now find that when you sit down to work in your room you have difficulty in concentrating. Often you spend entire evenings just loafing with the guys on the hall, playing pingpong, cards, or just spending time in bull sessions. As a result, you are getting further and further behind in your work, and are becoming very concerned that you will do poorly academically.

Imagine that you are actually in the above situation and there are the following nine possible courses of action you could take:

- | | <u>KEY</u> |
|---|------------|
| 1. Study only the essentials in each course..... | <u>5</u> |
| 2. Study with a friend to put yourself into the frame of mind for studying..... | <u>9</u> |
| 3. Find a quiet place to study in the dorm..... | <u>4</u> |
| 4. Plans to start the next semester by working harder..... | <u>1</u> |
| 5. Spend weekends catching up..... | <u>8</u> |
| 6. Do difficult assignments regularly, saving easier ones until the day before they're due..... | <u>7</u> |
| 7. Schedule study time with frequent short breaks for relaxation. Force yourself to study by taking a short break every time you want to stop studying..... | <u>3</u> |
| 8. Schedule two hours of library work for immediately after classes daily or a few nights a week..... | <u>2</u> |
| 9. Consider living at home again since you were formerly able to keep your grades up when living there..... | <u>6</u> |

Now, rank these nine courses of action open to you in order of preference. Indicate your ranking in the spaces provided on the right of each item.

Your most.....etc. (same as Form I: Task 1)

Method of Transforming Scores on Subtest III

The score obtained on each alternative was the difference between the rank assigned by the subject and criterion rank. This score had a possible range of 0 to 8. It was transformed so that smaller differences were made to correspond to higher scores.

Raw observed differences in ranks

0	1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---	---

Transformed score

9	8	7	6	5	4	3	2	1
---	---	---	---	---	---	---	---	---

TABLE A

ITEM CHARACTERISTICS OF SUBTEST III FORM I

	Pro- blem 1	Pro- blem 2	Pro- blem 3	Pro- blem 4	Pro- blem 5	Pro- blem 6
Mean	63.13	58.94	57.33	65.19	57.30	60.53
Variance	37.50	30.18	28.33	51.03	22.33	31.19
r^2	.59	.55	.37	.66	.30	.38
Difficulty level	.64	.60	.64	.57	.40	.58

TABLE B

ITEM CHARACTERISTICS OF SUBTEST III FORM II

	Pro- blem 1	Pro- blem 2	Pro- blem 3	Pro- blem 4	Pro- blem 5	Pro- blem 6
Mean	62.75	59.09	60.21	64.03	64.66	66.78
Variance	38.56	24.08	26.11	35.97	20.54	23.98
r^2	.61	.52	.39	.65	.29	.33
Difficulty level	.62	.57	.61	.52	.48	.61

APPENDIX VIII

ANXIETY MANAGEMENT TRAINING MANUAL

Contents	Page
Outline of treatment.....	144
Rationale.....	147
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Sample hierarchy.....	152
Initial hierarchy used.....	153

OUTLINE OF TREATMENT

Session 1

1. personal introductions
statement of individual expectations with respect..... 10 mins.
to each one's decision-making anxiety: degree,
duration and extent of this anxiety.
2. presentation of rationale and (course of treatment..... 5-10 mins.
(taped).
3. Relaxation induced by Method I (on audiotape)..... 30 mins.
4. Discussion of feelings and problems experienced during
relaxation training.
Instruction to practice for 15 mins. twice a day between sessions
focusing on muscle groups which had not responded.

Session 2

1. Discussion of success of relaxation practice and..... 10 mins.
correcting problems or misconceptions involved with
the relaxation training.
2. Construction of first hierarchy by group discussions. 15 mins.
- brief explanation of purpose of hierarchy
- presentation of sample hierarchy, emphasizing that
in each item the stimulus situation as well as self-
verbalizations are equally important.
3. Relaxation induced by Method I..... 20-25 mins.
followed by test of imagery
subjects asked to prepare their own hierarchy and bring
it to the next session.

Session 3

1. Construction of initial composite hierarchy..... 15 mins.
completed.
Discussion of problem related to relaxation.
2. Relaxation induced by Method II & III (audiotape)..... 15-20 mins.
3. Desensitization, working through hierarchy..... 25 mins.
4. Discussion of reactions and problems with desensitiza- 15 mins.
tion procedures. Instruct Ss to practice relaxing by
breathing and letting go in various situations at
least twice a day in between sessions. They should
stop practicing by Method I.

Session 4 - Session 6

1. Discussion of problem areas, including..... 10 mins.
(except in Session 7) changes in anxiety hierarchies
or construction of new hierarchies.
2. Relaxation induced by method II and III..... 15 mins.
3. Desensitization..... 20-15 mins.
4. Discussion of reactions during desensitization..... 15-20 mins.

Session 7

1. Discussion of problem areas..... 10 mins.
2. Relaxation induced by Method III with "completion".... 20 mins.
of desensitization hierarchies.
3. Provide closure through a discussion of treatment..... 20 mins.
effects, future plans and goals.

Explanation of important pointsDiscussion periods

The aim is to increase subjects confidence; skills in going through treatment procedures, awareness of stimuli they respond to and their typical responses in various situations (discrimination training). The major techniques used should include generalizing from one clients remarks; emphasizing similarities between problems, experiences, emotions, etc; referring questions to the group; applying general statements to the immediate group; situation i.e. being concrete. In general, be directive!

Relaxation instruction

Use the cassettes only. The emphasis should be on teaching Ss a general facilitative skill which they can carry around with them and use in their daily lives whenever tension builds up.

Test of imagery

This is done by asking subjects to image a common non anxious scene: "Now visualize yourself sitting in your room, studying. Describe what you see. Do you see it clearly? Do you see color? Do you feel as if you were there?"

Explain that, some may report seeing clear, distinct images, as if they are watching a movie; this is fine, but not necessary. The minimum requirement is that their visualizations be as clear as a very vivid memory, so that they are able to "relive" the experience of being in a situation. With practice, images will usually become clearer.

It is also important that the subject can start and stop images on request and that this be determined. The subject should visualize situations as if he were there - not as if he were watching himself!

Construction of hierarchy

The hierarchy should be composed of situations eliciting increasing amounts of anxiety irrespective of whether or not items appear to reflect on any given theme. In fact, a variety of different situations should be chosen to facilitate generalization.

Each item in the hierarchy should cover 1) the situation; 2) debilitating emotions experienced so that subjects' tensions, if associated with that item, is aroused; 3) self-verbalized material, if appropriate. The items should be worded to allow each subject to include the unique aspects of his own situational experiences.

Desensitization proper

During desensitization S should be instructed to maintain the image even though they are experiencing anxiety and then to relax away this tension while also using coping imagery i.e., visualizing themselves handling this anxiety with deep breaths and self-instructions.

Example of stimulus situation and subsequent desensitization:

"Imagine you have just got back your midterm in class. You look at your paper and find you have received a C-. You had expected at least a B+. You are getting anxious and you tell yourself, "I may not be meant for this program". (10 seconds pause). Now relax and while relaxing, imagine you are trying to relax with deep breaths as you leave class and telling yourself "Relax, maybe you should discuss with the professor what went wrong".

Note the three ingredients of the stimulus situation:

1. description of a situation including the fact that S is emotionally aroused.
2. S relaxes and imagines himself relaxing.
3. S exhorts himself to attend to relevant behavior: "Discuss with the professor what went wrong".

Desensitization procedure

After the subject is relaxed

1. present item
2. maintain image, even though he is experiencing anxiety.
3. now get S to relax and while relaxing, imagine that he is relaxing in the situation and attending to appropriate task-relevant behaviors. The subject imagines that he is relaxing by imagining that he tells himself to relax or imagining himself taking a few deep breaths to relax. Appropriate task

relevant behavior, refers to some relevant activity like consulting a professor or a friend or doing his work. This activity may be vocational exploratory behavior or whatever S was engaged in when he was disturbed by worries about his career.

4. Introduce each item twice, at least.
5. Allow 10 secs. to elapse, after each presentation, then instruct subject to "stop visualizing that, and go on relaxing".
5. Continue suggestions of warmth, relaxation, lack of tension, heaviness, etc. for 30 to 45 seconds, in between items.
7. Ask subjects to raise finger if still anxious, then present the next item.
8. Do not end session with a presentation that will leave subjects still anxious.
9. Should any subject be absent, begin the desensitization with new items covered in the previous session.

ANXIETY MANAGEMENT TRAINING RATIONALE

Learning to solve your vocational problem actually implies learning to cope with all the different tasks which are contained in the problem.

Examples of these tasks are writing to request a college or occupational pamphlet, talking to people who are working or have worked in an occupation, sitting down by yourself and figuring out which one of two or three possible vocational avenues is really cut out for you.

We have research evidence that one of the reasons why people cannot cope with these tasks is that for one reason or other they become tense or anxious and preoccupied whenever they think of or do things connected with their vocational problem. They could, given time, be able to solve their vocational problem on their own but anxiety or vague tension interferes when they go about trying to do so, helps to confuse issues and makes the finding of a viable solution difficult.

The anxiety could be of different types. It could be connected with thoughts like what will my parents think if I decide not to be a dentist or I would like to be an engineer but, gee, I won't be able to get an A in Math! The anxiety could also be connected with activities like talking to a professor about occupations in a given area or asking advice from friends.

What I plan to do is to help you cope with these thoughts and situations more successfully. The emotional reactions that

your experiences are a result of your previous experiences with people and situations. Since perceptions of these situations occur within ourselves, it is possible to work with your reactions right here in this room by having you recall thoughts and image situations.

First, you will all be taught how to relax so that in situations where you feel yourself getting tense and when certain thoughts begin to worry you, you will be better able to eliminate these feelings. The relaxation procedure is based upon years of work that was started in 1930's by Dr. Jacobson.

This relaxation technique is then combined with the psychological principle of counterconditioning.

It is done by taking note of a number of situations connected with your vocational problem which upset you to varying degrees. Then, starting with the less stressful ones, you will try to experience in imagination the worry and tension you go through in real life in each of the situations. Finally, for each situation, you will practice learning to "relax away" the worry and tension as it builds up.

We've used these procedures on many different types of clinical problems, including problems such as yours with good results.

The basic idea in all these procedures is to teach you a general coping strategy which you will be able to use in a variety of problem situations.

Since I have described here very briefly the procedures we will use in these sessions, maybe we ought to now clear up any initial questions you may have about them.

RELAXATION INSTRUCTIONS

This type contains three types of relaxation instructions. The three types are arranged so that as you proceed from one session to another, you will learn to relax easily and with increasing speed. First, you will learn how to relax by attending to the difference between feelings of tension and relaxation in different muscle groups of your body.

Next, you will practise relaxing by attending to different parts of your body, in turn, and breathing deeply at the same time.

Finally, you will learn to relax by concentrating rapidly on different muscle groups and switching off any slight tension that might still be present.

O.K. let's begin with the First Part.

- Get your body into a comfortable position - Close your eyes -
- Relax completely - let your whole body just relax

(Toes and Feet)

Begin by bending your toes downwards--as you do so, note the tight feeling and along your upper legs--now very slowly, let go, --bring your toes to a normal position and relax--that's it--note how different your foot feels now that it is relaxed as compared to when it was tense--relax completely.

Now curl your toes upward toward your face until there is tension along the back of your foot and at your upper legs. Note the tingling sensation--Now slowly relax--bring the toes slowly to a normal position and let your feet feel comfortable once more--Note how different they feel when relaxed. Relax completely--Feel more and more relaxed.

(Thighs and Legs)

OK--now try to make your thighs really tense by raising them slightly and pressing your heels down against the couch--Observe the unpleasant sensations--Now slowly unwind, and let the tension go--relax more and more--note the feeling of relief as your legs feel comfortable.

Once more tense your thighs in the same way as before, raising them a bit and pressing down on your heels--Make them feel really tight--Now, very slowly let them relax--try to remove any tension you might feel in your thighs and feet--Let them feel loose--relaxed--comfortable--Let your legs flop outward at your knees and toes--that's it--Just let them flop.

(Stomach)

Direct your attention to your stomach muscles--Contract them fairly strongly. Hold the tension for a few moments--Now slowly let go--Unwind--You are getting more and more relaxed--Take a deep breath--Now breathe out slowly--Carry on breathing slowly.

Once more contract your stomach muscles--That's it, maintain the tension--do not contract other muscles--Now, slowly, very slowly relax--Note how relieved your stomach feels--Breathe in deeply--Breathe out--Keep breathing slowly and gently--Relax completely--You are beginning to feel more and more relaxed.

