

The University of North Carolina  
at Greensboro

JACKSON LIBRARY



CQ

no. 1198

UNIVERSITY ARCHIVES

SHESLOW, DAVID V. Depression in College Students: Analysis of Activity Preference and Comparison of Treatment Approaches. (1974)  
Directed by: Dr. Marilyn T. Erickson. Pp. 75.

The first goal of this study was to determine whether depressed and non-depressed college students could be discriminated on the basis of both the quantity and quality of reported everyday activities. Results of a multivariate discriminant analysis demonstrated that with the inclusion of a large number of activity variables depressed students can be differentiated from non-depressed students.

The second goal of the study was to compare the effectiveness of different therapy techniques in alleviating the reported depression of college students. Two behavioral treatment groups, a Reinforcement Training group which attempted to increase skills in audience behavior and a Programmed Activities group which attempted to directly manipulate the depressed individual's environment into a potentially more reinforcing one, were compared with two other treatment approaches, a Problem Ventilation group, which discussed current personal problems, a Childhood Experiences group which discussed early experiences and depressed and non-depressed No-Treatment control groups on measures of depression and activity preference. Results of the analyses showed that all of the depressed groups reported equivalent reductions in depression at the end of the study. However, the different treatment approaches resulted in

different activity preferences at the termination of treatment. These results were discussed as being consistent with a behavioral view of depression and previous clinical findings.

DEPRESSION IN COLLEGE STUDENTS: ANALYSIS OF  
" ACTIVITY PREFERENCE AND COMPARISON OF  
TREATMENT APPROACHES

by

David V. Sheslow

A Thesis Submitted to  
the Faculty of the Graduate School at  
The University of North Carolina at Greensboro  
in Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts

Greensboro  
1974

Approved by

*Marlynn T. Walden*  
\_\_\_\_\_  
Thesis Adviser

APPROVAL PAGE

This thesis has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

Thesis Adviser Marylyn T. Euckson

Committee Members Rosemary O. Nelson

Ophe M. Pratt

March 5, 1974  
Date of Acceptance by Committee

## ACKNOWLEDGMENTS

I wish to express sincere appreciation to Dr. Marilyn T. Erickson, chairman of this Master's thesis committee, for her aid in planning this research, helpful comments on earlier drafts of this manuscript and stimulating discussions which provided much food for future thought. I would also like to thank Dr. Rosemary O. Nelson for her assistance in training the therapists, critical comments and helpful suggestions both during the research and on reading an earlier draft of this manuscript. To Dr. Robin Pratt for his interest, comments and assistance on statistical analyses. I would like to thank Steven Breckenheimer, Bill Hay and Marc Hays who served as therapists with responsibility, skill and enthusiasm. I would also like to thank Dr. William Powers, of the Mathematics Department, for his complete cooperation and assistance in programming the computer analyses used in this study.

I would further like to acknowledge the influence of Robert Zimmerman and Leonard Cohen who first stimulated my interest in this area of research. To my parents for their guidance and to Susan Corriher, psychology graduate student, for her help in preparing this manuscript.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS . . . . .	iii
LIST OF TABLES . . . . .	vi
CHAPTER	
I. INTRODUCTION . . . . .	1
Review of Related Literature . . . . .	1
Research Questions . . . . .	16
II. METHOD . . . . .	18
Experimental Design . . . . .	18
Subjects . . . . .	19
Dependent Measures . . . . .	19
Experimenters . . . . .	21
Procedures . . . . .	21
Pre-treatment Assessment of Depression . .	21
Assessment of Depression during Treatment .	21
Post-treatment Assessment of Depression . .	22
Treatment Procedures . . . . .	22
III. RESULTS . . . . .	27
Pre-Treatment Assessment of Activity Checklist . . . . .	27
Post-Treatment Assessment of Depression and Activity Checklist . . . . .	31
Additional Measure of Depression . . . . .	36
IV. DISCUSSION . . . . .	40
Pre-Treatment Assessment of Depression . . .	40
Post-Treatment Assessment of Depression . .	44
V. SUMMARY . . . . .	48
BIBLIOGRAPHY . . . . .	50

457531

APPENDIX A: Test Forms . . . . . 53

APPENDIX B: Manual of Weekly Therapy Procedures . . . . . 67

1. Predicted and obtained Case Classification Using the Stepwise Discriminant Analysis Following Step 1, Step 12 and Step 24 . . . . .	47
2. $F$ Values for Inclusion and Exclusion and Mean Scores for Each Activity Variable . . . . .	51
3. Mean Scores and Standard Deviations for Pre-Test, Post-Test and Change Scores on the 1000 (Number of Depressed Adjectives) . . . . .	52
4. $F$ Matrix and Predicted and Obtained Case Classification Using the Stepwise Discriminant Analysis Following Step 12 . . . . .	53
5. $F$ Matrix and Predicted and Obtained Case Classification Using the Stepwise Discriminant Analysis Following Step 24 . . . . .	54
6. Changes in and Direction of Time Allotted Following Breakdown . . . . .	55
7a. ANOVA for Three Factorial Testing System . . . . .	56
7b. ANOVA for Two-Factorial Testing System . . . . .	57



LIST OF TABLES

Table	Page
1. Predicted and Obtained Case Classification Using the Stepwise Discriminant Analysis Following Step 1, Step 19 and Step 28 . . . .	28
2. F Values for Inclusion and Deletion and Mean Scores for Each Activity Variable . . . .	30
3. Mean Scores and Standard Deviations for Pre-Test, Post-Test and Change Scores on the DACL (Number of Depressed Adjectives) .	32
4. F Matrix and Predicted and Obtained Case Classification Using the Stepwise Discriminant Analysis Following Step 27 . . .	33
5. F Matrix and Predicted and Obtained Case Classification Using the Stepwise Discriminant Analysis Following Step 38 . . .	35
6. Changes in the Direction of Time Allotment Following Treatment . . . . .	37
7a. ANOVAs for Three Personal Feeling Scales . . . .	38
7b. ANOVAs for Three Personal Feeling Scales . . . .	39

CHAPTER I  
INTRODUCTION

Depression has been the companion of man throughout his history. Although exact figures are not available, it is probable that about five out of every one hundred adults become significantly depressed at some time in their lives (Mendels, 1970). The fact that the term "depression" is used to describe a subjective mood, a symptom and a syndrome, as well as a specific group of illnesses, has contributed much confusion to the task of definition. Despite the difficulty of definition, depression has been one of the frequent diagnoses made on admission and at discharge for patients in psychiatric units of general hospitals and in private hospitals (Grinker, Miller, Sabshun, Nunn, & Nunnally, 1961).

After reviewing several historical definitions, Beck (1967) states the following attributes in his conceptualization of depression: (1) a specific alteration in mood: sadness, loneliness, apathy, (2) a negative self-concept associated with self-reproaches and self-blame, (3) regressive and self-punitive wishes: desires to escape, hide or die, (4) vegetative changes: anorexia, insomnia, loss of libido, and (5) changes in activity level: retardation or agitation.

Some of the main theoretical approaches will now be reviewed. The main focus of the review, however, will be concerned with a behavioral approach to analyzing depression.

Karl Abraham (1911) made the first attempt to systematically explain manic-depression illness within a psychoanalytic framework. He conceptualized the depressed patient as being dominated by his feelings of loss, guilt, and low self-esteem. Unconscious feelings of hostility toward the lost person (either symbolic or real) become self-directed. Freud (1917) suggested that the withdrawal of love and support by a significant figure during a crucial stage of development predisposes an individual to depression later in life. Freud also believed the depressed person to have suffered a loss, though it might be symbolic and not recognized. Patients who dwell on their own deficiencies and inadequacies are actually expressing unconscious feelings about the lost person. Thus for Freud, depression becomes a narcissistic inner-directed process arising from ambivalence toward the incorporated lost object characterized by a marked oral dependency (exaggerated need for continuous support). Abraham (1911), in citing etiological factors, included (1) an inherited predisposition that fixates the libido at the oral stage, (2) severe injury to infantile narcissism due to successive disappointments in love especially when it occurs prior to the resolution of the Oedipal conflict, and (3) the repetition of these disappointments later in life. Benedek

(1956) also stressed the importance of early oral experiences in causing depression. Lack of oral gratification leads to aggressive impulses which are introjected leading to the equation "bad mother equals bad self."

These psychoanalytic propositions have led to a stereotyped view of depression as being unrelated to variations in the clinical picture. These formulations, stereotyped though they may be, and agreed upon as they are by so many, have never been validated. Despite their universal acceptance by many authors, they are far from applicable to individual cases (Grinker et al., 1961, p. 15). The same concepts used to explain the phenomena of depression by psychoanalysts are also used to explain quite different conditions. For example, the concept of oral fixation has been applied to a diversity of conditions including schizophrenia, alcoholism, and peptic ulcer as well as depression (Beck, 1967). The lack of testable hypotheses and correlated clinical observations renders these psychoanalytic formulations unacceptable to the experimental-clinical tradition.