(Back)

Now let's go on to your back--Arch your back making the lower part of it hollow--As you do so you will begin feeling the tension all along your spine--Now try to hold this tension for a few seconds--slowly, very slowly, lower your back and begin to relax--let go completely--you are now feeling rested, more and more relaxed--try to breathe easily and gently.

Once more arch your back, making it tense, and the lower part of it hollow--Note how it feels--Very slowly, now, begin to let go--

Relax more and more--settle down comfortably and note how relieved the back feels--breathe in deeply--breathe out--and let all your muscles become loose and soft--You are slowly beginning to feel relaxed as though none of the muscles are straining or at work.

(Arms)

Now let's go on to a different muscle area: your arms--Clench your fists tight and bend your arms at the elbows and flex your biceps--Let your arms now continue to feel tense,--that's it--slowly unwind--Notice how tense your arms and hands feel--Just let your arms flop to your side as though they have no life in them. That's it--relax more and more. Try to feel at ease and calm all over, relax completely.

Once more, clench your fists tight and flex your biceps by bending your arms at the elbows--Make your arms tremble with tension--now let your arms flop to the side, just lifeless--Keep them motionless, relax completely--breathe in deeply--breathe out--Let your entire body slump loosely--You are getting relaxed--More and more relaxed.

(Face, neck)

Try now and relax the muscles of your face--frown hard, first tensing the muscles of the forehead, until your eyes smart a bit--That's the way--Hold it there--Now gradually release the tension--Relax completely--Note how calm you begin to feel as you do so--You are feeling more and more calm and relaxed.

Now draw the corners of your mouth back as far as you can, until your jaw muscles and cheeks hurt--Hold it there for a little while--Now, slowly bring your mouth to its normal position--As you do so relax completely, seeing that no tension lingers around your mouth.

Now, let's see if you can tighten your chin and throat muscles--just tighten them, so that they stand out at the side of the throat--Let them stand out as though you are getting strangled--Let go slowly; very slowly bring them back to a normal position. Relax completely--Your whole face is now feeling relaxed and calm--You are feeling comfortable and peaceful--just relax, keep breathing gently.

Part II

Now in this second part, concentrate on breathing in and out gently, and relaxing at the same time.

Take a deep breath and hold it--Note the tense sensations--All right, breath out--Relax--Notice how all the muscles in your body tend to become more relaxed when you breathe out.

Now, breathe in slowly, and while breathing in, tense the

muscles of your thighs and legs by bending your legs at the knee slightly and turning your toes toward your face--O.K., Slowly let go and as you do so breathe out--Do this again--Breathe in slowly and bend your legs and your toes--Breathe out and let your legs and toes relax--They are becoming completely relaxed. You are Beginning to feel more and more relaxed.

Once more, breathe in gently and tense your stomach muscles--Now; slowly breathe out and relax your stomach muscles--Let them just be loose and relaxed--Let go--That's very good.

O.K., now once more breathe in gently and hold your breath--let your chest feel as though it is tense--Breathe out and feel your chest relax--Your whole body is beginning to feel more and more relaxed--Just lie still and motionless--Very good, that's it.

Next, breathe in slowly--as you do so bend your arms and tense them slightly at the elbow--Now, slowly breathe out and relax your arms and as you breathe out, relax them more and more--Finally, flop them out at side--You are feeling completely at ease, as though you just want to "give up" at the end of a hard day's work and sprawl on a couch. Relax--Just relax completely--You are becoming more and more relaxed.

Let's see, now, if you can relax your back in the same way--Take a deep breath and as you do so arch your back slightly, without raising your neck--Now, begin relaxing the tension away--slowly, lower your back as you breathe out--Breathe out gently.

Now let's relax your neck--First, breathe in, and as you do so, tense it somewhat by raising it a bit--Now let your breath out very slowly and lower your neck--As you completely lower your neck down, watch your body becoming relaxed and feel relieved, completely relieved--Note how calm you are beginning to feel--Relax completely.

Breathe in, gently, once more--And, as you do so, this time contract your eyebrows into a frown--hold this tension around your eyebrows--Now, begin to relax--Unwind, and, as you do so, breathe out and allow your mouth to sag open--Relax, let your mouth sag open and keep breathing gently--that's it.

O.K., try this once more--Breathe in--As you do so frown--Let your eyes feel a bit tense around your eyebrows--Now slowly let go of the tension as you breathe out--As you do so, let your mouth sag open. Relax completely.

Now lie quiet and motionless. Relax completely, making no effort to any kind.

Part III

O.K., you have now had some practice in recognizing muscular uneasiness--In this part, we will proceed to concentrate rapidly

on different parts of your body and switch off any subtle tensions you might find.

Make sure that you are not tense in your feet and legs--Bend your legs slightly, raising them somewhat at the knee--note the tension in your thighs--Relax, lower your legs down and let your toes flop out--You are feeling relaxed, more and more relaxed.

Concentrate now on your stomach muscles--tense them slight--Now relax, just let go--Breathe in--Breathe out--Very good.

Now relax your chest muscles--Fill your lungs, very gradually with air and hold your breath--Feel that tension all over your chest, for a brief moment--exhale--breathe out and feel the relief spreading all over your chest--Carry on breathing normally--You are becoming relaxed, more and more relaxed.

Concentrate, now, on relaxing your back, paying attention to the subtle difference in sensations--Arch your back slightly--Now, let go, just make it flop down and relax--Relax it completely.

Next, direct all your attention to your neck with the rest of your body quite relaxed--raise your head, very slowly, about one inch above the couch--hold it, there, for a second or two--let it down slowly--Watch your neck muscles relaxing slowly by themselves.

Next, concentrate on relaxing your arms--First, clench your fists, bending your arms at the elbows slightly--They are feeling a bit tense--Now slowly let them relax and let them flop out--Your whole body is feeling relaxed--your legs and thighs--Your stomach--Your chest is relaxed and so is your back.

Now, go on to your jaws and facial muscles--let's concentrate on relaxing these--Begin by gritting your teeth slightly--Notice the tension climbing up your jaws to your temple--Now move your jaws apart slowly and let them sag open so that your tongue lies limply on the floor of your mouth--Relax completely--You are getting relaxed, more and more relaxed.

Next, just concentrate on your face around your eyebrows--raise your eyebrows as high as they can go, keeping your eyes closed--slowly lower them--As you do so, relax completely--let your whole body relax.

Just relax--lie motionless and still as though you don't have a care in the world--Keep relaxing--Very good.

SAMPLE LIST OF SITUATIONS FOR A HIERARCHY

1. Imagine you have just got back your midterm in class. You look at your paper and find that you have received a C-. You are getting anxious and you tell yourself, "I may not be meant for this program."

2. You have always wanted to take up a career in Chemistry. Imagine however, that this evening you are studying at your desk and you find that Chemistry is boring and uninteresting. You start worrying, saying to yourself, "What other field am I meant for?"
3. Imagine you are in the campus placement office and you want to get some information. Other students there appear cleverer and more confident than you. You start worrying. "Maybe I won't stand a chance getting a job," you say to yourself.
4. Imagine you are at home one weekend talking to your Dad. He keeps telling you how crowded the job field is and how you should work hard. You start worrying about your job prospects. You tell yourself, "What chances do I have with my marks." You keep worrying about this.
5. Imagine you have just been talking to a girlfriend in the lounge. Both of you wish to take up speech therapy. She tells you how only 15 out of 150 applicants got in last year. You become very upset. "Will I get in?" you say to yourself.
6. In order to be able to major in biology, which you like, you have to take chemistry. But you soon realize how difficult chemistry is. Imagine one day, while working in the lab, you keep wondering whether you have average ability to pass the course.
7. You cannot decide on a major area of study. Imagine that you are sitting one morning in this particular class of a subject you have tentatively chosen as a major when all of a sudden you realize that you have been dozing. You are troubled that even your major subject cannot hold your attention.
8. Imagine that you are in a professor's office to get a faculty advisor's signature on your course schedule. You are afraid that there may not be room for you in that particular course necessary for your major on account of your mediocre grades. You keep thinking, "He may think I am not smart enough".
9. Imagine that you are working in the library one day on an essay. It occurs to you that all the facts and details do not seem to be very helpful in determining what you should do with your life. You feel depressed, thinking, "How will I know what I'm meant for?"
10. Imagine that you are sitting down to study for a test. You find that you cannot concentrate. Even though your books and notes are in front of you, you spend most of your time worrying, thinking "What will happen if I don't get into the dental school?"

INITIAL HIERARCHY OF SITUATIONS FOR AMT

1. I am speaking to a classmate after a particularly difficult lecture. He remarks on how well the professor presented the material. To me, the material seemed very complicated and I had become lost. I began to feel a knot of tension and worry in my stomach and said to myself, "Maybe I really don't know much about this class at all."

2. You have always wanted to take up a career in Chemistry. Imagine however, that this evening you are studying at your desk and you find that Chemistry is boring and uninteresting. You start worrying, saying to yourself, "What other field am I meant for?"
3. Imagine you are in the campus placement office and you want to get some information. Other students there appear cleverer and more confident than you. You start worrying. "Maybe I won't stand a chance getting a job," you say to yourself.
4. Imagine you are at home one weekend talking to your Dad. He keeps telling you how crowded the job field is and how you should work hard. You start worrying about your job prospects. You tell yourself, "What chances do I have with my marks." You keep worrying about this.
5. Imagine you have just been talking to a girlfriend in the lounge. Both of you wish to take up speech therapy. She tells you how only 15 out of 150 applicants got in last year. You become very upset. "Will I get in?" you say to yourself.
6. In order to be able to major in biology, which you like, you have to take chemistry. But you soon realize how difficult chemistry is. Imagine one day, while working in the lab, you keep wondering whether you have average ability to pass the course.
7. You cannot decide on a major area of study. Imagine that you are sitting one morning in this particular class of a subject you have tentatively chosen as a major when all of a sudden you realize that you have been dozing. You are troubled that even your major subject cannot hold your attention.
8. Imagine that you are in a professor's office to get a faculty advisor's signature on your course schedule. You are afraid that there may not be room for you in that particular course necessary for your major on account of your mediocre grades. You keep thinking, "He may think I am not smart enough".
9. Imagine that you are working in the library one day on an essay. It occurs to you that all the facts and details do not seem to be very helpful in determining what you should do with your life. You feel depressed, thinking, "How will I know what I'm meant for?"
10. Imagine that you are sitting down to study for a test. You find that you cannot concentrate. Even though your books and notes are in front of you, you spend most of your time worrying, thinking "What will happen if I don't get into the dental school?"

INITIAL HIERARCHY OF SITUATIONS FOR AMT

1. I am speaking to a classmate after a particularly difficult lecture. He remarks on how well the professor presented the material. To me, the material seemed very complicated and I had become lost. I began to feel a knot of tension and worry in my stomach and said to myself, "Maybe I really don't know much about this class at all."

2. I have completed all of the research work for a final paper and sit down to begin writing. I try five or six times to organize the material but each time it does not come out the way I want it to. I begin to feel worried and pressured for time and say to myself "Maybe I'll never get this paper written."
3. A friend of mine and I are taking the same class. We had always gotten about the same marks in University, but in this class my friend got an 80 on the midterm and I got a 50. Looking at the mark I begin to get uptight and think, "Maybe I should drop this course, it isn't for me".
4. I think about the work it will take to study in my major area for the next few years and then I think of my classes and all the generalizations and useless facts we study. I begin getting upset and angry and say to myself "Is the education I'm getting really preparing me for anything?"
5. I have been invited to a party but I don't know any of the people that are going to be there and it would probably be difficult to get a date. I begin feeling tense and anxious and say to myself "Maybe I shouldn't go to the party. I have other things to do."
6. All of the courses I'm taking this year interest me and I'm doing well in them. Registration is approaching and I get worried and anxious when I think about choosing a major. I think to myself "What if I make the wrong decision?"
7. I'm sitting in my room the night before I'm to give a seminar, when I think about being in front of all those people I feel nervous and jumpy. I think to myself "I should have never agreed to do the seminar."
8. You're going to an interview for a summer job and how the interviewer judges you will determine whether or not you get the job. Sitting in the office waiting, you begin feeling tense and tight and say to yourself "I wonder if I'll say the right thing?"
9. Your parents had always wanted you to major in your present field. After being in it for a year you decide it's not for you. You feel your parents would be disappointed if you changed and as you think about telling them you get nervous and upset. You think to yourself "Should I really change my major?"
10. You have made a first date with someone who you've always admired but thought was out of reach. Five minutes before they are to arrive you begin getting anxious and on edge and say to yourself "I wonder what I'm going to say and do. Will it be the right thing?"

APPENDIX IX

PROBLEM-SOLVING TRAINING MANUAL

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Problem Solving Training Rationale

What do you do when you have a problem? That is, when you are in a situation, in which you have no immediate idea of what course of action you should take?

Ranging from such minor dilemmas as losing a book to more significant issues such as doing poorly in school, trying to find out what career is meant for you and dealing with an unreasonable employer, our daily lives are full of situational problems which we must solve in order to be able to function effectively. We all need to learn how to work with problems in a better way.

Research evidence suggests that a major reason why individuals are unable to act effectively in a problematic situation is that they cannot decide what course of action has the most advantages for them and the least inconveniences. Once they are able to identify the effective line of action to be taken they are usually able to carry it out.

In these series of sessions you will be learning procedures of dealing with problematic situations which according to the scientific evidence we have are crucial to effective problem solving. By learning to use these procedures or steps you will also develop a systematic approach to making important decisions, which would allow you to stand on your own two feet, so to speak, and deal independently with any problematic situation that might come up.

The steps are:

1st. an appropriate general orientation: this involves recognizing problematic situations when they occur and inhibiting any tendency to respond impulsively or do nothing; a person can become more effective by learning how to identify an effective response and practising to do so.

2nd. problem definition and formulation: which involves a) defining all aspects of situations, gathering relevant information b) formulating goals.

3rd. generation of alternatives: this involves use of the brainstorming method of 'idea' finding. The need for clarity and concreteness is important, i.e., you must learn to describe strategies not in general terms but in terms of specific actions and behaviors.

4th. screening of alternatives: in terms of concrete consequences. The purpose of this step is to be able to discern the course of action that will maximize the likelihood of positive consequences and minimize the likelihood of negatives ones.

5th. decision-making: this involves selection of one course of action, generation of concrete behavioral alternatives for implementing it and selection of most effective ones.

It is better that we stop here and answer any questions that might arise about these steps in problem-solving training.

OUTLINE OF TREATMENT

This manual covers procedures for giving training in the following:

- Step 1 - problem definition and formulation of goals
- Step 2 - generation of strategies
- Step 3 - screening of strategies - resulting in a decision as to best strategy or set of strategies
- Step 4 - generation and screening of behavioral alternatives - resulting in a decision as to the behavior or set of behaviors that will effectively carry out a chosen strategy

The following plan is recommended for the eight sessions:

Session 1 - rationale and step 1

● Session 2 - step 1

Session 3 - step 2

Session 4 - step 3

Session 5 - step 4

Session 6 - steps 1-4 additional problems to be worked out

Session 7 - repeat problems in steps 3-4. Wrap up.

NO new material is to be covered in session 7. The material within each step has been arranged as follows:

Part 1 (on audiotape).

1. rationale, covering the description, relevance and purpose of the step
2. presentation of a situation
3. Ss will record their answers on a handout
4. the narrator on audiotape then coaches Ss regarding the appropriate answer or approach to the situation

Part 2 (live)

5. the group leader then leads the group in practising the particular problem-solving step in question with other examples. One of the examples in Part 2 must always be of a vocational nature.

At no time must any subject's own vocational problem be dealt with in any session, since this is the subject of one of the dependent measures.

The techniques utilized by the group leader in group discussion should include: generalizing from one client's remarks; referring questions to the group; structuring the interaction and reflecting on a client's remarks; and, in general, helping the clients become more concrete in their approach to problem-situations. In general, also, be directive!

STEP 1: PROBLEM DEFINITION AND FORMULATION

PART I

Introduction

The first step in the problem-solving process is to obtain a clear description of the problematic situation you are in. This means gathering information concerning all the relevant aspects of the situation in specific and concrete terms.

Relevance

Gathering information in this way is important because all your other problem-solving behavior that will follow, like generating alternatives and decision-making, will depend on having a clear and complete idea of what is involved in the problem situation.

Purpose

The purpose of being concrete, while describing all aspects of the situation you are faced with, is to be able to separate relevant from irrelevant information and clearly identify the main goals as well as the secondary goals or issues. The goals are the "things" that need changing so that the situation ceases to be problematic.

Let us take the following example:

During your freshman year, you enrolled in a few large lecture courses. The classes are very different from anything you have taken before.

While preparing for the first batch of quizzes in the courses, you look over your lecture notes and find them quite disorganized. You also cannot concentrate while studying.

What questions would you ask yourself in order to full understand what could be bothering you. Let us PAUSE FOR A MINUTE while you write them down on the sheet of paper provided for this purpose.

Now let's check out your questions. It is important to have first identified areas of behavior that are immediately relevant to your study problem:

physical health,
current grades,
ability to concentrate,
study habits.

There are some of the common areas about which it would help to gather as much information as possible.

The second, and far more important point, is to make sure the information you collect is concrete and not vague or abstract. To

make this point clear imagine a ladder of abstraction. At the top we have abstract terms. Here the terms we use in speaking or thinking may mean many things in general. For example, "I lack confidence, could refer to different feelings and activities for different people. At the bottom of the ladder we have concrete terms - that is, they are tied to specific activities that you engage in, specific thoughts and feelings and specific happenings. Hence, "I feel small and tired when I talk to my professor" explains more specifically what "lacking confidence" could refer to.

To come back to the example. The concrete questions you could ask yourself would be of the following type:

What do I feel or do when I sit down to study and find I cannot concentrate?

What thoughts run through my head when I sit down to study?

Why do I find that my class notes do not help me to understand what was covered in class.

In what place do I usually study?

How many hours do I spend studying?

What are the grades I have received so far in different subjects?

Which grades are above or below the class average?

How many hours a day do I sleep?

Do I usually have an appetite at mealtimes?

Vague thoughts would be of the type?

How can I concentrate better?

I wish I could be better organized!

"Concentrate", and "organized" could mean many things. Now, take note of any vague questions you may have written down. Vagueness is what you should avoid, when trying to solve a problem.

PART II

(Examples to be worked out by group leader and the group. The task is to raise as many concrete questions or points about which information is needed. The theme of the problem has been underlined.)

1. You find your roommate quite inconsiderate and discourteous. Although he or she is sometimes noisy and rude, you've never been rude or inconsiderate in return. Recently, however, your roommate's behavior has really been getting to you and making you angry.

You would like to find a way of getting along with your roommate.

2. Although you do not have to declare a major for some time, you have definitely decided to major in biology. You realize that to major in this subject you must have a basic knowledge of some of the other sciences; consequently, you have enrolled in a Chemistry course.

After a few days of classes, you realize that you are upset to find the lectures too difficult and technical.

You would like to find a way of bearing up with the course.

3. Your mother does not seem to respect your independence and privacy.

After a hectic week of work, you feel like relaxing on the weekend at home. While sitting home and listening to some music, your mother comes into your room and asks you whether or not you have some school work to be done.

You resent the way your mother nags you and the way she keeps on after you. You have to find a way of dealing with her.

4. In high school you spent most of your time studying and did little dating. Now that you are a student at U.W.O., you are more interested in social life. You consider yourself to be a poor conversationalist with girls in that you don't seem to be able to hold their interest.

5. Ever since high school, you have always found yourself to be very nervous about taking exams. During your freshman year at U.W.O., you particularly have been experiencing "exam jitters".

You are sitting in one of the large lecture classes, and the instructor announces the date for a midterm exam, which will be occurring in a couple of weeks. This is a course you particularly want to do well in, but you are afraid that because of your difficulty with exams, you are going to do poorly.

6. Suggestions for Gathering information for vocational problem-solving

I Point out first that the steps for general and vocational problem-solving are similar:

1. Define the problem:

for what kind of vocation am I best suited?

for what kind of alternative vocations am I best suited?

for what kind of education or training am I best suited?

2. Gather relevant information
3. Weigh the evidence gathered
4. Choose among alternative plans or goals
5. Take action on your plans
6. Review your plan periodically

II Categories for information-gathering:

1. Study: amount of time and efficiency of your studying
2. Academic ability and achievement
3. Work experiences
4. Leisure experiences
5. Interests
6. Occupational and educational facts

III Examples of items within each category requiring concrete explanation:

1. Study

number of hours, needs, specific reasons why you study less, changes in study habits needed in view of your vocational plans.

2. Ability and achievement

performance in high school, performance at U.W.C.
strong and weak areas of work and ability

3. Work experience

jobs, what you learned about yourself from this job or that, what you liked most/least about the job

4. Leisure experiences

uses of leisure time, hobbies

5. Interests (Point out difference between interests and abilities)

present first/second career-choice
what attracts you to first/second choice

6. Occupational facts

education required, admission chances (e.g., into Law school)
what does work involve?
your strengths/weaknesses for this job

Stress categories 1, 2, 5 and 6.

Procedure to be followed for each example

1. Ask for examples of categories of information.
Give feedback,
2. Then ask for questions or points needing clarification in each of the categories.
Give feedback as to concreteness. Encourage Ss to rephrase vague questions.
3. Finally, with the help of the group, identify in the case of each example, possible major goals (behavioral objectives) or issues which make the situation problematic. You will have to refer here, to Ss individual experiences.
4. Leave 15 mins. for consideration of information-gathering needed for a vocational problem-solving.

DO NOT consider any Ss specific vocational concern. The purpose of this Problem-Solving Training is to teach Ss general skills for the solving of their own problems. The efficiency with which they are able to do this will be tapped by the dependent measures.

5. The major techniques used in the group should include generalizing from one client's remarks; emphasizing similarities between problems, experiences, emotions; referring questions to the group; applying general statements to the immediate group situation.

STEP 2 GENERATION OF STRATEGIES

PART I

Introduction

Once concrete information about the problem situation has been gathered and the goals to be achieved have been identified, the next step in the problem-solving process is to generate possible solutions in such a way as to increase our chances of finding the most effective solution.

Idea-finding

The idea-finding procedure we will use in this session is called "brainstorming". It has four basic rules:

- 1) Criticism is ruled out. In other words do not rule out any idea because you think it provides a poor solution to the problem.
- 2) "Free-wheeling" is welcome. The wilder the idea, the better.
- 3) Quantity is wanted. The greater the number of ideas, the greater the likelihood of useful ideas.
- 4) Combination and improvement are sought. In addition to contributing ideas of your own you should suggest how others ideas can be turned into better ideas, or how two or more ideas can be joined into still another idea.

Brainstorming encourages you to generate as many ideas as you can, one after another, without concerning yourself with their usefulness.

The ideas you will be asked to generate will represent the concrete strategies which could be used to solve a particular problem. Later on, in another session, you will practise how to evaluate strategies and how to break down a concrete strategy into still more concrete behaviors or ways in which it could be carried out.

Let us look at the following example:

Sally Evans, a fourth-year, 23-year old Economics student expressed the following concern:

During the past six months, my husband has had to work late in the evening, usually until about 10 P.M. However, I have been feeling increasingly lonely, anxious, and depressed in the evening after our child goes to bed and I am waiting for my husband to come home. I have been trying to amuse myself by watching T.V. or reading, but this doesn't work. I don't like being alone every evening. I enjoy being with people and engaging in interesting social conversation. Also we

live on a street that doesn't have many homes and is not well lighted, and I am afraid that someone will find out that I am alone in the evening and try to break in. When my husband finally comes home, he is usually very tired and goes right to bed. As a result, we have no sex at all during the week. This leaves me quite frustrated.

To solve Sally's problem it would seem necessary to find ways of achieving the following goals:

1. social interaction on weeknights
2. more sex during the week
3. feeling safer in the evening

I will pause now for a minute while you write down as many concrete ways as you can in which Sally could carry out these objectives. Write your suggestions on the handout.

Now let's check on what ideas you have come up with.

Here are some examples of concrete strategies to help you evaluate your ideas.

1. Take steps to get a girlfriend or relatives to visit me occasionally during the week.
2. Take steps to have an affair with another man.
3. Take steps to arrange safeguards against someone breaking in.

Examples of non-concrete or vague strategies, which you should avoid, would be:

- Sally should get more confidence in herself or she should take steps to have more social interactions

Note that at this stage the "steps" that you will take with respect to the concrete strategies need not be specified. Also we are not as yet concerned with evaluating the strategies as to whether or not they are "practical" or "realistic". Just concentrate on generating many strategies and many concrete strategies.

PART II

(The task is to generate as many concrete ideas as possible for resolving the major issues of each problem situation).

Examples to be worked out through group discussion.

1. Although most of your class at Stoney Brook are in the afternoon, you have one required course which meets at 8:00 in the morning. Consequently, after the first few weeks at school, you began attending this class less regularly. This was mostly due to the fact that you often study late and then sleep through the class.