Beck (1967) believes that certain cognitive patterns are activated in depression which can be explicated by his "primary triad." The first component of the triad is the pattern of construing experiences in a negative way. The second component is viewing the self in a negative way. The final component is viewing the future in a negative

way. As a result of this cognitive triad, the patient perseverates in making negative judgments and misrepresentations. Thus, it is Beck's thesis that if "an individual's conceptualization of a situation has an unpleasant content, he will experience a corresponding unpleasant affective response [Beck, 1967]." Beck's conceptualization is lacking in environmental consideration. It is unclear what exactly activates the cognitive pattern in the depressed individual. It seems that the "activator" of the depression is the resultant distorted outlook. No experimental work exists to demonstrate that cognitive disturbance is the precipitant of depression rather than the influence of environmental contingencies. A study dealing with the relationship between affect and a subject's changing cognitions can illustrate this point. Loeb, Beck, Diggory, and Tuthill (1966; cited in Beck, 1967) had a confederate student inform a classmate that he had failed a final examination. The effect in the subject was feelings of helplessness and discouragement. Verification that the initial information was incorrect led to positive changes in the subject's mood. Although Beck used this study to illustrate the interplay between cognition and affect, a more parsimonious explanation is possible. The report of the failure led to the withdrawal of the reinforcer for studying and test taking behavior. The withdrawal of this reinforcer may have been sufficient to produce a negative mood change.



The reinstatement of the reinforcer (finding out that he did not fail) led to a recovery from the "depression."

In 1965, Ferster proposed a classification of behavior pathology that stressed a functional or dynamic relation of behavior to the controlling environment. Implicit in this classification was the emphasis on antecedent conditions and current maintaining conditions of the behavior. For Ferster, the essential characteristic of the depressed person is the reduced frequency of emitting positively reinforced behavior. The reduction of such behavior may occur when (1) the environment requires a large amount of behavior to produce a significant change in it, (2) aversive stimuli, particularly conditioned aversive stimuli, are present, and (3) the controlling stimulus ( $S^D$ ) of behavior is suddenly removed from the environment. Ferster notes that no one of the processes alone is likely to be responsible for a change in a total repertoire (Ferster, 1966). Ferster proposed an experimental paradigm to study depression. He replaced an experimental female chimp with a new female in an experimental environment and observed the male chimp's behavior. The male now entered the work chamber fewer times and worked for shorter durations when he did enter. His food intake was 80 per cent of normal for several weeks. He and the new female chimp spent their time at opposite ends of the cage, except when he aggressed against

her (Ferster, 1966). In this case, either the removal of a reinforcer or the discriminative stimulus might be seen as antecedent to the chimp's behavior change. In this account, Ferster failed to stress that the occurrence of a reduced frequency in the emission of an organism's behavior is observed concurrently with the acquisition of a class of depressive behaviors through its contact with environmental contingencies.

In a more recent paper dealing with a functional analysis of depression, Ferster (1973) does stress collateral behavior effects of a reduced frequency of some activities in the depressed person's repertoire. He conceptualizes the depressed person's behavioral repertoire as a passive one, derived from prompts, commands, or other aversive initiatives from other persons rather than freely emitted activities. Ferster notes some of the basic behavioral processes (consistent with the clinically reported picture of depression) that may contribute to or reduce the frequency of a person's conduct. These include (1) the loss of reinforcement due to the inability to accurately observe the environment around him (similar to Beck's cognitive distortion explanation), (2) factors that block the cumulative development of a repertoire in infancy and childhood (similar to psychodynamic explanations), (3) schedules of reinforcement influencing ongoing behavior, (4) changes in the actual physical environment

and (5) anger, a frequent reference in clinical descriptions. In this paper, Ferster was innovative in attempting to account for the depressed person's decreased repertoire of adaptive behavior in light of often reported clinical phenomena. However, his theoretical conceptualization suffers in two major areas: (1) the lack of stress placed on a continuum of severity of depression and (2) the lack of experimentally testable hypotheses based on his theoretical position.