It is now about halfway through the semester and you have missed two weeks of the morning class, or six consecutive meetings. You are reluctant to return, not only because you will be unfamiliar with the subject matter, but also because you are afraid of the instructor's reaction to your absence.

The major issues here to be solved are:

1. you study late at night and sleep late in the morning, which leads you to miss classes.
 2. you feel you should return to class but you are afraid you will not understand what's going on.
 3. you feel you should return to class but you are afraid of the instructor's reaction to your absence.
2. You find your roommate quite inconsiderate and discourteous. Although he's often noisy and antagonistic, you have never been rude, nasty, or inconsiderate in return. Recently, however, his behavior has really been getting to you and making you angry.

You are in your room about 10 o'clock one evening, typing a paper due at 1 P.M. the next day, when your roommate comes in and starts getting ready for bed. He says that because of an early morning exam the next day, he'd like to get to bed early. Because you don't think he's being very considerate of you if the situation were reversed, you feel like ignoring him and continuing your typing.

Major Issues:

- | | | |
|---|-----|--|
| Roommate wants to go to bed early because of exam next morning. | vs. | Student is typing paper due the next day and wishes to continue. |
| Getting angry at noisy, inconsiderate, discourteous roommate. | vs. | wants more compatible relationship. |

3. You have fallen quite far behind in your language homework. All of the material from the first half of the semester will be covered on the midterm, which is scheduled for Wednesday morning.

It is Tuesday evening and you are starting to study for your language exam in the study lounge on your hall. You are becoming quite upset, realizing how much material you have to cover in order to do well on the exam tomorrow. In addition, you are very tired and not able to concentrate very well. To make matters worse, the lounge in which you are studying is very noisy.

Major Issues:

- | | | |
|---|-----|--|
| You have an exam schedule for next morning. | vs. | You are far behind in your homework. |
| You are tired and having difficulty concentrating | vs. | You need to study effectively and efficiently. |

Lounge in which student is studying is noisy vs. Student needs quiet study environment

4. While in high school, you were always surrounded by family and friends and usually felt in pretty good spirits. You looked forward to coming to Stony Brook, and did not anticipate having any difficulties in adjusting to this new type of environment.

You have been on campus for a few weeks, and have been getting along well with your roommate, but you have not yet made any other close friends. You realize that you feel homesick and lonely most of the time, and are beginning to have difficulty in concentrating on your work.

Major Issues:

You are accustomed to being surrounded by family and friends vs. You have not made any close friends on campus and feels homesick and lonely.

You want to do well in academic work vs. Loneliness makes it difficult for you to concentrate on work

5. You cannot decide on a major area of study, and your indecisiveness and lack of direction trouble you. You have tentatively chosen a major, but you find your introductory course in that subject, boring, difficult, and unrewarding.

You are sitting in this particular class one morning, when all of a sudden you realize that you have been dozing. You are troubled that even your major subject cannot hold your attention.

Major Issues:

You have tentatively decided on major area of study vs. Concerned about not being interested in the introductory course in your major.

You are generally undecided about major area of study vs. You want to decide on area of study and have greater sense of direction.

NOTE

1. Get the group first to identify major issues in each example.
2. It might help to write the ideas thought up by the group on the board, not paying attention to order.
3. Remember - 'Criticism of ideas is to be ruled out'. Be on the alert and negatively reinforce 'killer' phrases - those that stop the flow of ideas: e.g., It won't work!
Nuts!
Yes, but!

Too academic!
Too conservative!

4. But make sure that the ideas are expressed concretely!
5. Encourage one or other client to take up one or other example and begin the 'freewheeling' on it. Encourage clients also to relate the examples to their own experiences. It is important that the group does most of the freewheeling.
6. Bring in some closure on each example by classifying idea according to the issues they are intended to resolve.
7. About 10 minutes should be spent on each example.

STEP 3 SCREENING OF STRATEGIES

PART I

In this session we now come to the core of the problem-solving process, namely, evaluation of strategies in terms of concrete consequences that are likely to result from them. This is done by first going through the list of strategies and doing a rough screening to eliminate any obviously inferior ones. This decision should be made if you can think of one or more highly likely and extremely negative consequences that would result. In this case, further consideration of such an inferior strategy would be a waste of time.

Second, following this initial screening, each of the remaining strategies is evaluated by asking yourself the following question "If I were to carry out this particular course of action what are the various possible concrete consequences?"

Finally, after carefully weighing the various alternatives, a set of strategies or one strategy is chosen which is likely to have the best "payoff" in (1) resolving major issues (2) maximizing the likelihood of positive and minimizing the likelihood of negative consequences.

It is sometimes helpful to adopt a method in looking for possible consequences. For a given strategy, you could, for example, explore possible consequences in four different categories: personal, social, short-term and long-term. The personal category covers consequences in terms of your feelings, needs and desires. The social category covers consequences that might affect other people whom you usually come in contact with. The short-term category covers consequences in your immediate life situation. The long-term category covers the possible future results of taking up a course of action.

Now let's take up the case of Sally Evans we covered in an earlier session. Her problem involved a desire of social interaction on weeknights, a desire for more sex during the week, and a desire to feel safer in the evening.

On the table provided, you will find four strategies listed and below each some space in which you are to write in possible consequences you might imagine could occur. Consequences for the first strategy have been provided.

Having thought up possible consequences, also rate them as to whether you think they are - highly likely or likely or unlikely - and positive or negative (unpleasant) or neutral. You have about 15 min. for this task.

(PAUSE)

Now compare your answers with those on the second sheet of your handout. Please check whether the consequences you have generated, have been expressed in concrete terms. Concreteness is an important characteristic of all responses in the problem-solving process.

(Give Ss a minute or so to compare their answers).

Which strategy or strategies would you choose?

(Give each S a chance to express his choice and explain his reasons. He may disagree with any or all of the ratings give to the consequences).

Strategy I: Take steps to get a girl-
friend or relative to visit me
occasionally week nights

- 1. I might become indebted to my relatives. HL
- 2. It would be embarrassing to be always inviting someone and be rarely invited out. HL
- 3. The number of friends I have would increase and I would be invited out. L

Strategy II. Take steps to have an
affair with another man.

- 1. Will have interesting social conversation. HL
- 2. Will have pleasurable sex experience. L
- 3. Gifts, social activities. L
- 4. Guilt feelings about being disloyal to my husband. HL
- 5. My husband finding out, separation. L

Strategy III: Take steps to arrange
safe-guards against somebody breaking in.

- 1. The wall would look ugly as a result of installing a chain-lock. HL
- 2. Feel embarrassed admitting to my husband I feel scared. L
- 3. Feeling and being safer after installing a chain lock. L

PART II

(Examples to be worked out through group discussion)

- 1. Get the group to make a choice as to the best strategy or set of strategies in the case of every example, that you take up for discussion.
- 2. In evaluating consequences, clients in the group will have to be encouraged to make use of material from their own past experience even if this means modifying the content of the example, a little.

3. Leave enough time to tackle the case of Tom.

In the "case of Tom" each of Tom's career choices are to be considered as strategies. The group should evaluate each choice by asking themselves with respect to each category of information: past achievement, general academic aptitude, etc.

If Tom did become a machinist (or a farmer or a salesman) what support would he get from his abilities (or interests, etc.) You may find that not enough information is found in a given category.

The main point of the exercise, however, is to get the group to articulate possible consequences as concretely as possible.

1. You find your roommate quite inconsiderate and discourteous. Although he's often noisy and antagonistic, you have never been rude, nasty, or inconsiderate in return. Recently, however, his behavior has really been getting to you and making you angry.

You are in your room about 10 o'clock one evening, typing a paper due at 1 P.M. the next day, when your roommate comes in and starts getting ready for bed. He says that because of an early morning exam the next day, he's like to get to bed early. Because you don't think he'd be very considerate of you if the situation were reversed, you feel like ignoring him and continuing your typing.

Major Issues:

- Roommate wants to go to bed early because of exam next morning vs. Student is typing paper due next day and wishes to continue
- Getting angry at noisy, inconsiderate, discourteous roommate vs. Wants more compatible relationship

STRATEGIES

- I. Takes steps to continue typing in room
 - A. Emphasizes importance of paper
 - B. Emphasizes amount of time it will take him to finish typing
 - C. Makes reference (direct or implied) to roommate's lack of consideration
 - D. Says nothing to roommate or arranges things or makes suggestions so that roommate might be able to sleep
- II. Discontinues typing in room and takes steps to complete paper.
- III. Gets roommate to change his (more general) inconsiderate behavior by discussing the situation with him rationally.
- IV. Gets roommate to change his (more general) inconsiderate behavior by communicating annoyance and displeasure
- V. Takes steps to minimize contacts with roommate in the future.
- VI. Requests a room change at the earliest possible time

2. You have fallen quite far behind in your language homework. All of the material from the first half of the semester will be covered on the midterm, which is scheduled for Wednesday morning.

It is Tuesday evening and you are starting to study for your language exam in the study lounge on your hall. You are becoming quite upset, realizing how much material you have to cover in order to do well on the exam tomorrow. In addition, you are very tired and not able to concentrate very well. To make matters

still worse, the lounge in which you are studying is very noisy.

Major Issues:

- | | | |
|--|-----|---|
| You have an exam scheduled for next morning | vs. | You are far behind in your homework |
| You are tired and having difficulty concentrating | vs. | You need to study effectively and efficiently |
| Lounge in which student is studying is noisy | vs. | Student needs quiet study environment |

STRATEGIES

- I. Takes steps to increase mental alertness and ability to concentrate
 - A. Taking breaks to relax (e.g., rest, sleep, taking a walk, talk with others)
 - B. Using physical means to refresh himself (e.g., shower, fresh air, food, drink, stimulants)
- II. Takes steps to reduce noise and other distractions.
- III. Takes steps to study all material in as efficient a manner as possible
 - A. On his own
 - B. With the help of others
- IV. Takes steps to study only the material most important for the exam.
- V. Takes steps to increase study time

3. While in high school, you were always surrounded by family and friends and usually felt in pretty good spirits. You looked forward to coming to Stony Brook, and did not anticipate having any difficulty in adjusting to his new type of environment.

You have been on campus for a few weeks, and have been getting along well with your roommate, but you have not yet made any other close friends. You realize that you feel homesick and lonely most of the time, and are beginning to have difficulty in concentrating on your work.

Major Issues:

- | | | |
|--|-----|--|
| You are accustomed to being surrounded by family and friends | vs. | You have not made any close friends on campus and feel homesick and lonely |
|--|-----|--|

You want to do well in academic work vs. Loneliness makes it difficult for you to concentrate on work.

STRATEGIES

- I. Gets good advice about how to handle issues #1 and/or #2
- II. Reduces his concern about being lonely talking to himself rationally.
- III. Reduces loneliness by maintaining closer contact with family and friends outside of university
 - A. By means of visits home, phone calls, or correspondence
 - B. By inviting people to campus
 - C. By transferring schools
- IV. Takes steps to develop closer relationships with his current acquaintances
- V. Reduces loneliness by developing new friendships
 - A. Makes contacts through academic or job-related activities
 - B. Makes contacts through everyday interpersonal interactions or social activities (e.g., cafeteria, social functions, etc.)

4. You cannot decide on a major area of study, and your indecisiveness, and lack of direction trouble you. You have tentatively chosen a major, but you find your introductory course in the subject, boring difficult, and unrewarding.

You are sitting in this particular class one morning, when all of a sudden you realize that you have been dozing. You are troubled that even your major subject cannot hold your attention.

Major Issues:

You have tentatively decided on a major area of study vs. Concerned about not being interested in the introductory course in your major

You are generally undecided about major area of study vs. You want to decide on major area of study and have greater sense of direction

STRATEGIES

- I. Gets good advice about how to deal with issues #1 and #2
 - A. From faculty or staff of university
 - B. From friends or relatives
- II. Reduces concern about lack of interest in introductory course in his tentative major by talking to himself rationally

- III. Takes steps to evaluate his interests in other fields
 - A. By taking or sitting in on other courses
 - B. By seeking guidance or counsel from others
 - C. By thinking things through by himself or switching majors
- IV. Takes steps to re-evaluate his interest in tentative major
 - A. Through courses
 - B. Through consultation with others
 - C. Through individual study, effort, or related job experience
- V. Drops the course
- VI. Drops out of school

Vocational Example

THE CASE OF TOM

Tom, was twenty-two years old and a high school graduate. He did not know whether he should be a farmer, salesman or a machinist.

Now that you have had some practise in evaluating consequences, go through the information provided below about Tom and screen his three career choices. The question we should ask ourselves is which of these choices receive the most support from each category of information.

Information about Tom

Past achievement. Tom had spent the first two years of high school in a public school and the last two in a private academy. He did his best work in shop and in social studies. He had a hard time scholastically, however, and had always been below the middle of his class academically.

General academic aptitude. Tom appeared to have little interest in attending college. Because his parents were urging him to go to college, he was given several tests to measure his scholastic aptitude. On one test, Tom stood at the 48th percentile of the general population.

Interests. Tom reported that he liked sports, tools, and the out-of-doors. He did not enjoy school work. The interest inventories which Tom answered indicated that he would probably like active occupations (agricultural and skilled mechanical) and dealing with people. On the Strong Vocational Interest Blank for Men, Tom had A ratings in interests similar to those of farmers, real estate salesmen, and purchasing agents, and B ratings in interests similar to those of bankers and carpenters.

Physical health. Tom's health was excellent in so far as was known at the time.

Personal adjustment. Tom seemed to need assurance and support in his struggle to gain independence from his family and to make his way according to his pattern of interests and abilities. He remarked, "I've been bossed most of my life, first by mother, and then by the sergeant."

Social adjustment. Tom possessed fine personal qualities which made him popular. He had always had good, warm relationships with others both in school and military service.

Home and family background. In contrast to the family's college background and his sister's outstanding college record, Tom was the academic "black sheep" of the family. This was a source of constant strain to him while he was in school and after his military service.

Work experience. Tom had worked on a farm for two summers before entering the service. In the service, he had for the most part driven a truck.

STEP 3. GENERATION AND SCREENING OF BEHAVIORAL ALTERNATIVES

PART I

In the previous two steps, we have practised skills that resulted in the selection of the best strategy or set of strategies that could be employed to resolve the major issues of a problem. Now we are concerned with the precise behavioral alternatives and specific activities we should employ to carry out these strategies.

This means we will have to, first, use the rules of "brainstorming" once more to generate these concrete behavioral alternatives. Details of time, place, person, feelings and ideas will have to be clearly described.

Remember the rules of brainstorming are:

- (1) criticism is ruled out
- (2) "Freewheeling" is welcomed
- (3) quantity is wanted
- (4) combination and improvement are sought

Next, these suggestions of concrete ways in which the strategies are to be carried out will have to be screened like before, in terms of possible consequences and the most effective means selected of implementing the chosen strategies.

Let's go once more to the case of Sally Evans. Suppose that one of the strategies that Sally decided to carry out was:

"Take steps to get a girlfriend or relative to visit occasionally on weeknights"

When you practised brainstorming for the purpose of generating concrete strategies the "steps" or specific ways in which they were to be carried out were left usually unspecified. We allowed this to happen because there was no point in spending time specifying what the "steps" would be unless we were sure that the strategy was effective.

In the case of the strategy; "Take steps to get a girlfriend or relative to visit occasionally on weeknights"; spend the next minute elaborating exactly what these steps should be. Freewheel! but be very concrete. Please write your suggestions down.

(PAUSE)

Some examples of concrete steps are:

1. Ask my mother to spend an evening with me, at least one night each week.

- 2. Ask several neighbours if they would like to have a party name at my house one night each week.
- 3. Inform schoolfriends that I am beginning to have a group study session one evening each week.

Are the steps you have written down sufficiently concrete?

Now that you have thought of the "steps" Sally could use, let's screen them, just as we screened strategies in terms of possible consequences.

The exercise should now be completed using the blackboard and group discussion. The group leader should make sure each S has a chance to give the group his ideas of what steps Sally should take. Some of these steps should then be taken up and consequences (from these steps) elaborated by the group.

Evaluate the consequences as before (positive, negative, neutral; highly likely, likely, unlikely) and get a group decision on the best steps or set of steps, Sally should choose).

PART II

Take up #1 and at least one example from #2 and one from #3, for group practice:

- 1. In examples I & II evaluate behavioral alternatives and ask S to choose the most effective response or set of responses.
- 2. In examples III & IV ask S to
 - (a) freewheel and formulate their own behavioral alternatives for each of the strategies
 - (b) evaluate and judge the effectiveness of these alternatives, i.e., choose the best one or best set of alternatives.
- 3. In examples V, VI, & VII ask Ss to
 - (a) evaluate the most effective strategy or set of strategies
 - (b) freewheel and generate behavioral alternatives for the effective strategy or strategies
 - (c) evaluate behavioral alternatives
- 4. Leave enough time to deal with example II. Here the group should be encouraged to think up as many instances of vocational exploratory behaviors as possible.

Although most of your class at university are in the afternoon,

you have one required course which meets at 8:00 in the morning. Consequently, after the first few weeks at school, you began attending this class less regularly. This was mostly due to the fact that you often study late and then sleep through the class.

It is now about halfway through the semester and you have missed two weeks of the morning class, or six consecutive meetings. You are reluctant to return, not only because you will be unfamiliar with the subject matter, but also because you are afraid of the instructor's reaction to your absence.

The major issues here to be solved are:

- you study late at night and sleep late in the morning, which leads you to miss classes.
- you feel you should return to class but you are afraid you will not understand what's going on.
- you feel you should return to class but you are afraid of the instructor's reaction to your absence.

STRATEGIES

I. Gets good advice

- seeks advice from faculty advisor
- seeks advice from residential counselor
- seeks advice from other students in the course

II. Returns to class and takes steps to catch up in course work

- asks instructor about how he might get help on the material he missed
- asks friend to explain the material he has missed
- borrows notes from a friend in the course and tries to catch up before returning to class

- devotes extra time to the course until caught up
- pays careful attention in class and tries to take good notes

III. Returns to class and takes steps to increase positive reactions from instructor

- explains his absence to the instructor
- tries to appear interested and attentive in class. Tries to show professor his concern for course by showing his understanding
- tries to be as unobtrusive as possible when first returning to class - sits in back of class

IV. Returns to class and takes steps to make certain that he does not miss this class in the future

- plans to rearrange study habits and go to bed earlier
- tries to switch to a section which meets late in the day
- plans to insure being awakened early enough to go to class by getting alarm clock or by having roommate wake him up
- plans to budget time (i.e., studying, sleeping, etc.) better in future

You cannot decide on a major area of study, and your indecisiveness and lack of direction trouble you. You have tentatively chosen a major, but you find your introductory course in that subject boring, difficult, and unrewarding. You are sitting in this particular class one morning, when all of a sudden you realize that you have been dozing. You are troubled that even your major subject cannot hold your attention.

Major Issues:

You have tentatively decided on a major area of study vs. Concerned about not being interested in the introductory course in your major

You are generally undecided about major area of study vs. You want to decide on major area of study and have greater sense of direction

STRATEGIES

I. Gets good advice

- seeks advice from course instructor
- seeks advice from academic advisor
- seeks advice from friends in different fields
- seeks advice from parents

3

OF/DE

3



II. Takes steps to evaluate his interests in other fields

- sits in on some courses in other fields of interest
- takes courses in several different areas to find something he likes
- takes vocational guidance tests
- starts thinking about a new major by seeing his advisor
- tries to think about what field best suits his abilities, and decides to major in it
- switches to another major area which seems to be interesting
- leaves college for a semester or two to work and/or to think things over

III. Takes steps to Re-evaluate his interest in his tentative major

- takes another course in major so as not to decide on basis of one course. Asks instructor if he can audit a more advanced course
- sits in on another section to see if it is just the instructor that is boring
- talks to people involved in his tentative major area and asks them why they are involved in that field
- seeks information as to whether advanced courses are more interesting
- does extensive reading in his tentative major. Reads ahead in major to see what is in store and to be ahead so as to make it easier later
- takes a part-time job in that part of his tentative major that interests him most. Tries to get summer job in his field of interest

3.

You are taking a humanities course, which has a fairly large enrollment. The instructor spends most of the class lecturing, and he has a tendency to speak very fast.

You are sitting in class during the second week of classes, the instructor is lecturing, and you are having a difficult time in writing down all the points which you feel are important. As you look around the room, it appears that many others are experiencing the same difficulty.

STRATEGIES

- gets good advice about how to handle conflict
- takes steps to improve adequacy of note-taking
- takes steps to complete notes after class by seeking out relevant courses of information regarding the lecture
- takes steps to get the instructor to slow down
- drops the course
- plans to avoid having to deal with conflicts similar to this one in the future

4.

All last year you were looking forward to coming to college. You thought the courses would be interesting and stimulating, and hoped that after being here a while, you would discover what you wanted to do with your life in the future.

After two months at the University, you find that the introductory courses in all areas, including your major, are not nearly as stimulating and interesting as you thought they would be. It occurs to you one day that you are being required to learn a lot of facts and details that do not seem to be very helpful to you in determining what you should do with your life. You feel depressed, disappointed, and find yourself losing interest in studying.

Major Issues:

Expected interesting courses	vs.	Depressed and disappointed by boring ones and losing interest
Expected to discover career direction		Disappointed about not finding career direction

STRATEGIES

- gets good advice about how to handle conflicts #1 and #2
- reduces disappointment over uninteresting courses by correcting his expectations
- takes steps to obtain reliable information about the appropriateness of his disappointments with college
- takes immediate steps to find something this semester which can get him interested
- takes steps to ensure an interesting education and career in the future
 - A. By taking courses
 - B. By trying outside of courses to determine long range interests and goals

5.

Although you do not have to declare a major for some time, you have definitely decided to major in biology. You realize that to major in the subject, you must have a basic knowledge of some of the other sciences; consequently you have enrolled in a chemistry course.

You buy the textbook before the first day of class and when you look it over, you are upset to find it very difficult and technical. You are even more upset the first day of classes, when you realize that your instructor speaks very fast and tends to ramble.

Major Issues:

Enrolled in chemistry course in order to fulfill science requirement for his major

vs.

Upset when looks at text and finds it difficult and technical

Enrolled in chemistry course in order to fulfill science requirement for his major

vs.

Experiences difficulty in taking lecture notes first day of classes because instructor speaks fast and mumbles

6.

You have enrolled in an English composition course at the University. One of the assignments given to the class is to write a creative short story. Because you felt unsure about the assignment, you put off working on it until the last minute.

The night before it is due, when you sit down to write, you find that you have very few original ideas relevant to the assignment. As you think about it, you realize that you are unsure of what the instructor expects.

APPENDIX X

COMBINED TREATMENT: ANXIETY MANAGEMENT
AND PROBLEM SOLVING TRAINING

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**COMBINED TREATMENT:
ANXIETY MANAGEMENT PLUS PROBLEM-SOLVING TRAINING**

Session 1

As per session 1 of Anxiety Management Training (AMT), except that you will be presenting an audiotaped rationale of the combined treatment after the personal introductions. Ss will be given the sample hierarchy to take home and asked to bring their own next time.

Session 2

1. Relaxation induced by Method I.
2. Discussion of success of relaxation practice and correction of misconceptions, if any, involved with relaxation.

Collect Ss' individual hierarchies

time permitting, you may initiate a discussion on composite hierarchy

3. Step 1. Problem Solving----- 1/2 hr.

Session 3

1. Relaxation induced by Method II & III.
2. Discussion of problems related to relaxation present and go over composite hierarchy, explaining the general ingredients of items therein.

3. Step 2 of PST----- 1/2 hr.

N.B.

Instruct Ss to practise relaxing by breathing and 'letting go' in various situation as per AMT Session 3.

Session 4

1. Relaxation induced by Method II----- 15 mins.
2. Desensitization working through hierarchy----- 15 mins.
3. Step 3 of PST----- 15 mins.

Session 5

1. Relaxation induced by Method II & III----- 15-20 mins.

2. Desensitization working through hierarchy----- 10-15 mins.

Before starting the relaxation in #1 try to get feedback on the relevance of items in hierarchy and make change if needed.

3. Step 4 of PST

Session 6

1. Relaxation induced by Method II----- 15 mins.

2. Desensitization working through hierarchy----- 15 mins.

Before starting the relaxation in #1 obtain feedback on success of relaxation and desensitization procedures. Make appropriate change.

3. Step 4 & 5 of PST----- 30 mins.

Session 7

1. Obtain feedback on success of relaxation and desensitization as before.)

2. Relaxation induced by Method II & III)
Point out usefulness of Method III)

3. Desensitization----- 15 mins.

4. Step 4 & 5 of PST----- 30 mins.

Leave about 5-8 mins. for wrap up.

N.B.

It is possible that with increasing practice you will be able to cover relaxation and desensitization in less than 1/2 hour. If so, go directly to PST procedures.

The same recommendations for the discussion periods apply here as in the other treatment

COMBINED AMT & PST RATIONALE

Learning to solve your vocational problem actually implies learning to cope with all the different tasks which are contained in the problem as well as having a clear idea of what these tasks should be. Examples of these tasks might be writing to request a college or occupational pamphlet, talking to people who are working or have worked in an occupation, or sitting down by yourself and figuring out which one of two or three possible vocational avenues is really cut out for you.

We have research evidence that there are too many reasons why people cannot cope with problematic situations. One reason is that they become tense, anxious, or preoccupied with worry whenever they think of or do things connected with their problem. The other reason is that they cannot decide what course of action has the most advantages for them and the least inconveniences. In this series of sessions then, you will be trained in the general use of techniques for controlling your anxiety as well as in problem solving steps that are seen as crucial in having a systematic approach to making decisions.

Now let's cover in some more detail what anxiety management training and problem-solving training involved.

Anxiety management training begins with teaching you how to relax in situations where you feel yourself getting tense and when certain thoughts begin to worry you. The relaxation procedure is based upon years of work that was started in the 1930's by Dr. Jacobson. This relaxation technique is then combined with the psychological principle of counter conditioning. This is done by first taking note of a number of situations connected with your vocational problem which upset you to varying degrees. Starting with the less stressful ones you will try to experience in imagination the worry and tension you go through in real life. Finally, you will practice learning to relax away the worry and tension as it builds up.

Problem-solving training consists of practice in the following four steps: First, problem definition and formulation. This involves defining all aspects of a situation and gathering relevant information, and formulating goals. Second, generation of alternatives. This involves the use of the brainstorming method of idea finding. The need for clarity and concreteness is important. That is, you must learn to describe strategies not in general terms but in terms of specific actions and behaviors. Third, screening of alternatives. This involves emphasis upon concrete consequences. The purpose here is to be able to discern the course of action that will maximize the likelihood of positive consequences and minimize the likelihood of negative ones. Fourth and finally, decision-making. This involves selection of one course of action, generation of concrete behavioral alternatives for implementing it and selection of the most effective one.

We have used these procedures on many different types of pro-

blems including problems such as your with good results. The basic idea in all these procedures is to teach you a general coping strategy which you will be able to use in a variety of problem situations. Since I have described here very briefly the procedures we will use in these sessions maybe we ought to now clear up any initial questions that you may have about them.

APPENDIX XI

DISCUSSION PLACEBO TREATMENT

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INSTRUCTIONS TO THE THERAPIST

1. This group receiving this treatment should be conducted as though it were a general discussion group. In general, be non-directive!
2. The first session should begin with introductions, statement of individual concerns, brief discussion of expectations, consideration of the rationale (on tape).
3. After that, the rest of the sessions should consist of alternately playing the material on tape for about 5 mins. and then conducting a discussion on it until interest seems to wane. You may be didactic and explain the material on tape using any other theoretical knowledge available to you.
4. The major techniques should include reflection, generalizing from one client's remarks (see #5); emphasizing similarities between experiences and referring questions to the group.
5. Do not initiate or direct the discussion towards being concrete.
6. Also steer away from discussion of anyone's specific vocational concern, specific anxieties or specific ways of handling a vocational problem.

TREATMENT RATIONALE

Coping with your career problem actually implies learning to cope with all that is contained in that problem: your experiences with people and situations, your hopes and ambitions, and your concern about your past performance.

Your indecision concerning a career and the anxiety associated with it may also be connected to certain conflicts brought about, for example, by the gap between what opinion you have of yourself and what you'd like to be. Another source of conflict may come from the undue influences the values of other people have on you.

We have scientific evidence that one way of reducing a problem such as this one is to gain insight into its roots. That is, it would be of great advantage to you if you arrived at a clearer understanding of how your career biases developed or whether they are rationally or emotionally based.

To this end, these seven group experiences have been arranged for you. It is hoped that we will succeed in developing here a psychological climate in which freedom of expression of feelings can occur. It is also hoped that through interaction with others, you will be able to share each others experiences and learn from them.

To facilitate an exchange of opinions among you, some tape-recorded material has been prepared based on Dr. John Crites' excellent review of vocational psychology. Examples of topics covered are: some views of vocational development, the nature of vocational choice and problems in vocational choice.

You might find at times that this material is somewhat theoretical in nature. Do not let that dismay you. Please remember, that the effort you spend in reflecting on the general characteristics of vocational choices will help you to arrive at an insight into your own problem.

TRANSCRIPTS OF TAPE-RECORDED TALKS

1. Theories of Vocational Choice

We shall now review some of the theories of vocational choice which have been formulated to explain how individuals choose occupations.

Developmental explanations of choice propose that the decisions involved in the selection of an occupation are made at a number of different points in the individual's life, and that they constitute a continuous process which starts in childhood and ends in early adulthood. The theory formulated by Ginsberg and his associates, which they derived from interviews with adolescents, consists of three propositions about the developmental nature of vocational choice. First, they point out that contrary to the traditional conception of choice as a single event in time, their data indicate that it is a process which spans the entire period of adolescence from approximately age 10 to age 21. Second, this process is largely irreversible; once launched upon a particular course of action, such as training for a specific job, an individual finds it increasingly difficult to change his goals as time passes. He is restricted more and more by his previous decisions, expenditure of effort and money, and commitments of time. As a result, the single most important factor in his vocational choice becomes the inertia of the decision making process itself. And third, the process ends in a compromise between an individual's needs and the realities which impinge upon him.

Ginsberg identifies some of the tasks which face the adolescent while deciding upon a vocation by specifying the pressures which make the accomplishment of these tasks difficult and by describing the supports which are available to withstand the pressures. Consider the following various problems, ego functions, pressures and supports, which the selection of a career involves:

First, there is the problem of determining freedom in occupational choice by enlarging knowledge of self and the world. The ego function operating here is that of reality testing. The pressures involved are immediate gratification of impulses growing out of a general maturation such as emergence of sex needs and adolescence. The values of the goals encourage the individual to relate

present activities to the future.

Consider a second problem, that of distinguishing between present, the near future, and the distant future. The ego functioning involved here is that of sharpening the time perspective. Some of the pressures involved here are time, and the necessity to make decisions; the prospects of realizing future goals help to cope with these pressures.

Consider a third problem, to postpone legitimate gratification. The ego function involved here is that of the delaying capacity. Some pressures involved include parental aspirations and ambitions. Minimum gratification of present needs helps to withstand these pressures.

And finally, consider a fourth factor, that of setting realizable goals and choosing suitable approaches for their attainment. The ego function involved here is the ability to compromise. The pressures are of a motivational nature, work orientation versus pleasure orientation. The supports are largely external: educational system which sets up intermediate goals, parental guidance, identification with the parent.

Let's move on now to another theory of vocational development, postulated by Super:

First, says Super, people differ in their abilities, interests and personalities.

Second, they are qualified by virtue of these characteristics, each for a number of occupations.

Third, each of these occupations requires a characteristic pattern of abilities, interests and personality traits with tolerance wide enough, however, to allow both some variety of occupations for each individual and a variety of individuals in each occupation.

Fourth, vocational preferences and competencies, the situations in which people live and work, and hence their self concepts, change with time and experience, although self concepts are generally fairly stable from late adolescence until late maturity. This makes choice and adjustment a continuous process.

Fifth, this process may be summed up in a series of life stages characterized as growth, exploration, establishment, maintenance and decline.

Sixth, the nature of the career pattern, that is, the occupational level attained and the sequence frequency in duration of trial and stable jobs, is determined by the individual's parental socio-economic level, mental ability and personality characteristics, and by the opportunities to which he is exposed.

Seventh, development through the life stages can be guided partly by facilitating the process of maturation of abilities and interests, and partly by aiding in reality testing and in the development of the self concept.

Eighth, the process of vocational development is essentially that of developing and implementing the self concept. It is a compromise process in which the self concept is a product of the interaction of inherited aptitudes, neuro and endocrine makeup, opportunity to play various roles, and evaluations of the extent to which the results of role playing meet with approval of superiors and fellows.

And finally, work satisfactions and life satisfactions depend upon the extent to which the individual finds adequate outlets for his abilities, personality traits and values. They depend upon his establishment in a type of work, or work situation and a way of life in which he can play the kind of role which his growth and exploratory experiences have led him to consider congenial and appropriate.

2. Nature of Vocational Choice

The purpose of this session is to clarify what the nature of vocational choice is by proposing some answers to such questions as the following: What are the characteristics of vocational choice behavior? How can choice be distinguished from closely related concepts such as vocational preference and aspiration? What are the necessary conditions for making the choice?

Dependent upon the frame of reference used and the assumptions about human behavior which underly it, there are different ways of conceptualizing vocational choice.

The first question about vocational choice is whether it is conscious or unconscious behavior. By conscious or unconscious is meant whether an individual is aware of the experiences which he has had. Does the individual know at the time he is deciding upon a vocational choice, that this is what he is doing and does he know what the factors are which have influenced or produced his choice.

One traditional theory maintains that vocational choice is largely a conscious, cognitive, problem-solving process. According to this viewpoint, confronted with the necessity of choosing an occupation, an individual consciously proceeds to make an analysis of his vocational assets and liabilities, accumulates information about occupations and arrives at a decision. The individual consciously sets the goals he wants to attain and tests them against the realities of his physical and psychological environment. Once his goals are established, as realistic ones, he relates his present activities and efforts to them and then delays the gratification of his present needs in order to fulfill his long-term objectives. Throughout this process the individual is aware of his behavior and its consequences.

On the other hand, others say that the primary reasons for selecting a particular vocation are unconscious, in the sense that when the individual is pressed to elaborate beyond the superficial rationalizations of economic advantage and opportunity, he is forced to admit that he doesn't know why. He simply has to build bridges or can't stand paper work. These activities have immediate appeal or immediate distaste for him.

Midway between these positions is the opinion that the individual becomes increasingly aware of his vocational choices and his motivations for them as he grows older and responds more and more to the expectation that he select and prepare for a life's work. Probably, prior to adolescence vocational choices are largely unconscious and during adolescence they are mostly conscious, except for those individuals who are less well adjusted.

A second question about vocational choice is whether it is rational or emotional. To be rational means to base decisions upon logical and realistic considerations. The rational person thinks through a problem by surveying the various alternative solutions which are feasible, projecting into the future what the probable consequences of each alternative are, and then selecting one alternative as the most desirable one because it maximizes what is desired within the limitations of what is attainable.

In contrast, to be emotional means to act upon feelings, attitudes and needs: The emotional person perceives and solves problems in terms of what he desires and wants rather than in terms of reality factors. This does not mean however, that he is necessarily unrealistic in his courses of action, since his emotions may be consistent with reality; but it is not uncommon for the emotional person to be unrealistic, particularly in his choice of an occupation. It may be that individuals with the same motivation but different reasoning modes may choose different occupations and individuals with different motivations but the same approach to problem-solving may choose the same occupation.

A third question about vocational choice is whether it is a compromise or a synthesis. Some people have thought that the decision concerning an occupational choice is, in the last analysis, a compromise, whereby an individual hopes to gain the maximum degree of satisfaction out of his working life, by pursuing a career in which he can make as much use as possible of his interests and capacities in a situation which will satisfy as many of his values and goals as possible.

The critics on the other hand of this position say, that first of all, it does not describe how the compromise takes place. Secondly, it recognizes the action and interaction of factors like interests, capacities, values and realities, relatively late in the development of the individual and leaves the impression that once a late developing factor comes into play, those that which have played a part earlier, are no longer of much consequence. The process is probably not so much one of compromise as one of synthesis.

Probably our best hypothesis about compromise and synthesis in choice is that both may play a part, depending upon how restrictive reality conditions are for the individual. When freedom to choose is maximal it is possible that choice might be based solely upon synthesis; as freedom to choose decreases however, amount of compromise increases and choices are based upon some adjustment between the individual's needs and reality.

A fourth question about vocational choice is whether it is an event or a process. For many years the accepted conception of vocational choice was that an individual arrives at a particular point in his life usually upon graduation from high school or college when he selects his future career. According to this traditional viewpoint, the young person gives little thought to his vocational choice until he reaches the end of high school or college and is confronted with the problem of entering an occupation and establishing himself as a gainfully employed worker.

In marked contrast to this crossroads conception of vocational choice as a one-time event, is the idea that the choice process transpires over a prolonged period of time. An individual never reaches the ultimate decision at a single moment in time but through a series of decisions over a period of many years. There does not seem to be a solution to this problem. A principle from developmental psychology states that there are individual differences in rates at which people develop. Each person progresses in his development at a highly or at a slightly different rate. Levels of maturity are reached at different times, and spurts and starts in growth vary from one individual to another. As a result, at one point in time, when a number of individuals are compared, they may tend to differ because their rates of development are not exactly the same. In other words, the differences which exist between individuals when we view their vocational choices as events, may be due to the differences in the rates of development which characterize them when we consider their choices as processes.

3. Dimensions of Vocational Choice

First, let's make ourselves aware of the irreversibility of the vocational choice process. At the beginning of high school, typically in the 9th grade, a young person must make a preoccupational choice of academic curriculum which requires a selection from among various courses of study such as college preparatory, commercial, industrial arts or general. Usually, this decision about high school, presumes prior considerations of long term goals, which direct immediate curricular choices and which circumscribe future choices of action, as they relate to shifts in curriculum, selection of a school for advanced training or placement on a job.

Five factors are seen as contributing to the irreversibility of the choice process. First, family support for training. Because families assume the responsibility for support and education

of their children for only a set period of time, changes in vocational objectives are limited by the availability of their financial resources for training. A second factor, is preparation for college and work. Changes from one curriculum to another are restricted by the amount of time remaining after the shift to meet the requirements for further training or for employment. A third factor, is the imminence of marriage. The prospect of marriage in the early years of adulthood tends to inhibit alterations in vocational decisions which would lengthen the period of preparation and necessitate a postponement of occupational entry and the establishment of a family. A fourth factor is the reluctance to admit poor planning and failure. A change on one's vocational goals may mean an admission of poor planning or of a failure to implement plans. Such admissions may be repugnant to the individual and this may impel him to continue in his original course of action. And finally, a fifth factor, is the advantages and disadvantages of changing goals. The disadvantages of changing goals may outweigh the advantages. Furthermore, even if a person alters his plans there is no guarantee that the new course of action will resolve the uncertainties about one's choice which prompted it. To these factors which tend to make the choice process irreversible, we might add those of cost of expenditure and effort. Certainly, every time an individual reverses his plan he incurs at least some loss of money because of the cost involved in buying new books or forfeiting college application deposits, moving from one school to another, or any number of other expenses. And also, unless he changes to a closely related area of study or work there is the possibility that skills and proficiency acquired in the past endeavours will have little applicability in future activities.

Do you see your vocational plan as something over which you have very little control?

And now on to other dimensions of the vocational choice process. Vocational choices are increasingly based upon considerations of reality factors as the individual develops. In other words, one dimension along which the choice process proceeds, is the extent to which reality plays a part in the making of vocational decisions. In addition to this dimension there are others which have to do primarily with an individual's attitudes toward the problem of choice and his ability to solve it. Some of these are as follows:

First, orientation of choice. To make a choice, it is necessary first to be aware of the social expectation that one must choose an occupation as his life's work. The choice process begins when the individual develops this awareness and continues as he becomes increasingly oriented to the decisions about high school curriculum, part time work, college, and so forth, which he must make in the present and in the future.

Second, clarification of the vocational self-concept. This dimension has been called crystallization of traits and aptitudes and is defined as the degree to which abilities and traits have taken shape providing consistent bases for action.

Third, occupational information. Much as the individual learns more about himself as he grows older, he also gathers more information about occupations and how to enter them. The information he has increases in relevance, reliability and specificity as he develops and he uses it more often as a basis for his decision.

Fourth, independence. One of the primary dimensions along which social and emotional development take place is from dependence to independence. The choice process proceeds in the same direction. In early adolescence, the individual relies rather heavily upon others for choice determination. But as he matures, he becomes more and more self sufficient in his decision making. He develops from what Ginsberg has called the passive person to what he has termed the active person. The active person takes positive steps in his own behalf. The passive type however, responds to external pressures. He reacts to major forces instead of seeking to control them. The active-passive involvement in choice or independent-dependent choice behavior are linked to the orientations of the individual toward work and pleasure. The work oriented person pursues his goals with determination and persistence and is not easily deflected from them. Also he foregoes current gratification or postpones them. In contrast, the pleasure oriented individual has only vaguely defined objectives and is easily distracted in his endeavours by the desire for immediate satisfactions.

Fifth, playful daydreaming and phantasy. As essential component of effective decision making seems to be an optimum use of daydreaming and phantasy to conceptualize oneself in different kinds of work and to eliminate unsuitable occupational alternatives through tryouts in thought rather than through the more expensive and time consuming process of trial and error.

Sixth, means and cognizance. The younger person has difficulty in relating his goals to the steps he must take to reach them because he has not developed the ability to conceive what the appropriate associations are and because his time perspective has not sharpened sufficiently for him to project accurately into the future.

And seventh, consistency of choices. Consistency or agreement among the individual's choices should increase as he matures. It has been argued that consistency of vocational preferences shows intensity and validity of interests and that it is better to work consistently toward one clear-cut goal than wastefully to keep shifting objectives.

4. Problems in Vocational Choice

The possible problems which can arise in making a choice will be discussed today under the three major divisions of problems of adjustment, indecision and unrealism.

Problems of adjustment - (1) The adjusted individual's choice is in the field of his interest and is on the appropriate aptitude

level. He may have a multiple interest pattern but his choice agrees with at least one of the patterns. In effect, he has no problem, although he may come for counseling because he lacks assurance.

(2) The maladjusted individual's choice neither agrees with his field of interest nor with his level of aptitude. The problem here is one of complete disagreement among the variables involved in the decision making process.

Problems of indecision - (1) The multi-potential individual has two or more choices, each of which agrees with his field of interest and is on the appropriate aptitude level. He may have a multiple interest pattern but his choices must be consistent with one of the patterns. His problem is that he can't decide among the alternatives.

(2) The undecided individual has no choice. He may also have no interest pattern, a single or multiple pattern and an aptitude at a high, average, or low level but regardless of his status on these variables, what defines his problem is that he can't state which occupation he intends to enter in the future.

(3) The uninterested individual has at least one choice which is on the appropriate aptitude level but he has no patterned interests.

And finally, problems of unrealism.

(1) The unrealistic individual's choice agrees with his field of interest (or there is no interest pattern) but it requires a level of aptitude that is higher than his tested level.

(2) The unfulfilled individual's interest choice agrees with his field of interest but is on an aptitude level which is below his measured capability.

(3) The coerced individual's choice is on the appropriate aptitude level but is not congruent with his field of interest. Although his problem may appear to be one of adjustment or indecision it is listed here because a choice has been made. What makes it unrealistic is its being in the wrong interest area.

We shall now consider, in some detail, indecision in vocational choice. Indecision in vocational choice refers to the inability of the individual to select or commit himself to a particular course of action, which will eventuate in his preparing for and entering this specific occupation. Note that this definition of indecisions is a general one which encompasses the three problems of indecision which were defined in the previous section. The problem of the multipotential individual is not that he is unable to make a choice but rather that he has too many

choices, two or more, and can't designate one as his goal. His difficulty arises because he can't choose from among his choices. In contrast the undecided individual's problem is that he cannot make any choice from among the alternatives which are available to him. More specifically, the necessary conditions for making a choice obtain, that is, a choice supply, an incentive to make a choice, and freedom to choose, but the individual, nevertheless, cannot complete the choice act. Finally, the uninterested individual has made a choice. He has made only one, but he is uncertain about it, because it is not supported by an appropriate interest pattern. He is attracted to his chosen occupation but at the same time is repelled by it. Thus all three problems involve indecision but for clearly different reasons.

Several theorists have noted the tendency for indecision in vocational choice to decrease as age increases. More older individuals seem to have made a vocational choice as compared with younger individuals. Inability to make a choice not a matter of chance. Growth towards vocational choice is apparently integrated with other aspects of development. Also, choices come in sequences. A person may find it impossible to make a later one if he has not settled the earlier ones. There are periods of indecision even indifference which run through the whole developmental process. Long periods of time may intervene between steps towards vocational maturity.

Even though it is assumed on the basis of present evidence that indecision increases in midadolescence before final vocational choices are made it is still not known why some individuals have reached a decision about their occupation and others have not at a given age level. The tendency to have a vocational preference is associated with age but of course not merely as a product of maturation, and certainly not entirely as a result of efforts and deliberate teaching. In other words, how can we account for the fact that there are individual differences in indecision which are not a function of age.

There may be at least four factors which may produce a state of vocational indecision in an individual.

First, influences emanating from family and friends. Leona Tyler cites an example of a boy whose mother wants him to be a minister, but who has become weakened in his faith. He doesn't want to disappoint his mother but he also doesn't want to enter the ministry, as a result he remains undecided.

Second, aspects of occupational role one plays. An occupation may have both desirable and undesirable features such as an army chaplain which combines authoritarian and altruistic role expectations. An individual considering such an occupation may be in a quandary because he is both attracted to it and repelled by it.

Third, equi-potentiality. An individual may be fitted for several different occupations and find it difficult to choose from among them. The problem involved in this case is one of the in-

dividual's inability or unwillingness to make negative decisions and thus limits the development of his potentialities to one area.

And fourth, limitations imposed by circumstances. Sometimes in decision will arise because reality prevents the implementation of a plan and no other alternative course of action can be formulated.

The next point to consider is unrealism in vocational choice. Unrealism in vocational choice means that the occupation which the individual has selected is not consistent with either his aptitude or his interests. Three problems of unrealism were identified and defined earlier. The first and most common of these is the problem of the unrealistic individual who chooses an occupation which requires a greater degree of aptitude for its successful performance than he possesses, despite the fact that his interests agree with his choice. A typical example is the person who has mechanical scientific interests and who wants to become an engineer but who has ability only sufficient to succeed as a draftsman. The second type of unrealism problem is that of the unfilled individual who in contrast to the unrealistic person selects an occupation on a level below that on which he could successfully perform in terms of his aptitude. He is unrealistic because he distorts reality by underestimating what he can actually do. And finally, there is a third kind of unrealism problem which characterizes the coerced individual whose choice is consistent with his aptitude level but not with his field of interest. Usually in this case, the choice reflects the aspirations and wishes of the parents, or less frequently results from the individual's lack of awareness of his interests. Here are some factors to account for unrealism in career choosing.

First, it appears that there are several different origins of unrealistic choices which can be classified into the following three categories (a) influence of teachers or other members of the school staff (b) influence of the family and (c) influence of individual psychological factors. Most unrealistic choices are the result of not one but several influences which have a combined effect upon the individual's decision making.

Second, a factor which is often overlooked as a possible source of unrealism in choice is what is called status anxiety. This is the feeling of apprehension and uncertainty that an individual experiences about his socio-economic status and which motivates him to improve his position in society. Because of an individual's status anxiety occupational goals may be selected which are uncongenial to basic interests or fundamental aptitudes and even the essential personality structure.

Third, a closely related factor to choice unrealism is the individual's ego involvement in his career goal and consequent reluctance to change his objective even though it may not be the one for which he is best fitted. How difficult it is sometimes, for a person to give up an unrealistic course of action because it is threatening to the ego to admit errors in judgment, particularly when others know the decision which has been made. A high school

senior, for example, found that he did excellent work in mathematics and science courses and consequently told his parents and friends that he had decided to become a nuclear physicist. In college however, he did much better in his non-science courses than physics. When he was advised to change his major he found it difficult to give up his original plan. He could hear himself say, I am going to be a nuclear physicist. His mother's voice spoke with pride, John is going to be a great scientist. Father's voice at Rotary Club said, John is going to the University to work on the atom smasher. Not until he had to leave college as a result of low grades in his science courses was he able to face the unrealistic nature of his vocational choice, and change it to a more appropriate field.

APPENDIX XII

ANALYSES OF COVARIANCE AND VARIANCE ON DEPENDENT MEASURES

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TABLE A
ANALYSIS OF VARIANCE OF VOCATIONAL EXPLORATORY BEHAVIOR

Measure	Source	df	MS	F
Frequency	Between groups	4	105.86	4.37**
	Within groups	27	24.21	
Variety	Between groups	4	21.90	7.26**
	Within groups	27	3.01	

** $p < .01$

TABLE B

ANALYSES OF COVARIANCE ON SELF REPORT AND PROBLEM SOLVING MEASURES

Measure	Source	df	MS	F
IPAT Anxiety	Between groups	4	61.04	1.76
	Within groups	26	30.29	
IADM	Between groups	4	22.18	.40
	Within groups	26	55.98	
DDC	Between groups	4	332.11	.56
	Within groups	26	595.25	
Individual Decision Difficulty	Between groups	4	6.61	1.34
	Within groups	26	4.97	
Problem Solving Test	Between groups	4	12.31	6.06**
	Within groups	26	2.04	
Test of Vocational Standing	Between groups	4	11.11	2.10
	Within groups	26	4.77	

** p < .01

TABLE C

ANALYSIS OF COVARIANCE ON PROBLEM SOLVING SUBTESTS

Measure	Source	df	MS	F
(i) Informa- tion Gathering	Between groups	4	91.89	13.88***
	Within groups	26	6.62	
(ii) Generat- ing Alter- natives	Between groups	4	28.71	3.28*
	Within groups	26	8.76	
(iii) Choice Behavior	Between groups	4	193.69	1.05
	Within groups	26	117.37	

* $p < .05$ *** $p < .001$

APPENDIX XIII

A POSTERIORI ANALYSES BY DUNCAN'S TEST

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TABLE A

DUNCAN'S TEST APPLIED TO DIFFERENCES BETWEEN
MEAN SCORES OF FREQUENCY OF VOCATIONAL EXPLORATORY BEHAVIOR

Groups		D	PST	NT	AMT	CT
	Means	2.86	3.50	5.00	7.71	13.00
D	2.86		.61	2.14	4.85	10.14**
PST	3.50			1.50	4.21	9.50**
NT	5.00				2.71	8.00*
AMT	7.71					5.29
CT	13.00					

Note: critical ranges: $w_2 = 7.69$, $w_3 = 8.04$, $w_4 = 8.23$, $w_5 = 8.41$
** $p < .01$

critical ranges: $w_2 = 5.69$, $w_3 = 5.95$, $w_4 = 6.14$, $w_5 = 6.28$
* $p < .05$

TABLE B

DUNCAN'S TEST APPLIED TO DIFFERENCES BETWEEN
MEAN SCORES OF VARIETY OF VOCATIONAL EXPLORATORY BEHAVIOR

Groups	PST	D	NT	AMT	CT
Means	2.33	2.57	3.50	5.00	6.83
PST	2.33	.24	1.17	2.67*	4.50**
D	2.57		.93	1.43	4.26**
NT	3.50			1.50	3.33**
AMT	5.00				1.83
CT	5.83				

Note: critical ranges: $w_2 = 2.71$, $w_3 = 2.84$, $w_4 = 2.90$, $w_5 = 2.97$

** $p < .01$

critical ranges: $w_2 = 2.01$, $w_3 = 2.11$, $w_4 = 2.16$, $w_5 = 2.21$

* $p < .05$

TABLE C

DUNCAN'S TEST APPLIED TO DIFFERENCES
BETWEEN MEANS SCORES (\bar{x}) OBTAINED
ON THE PROBLEM SOLVING TEST

Groups	NT	D	AMT	PST	CT
Means	-2.0650	-0.6554	-0.0997	0.4669	2.26
NT	-2.0650	1.41**	1.97**	2.53**	4.33**
D	-0.6554		0.56	1.12*	2.92**
AMT	-0.0997			0.57	2.36**
PST	0.4669				1.97**
CT	2.2605				

Note: critical ranges: $w_2 = 1.26$, $w_3 = 1.32$, $w_4 = 1.35$, $w_5 = 1.38$
** $p < .01$

critical ranges: $w_2 = 0.93$, $w_3 = 0.98$, $w_4 = 1.01$, $w_5 = 1.03$
* $p < .05$

TABLE D

DUNCAN'S TEST APPLIED TO DIFFERENCES BETWEEN
MEAN SCORES OBTAINED ON PROBLEM SOLVING SUBTEST
(I): GATHERING INFORMATION

Groups	NT	D	AMT	CT	PST
Means	27.45	33.24	35.23	38.07	38.26
NT	27.45	5.79**	7.78**	10.62**	5.02**
D	33.24		1.99	4.83**	5.02**
AMT	35.23			2.84	3.03**
CT	38.07				.19
PST	38.26				

Note: critical ranges: $w_2 = 4.02, w_3 = 4.2, w_4 = 4.31, w_5 = 4.40$
** $p < .01$

critical ranges: $w_2 = 2.98, w_3 = 3.13, w_4 = 3.21, w_5 = 3.28$
* $p < .05$

TABLE E

DUNCAN'S TEST APPLIED TO DIFFERENCES BETWEEN
 MEAN SCORES OBTAINED ON PROBLEM SOLVING SUBTEST
 (II): GENERATING ALTERNATIVES

Groups	D	NT	AMT	PST	CT
Means	6.36	7.55	9.50	10.52	11.60
D	6.36	1.19	3.14	4.16*	5.24**
NT	7.55		1.95	2.97	4.05*
AMT	9.50			1.02	2.10
PST	10.52				1.08
CT	11.60				

Note: critical ranges: $w_2 = 4.62$, $w_3 = 4.83$, $w_4 = 4.95$, $w_5 = 5.05$
 ** $p < .01$

critical ranges: $w_2 = 3.52$, $w_3 = 3.60$, $w_4 = 3.69$, $w_5 = 3.77$
 * $p < .05$

APPENDIX XIV

TREATMENT MEANS AND STANDARD DEVIATIONS

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TABLE A

MEAN SCORES OF VOCATIONAL EXPLORATORY BEHAVIOR

Treatment group	Vocational Exploratory Behavior			
	Frequency		Variety	
	M	SD	M	SD
AMT	7.71	4.38	5.00	1.29
PST	3.5	1.22	2.33	1.03
CT	13.00	9.59	6.83	1.94
D	2.86	2.79	2.57	2.37
NT	5.00	2.19	3.50	1.64

TABLE B

MEANS SCORES ON PROBLEM-SOLVING AND VOCATIONAL STANDING TEST

Treatment	Measure			
	Problem-solving Test		Test of Vocational Standing	
	Pre	Post	Pre	Post
AMT	<u>-.3455</u> <u>.75</u>	<u>-.1362</u> <u>1.81</u>	<u>14.71</u> <u>2.69</u>	<u>17.71</u> <u>2.06</u>
PST	<u>-1.0516</u> <u>.89</u>	<u>.2254</u> <u>1.00</u>	<u>16.83</u> <u>2.23</u>	<u>17.50</u> <u>2.43</u>
CT	<u>-1.3993</u> <u>2.89</u>	<u>1.9180</u> <u>1.10</u>	<u>14.16</u> <u>3.31</u>	<u>18.66</u> <u>2.58</u>
D	<u>.9006</u> <u>.66</u>	<u>-.3300</u> <u>1.19</u>	<u>19.42</u> <u>3.51</u>	<u>17.71</u> <u>2.06</u>
NT	<u>.6301</u> <u>2.24</u>	<u>-1.8182</u> <u>2.01</u>	<u>16.83</u> <u>3.43</u>	<u>17.67</u> <u>4.59</u>

Note: Means are indicated above standard deviations, which are underlined.

Problem-Solving Test means are expressed as z-scores.

TABLE C

MEAN SCORES ON ANXIETY AND DECISION-DIFFICULTY SCALES

Treatment group	Scale											
	IPAT Anxiety		IADM		DDC		Post		Pre		Individual Decision Difficulty	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
AMT	38.71	39.86	50.43	46.00	155.86	153.29	16.57	11.43	16.57	11.43	5.65	3.41
	<u>12.91</u>	<u>11.68</u>	<u>9.43</u>	<u>12.95</u>	<u>15.93</u>	<u>25.12</u>	<u>5.65</u>	<u>3.41</u>	<u>5.65</u>	<u>3.41</u>	<u>5.65</u>	<u>3.41</u>
PST	26.50	28.33	42.00	37.33	134.17	127.00	12.50	8.67	12.50	8.67	2.88	2.73
	<u>2.71</u>	<u>11.41</u>	<u>2.06</u>	<u>10.29</u>	<u>15.38</u>	<u>17.40</u>	<u>2.88</u>	<u>2.73</u>	<u>2.88</u>	<u>2.73</u>	<u>2.88</u>	<u>2.73</u>
GT	36.33	35.50	54.67	51.83	160.33	144.00	16.17	14.50	16.17	14.50	4.83	5.65
	<u>17.45</u>	<u>15.14</u>	<u>9.95</u>	<u>8.13</u>	<u>28.97</u>	<u>33.23</u>	<u>4.83</u>	<u>5.65</u>	<u>4.83</u>	<u>5.65</u>	<u>4.83</u>	<u>5.65</u>
D	33.71	27.71	47.14	41.57	153.00	141.14	13.71	10.43	13.71	10.43	5.68	3.31
	<u>11.74</u>	<u>13.31</u>	<u>12.51</u>	<u>9.91</u>	<u>19.97</u>	<u>33.76</u>	<u>5.68</u>	<u>3.31</u>	<u>5.68</u>	<u>3.31</u>	<u>5.68</u>	<u>3.31</u>
NT	40.47	40.17	48.33	43.17	151.33	130.33	11.33	10.00	11.33	10.00	3.56	4.24
	<u>12.68</u>	<u>16.65</u>	<u>11.64</u>	<u>11.84</u>	<u>22.83</u>	<u>34.57</u>	<u>3.56</u>	<u>4.24</u>	<u>3.56</u>	<u>4.24</u>	<u>3.56</u>	<u>4.24</u>

Note: Means are indicated above standard deviations, which are underlined.

MEAN SCORES ON SUBTESTS OF PROBLEM-SOLVING TESTS

Treatment group	Problem-solving subtest					
	(i) Information Gathering		(ii) Generation of Alternatives		(iii) Choice Behavior	
	Pre	Post	Pre	Post	Pre	Post
AMT	31.71 <u>2.14</u>	34.29 <u>2.50</u>	8.57 <u>1.62</u>	9.29 <u>3.40</u>	378.00 <u>9.18</u>	375.14 <u>12.80</u>
PST	30.67 <u>2.07</u>	36.83 <u>1.83</u>	8.00 <u>2.97</u>	10.00 <u>3.52</u>	373.33 <u>12.63</u>	368.83 <u>9.22</u>
CT	32.50 <u>3.89</u>	37.50 <u>3.33</u>	8.17 <u>2.64</u>	11.17 <u>2.93</u>	362.50 <u>29.92</u>	382.83 <u>10.44</u>
D	37.86 <u>3.29</u>	35.14 <u>3.76</u>	8.57 <u>4.47</u>	6.14 <u>2.34</u>	372.71 <u>8.24</u>	378.43 <u>9.95</u>
NT	35.66 <u>2.94</u>	28.33 <u>2.34</u>	11.67 <u>7.32</u>	9.00 <u>5.66</u>	365.33 <u>9.52</u>	371.67 <u>10.46</u>

Note: Means are indicated above standard deviations, which are underlined.

TABLE E
ADJUSTMENT MEANS AND STANDARD ERRORS
FOR FIVE TREATMENT GROUPS¹

MEASURE	AMT	PST	CT	D	NT
Test of Vocational Standing	18.76 <u>.86</u>	17.26 <u>.89</u>	20.05 <u>.94</u>	15.89 <u>.92</u>	17.43 <u>.89</u>
IADM	44.58 <u>2.84</u>	42.21 <u>3.18</u>	47.25 <u>3.17</u>	42.61 <u>2.83</u>	43.31 <u>3.05</u>
IPAT Anxiety	36.56 <u>2.30</u>	26.66 <u>2.58</u>	34.47 <u>2.46</u>	29.18 <u>2.28</u>	35.01 <u>2.51</u>
Individual Decision Difficulty	9.99 <u>.86</u>	10.06 <u>.93</u>	11.95 <u>.97</u>	10.97 <u>.85</u>	12.20 <u>.95</u>
IDC	150.18 <u>9.28</u>	138.23 <u>10.66</u>	137.93 <u>10.17</u>	139.92 <u>9.23</u>	130.22 <u>9.96</u>
Problem-solving test	-.1 <u>.54</u>	+1.47 <u>.60</u>	+2.26 <u>.61</u>	-.66 <u>.57</u>	-2.07 <u>.06</u>
Problem-solving subtests:					
Information	35.23 <u>1.03</u>	38.26 <u>1.17</u>	38.66 <u>1.97</u>	33.24 <u>1.19</u>	27.45 <u>1.10</u>
Generation of Alternatives	9.50 <u>1.12</u>	10.52 <u>1.22</u>	11.60 <u>1.21</u>	6.26 <u>1.12</u>	7.55 <u>1.26</u>
Choice Behavior	374.56 <u>4.21</u>	368.62 <u>4.44</u>	383.48 <u>4.55</u>	378.27 <u>4.10</u>	372.09 <u>4.48</u>

¹Means are indicated above standard errors, which are underlined