Lazarus (1968) hypothesized that the depressed person is virtually on an extinction trial and that depression may be regarded as a function of inadequate or insufficient reinforcers. Basic to the hypothesis was the assumption that some significant reinforcer had been withdrawn. He saw the antecedents of depression as summed up by a simple aphorism; "depression is due to a loss and a lack; loss of health, loss of a loved one, loss of money, loss of status as well as some less obvious factors such as loss of self-esteem and loss of trust [Lazarus, 1972, p. 249]." The resulting non-reinforcing state of affairs may render the person relatively refractory to most stimuli, "causing the individual to enter a state of depression [Lazarus, 1968]." He therefore hypothesizes that the depressed patient needs a different schedule of reinforcement and/or needs a way to recognize and utilize reinforcers at his disposal (Lazarus, 1968).



Lazarus (1968) treated a 23-year-old art student who became acutely depressed when her boy friend reported that he intended to marry one of her classmates. After compiling a list of reinforcers that were effective prior to the lost relationship, he induced a hypnotic trance (although he notes hypnosis is often not necessary) and used the technique of time projection with positive reinforcement. This technique, in effect, advances the client forward in time, through imagery, emphasizing all of the positive activities possible in this time sequence. The client then hopefully "looks back" on the present time with a change of affect. "Once a patient can imagine himself sufficiently freed from his oppressive inertia to engage in some enjoyable (or formerly enjoyable) activity, a lifting of depressive affect is often apparent. This may be sustained by insuring that the patient thereupon experiences actual rewarding experiences [Lazarus, 1968, p. 88]."

Another technique Lazarus (1968) found useful in the treatment of depression, is behavioral deprivation and re-training. Lazarus believes that a period of deliberate or enforced "sensory deprivation" and inertia may render the depressed individual more susceptible to incoming stimuli so that potentially reinforcing events may once again become effective (Lazarus, 1968).

Patterson and Rosenberry (1969), in keeping with social learning theory, have described depression as having two general components: a reduced rate of the individual's typical behaviors and its increased accompanying statements about dysphoric mood produced by a reduction in the individual's supply of positive reinforcement. To account for differences in the severity and duration of the depression, two further interrelated assumptions were introduced. The first assumed individual differences in the number of reinforcement "dispensers" available to the individual. The second assumed that it is the relative decrease in reinforcement which determines whether the decrease will lead to a prolonged depression (Patterson & Rosenberry, 1969, p. 3). Additionally, Patterson and Rosenberry (1969) see the depressed individual as having limited skill as a dispenser of reinforcement for the behavior of others and is likely to have "a full repertoire of social behaviors that other people find mildly aversive." This hypothesis was supported by Rosenberry (1968) who showed that subjects scoring high on a self-report measure of depression tended to be less skilled on a laboratory measure of skill of reinforcing other people. Patterson and Rosenberry (1969) conceptualize the ineptitude of the depressed individual's social reinforcing skill and the emission of aversive behaviors as leading to a situation in which these persons must obtain their total supply of

reinforcement from a minimal number of interactions with a limited number of people. Minor variation in either of these two areas should lead to a major reinforcement deprivation for the individual.

Patterson and Rosenberry (1969) illustrate their social learning model with a case study of a 25-year-old first year graduate student who exhibited a pattern of depressive episodes since his fourth grade. Aside from his wife, he reported having only one close friend. Due to school difficulties, he allowed little time for recreational activities and spent much of his time, depressed, in bed, sleeping or ruminating about his problems. Interviews and home observations yielded data that suggested that the focus of treatment should concern modifying his work skills and pattern of social interaction. The first problem was approached through a combination of procedures: (1) reducing his course load, (2) instituting a remedial reading program and (3) training in "attending" behaviors for studying. Further assessment was undertaken by counting the number and duration of interpersonal contacts. These data showed a low rate of interpersonal interaction. From home observations, it was noted that "almost any topic would send him off in a frantic search for details." He had very little of interest to talk about because he seldom did anything he enjoyed. The second treatment procedure concerned the discussion and role playing of alternative

means of interacting. A program of assertive training was also instituted to aid in the teaching of appropriate social behaviors.

The client showed a decided alleviation of depression, although his moving out of the area caused premature termination of treatment. There was a dramatic change in the quality of home interactions (as rated through a coded interaction sheet) as well as significantly positive changes on the Wessman and Ricks (1966) mood scales. These findings were supported by his wife's ratings on the same scales.

Lewinsohn, Shaffer, and Libet (1969) list four assumptions underlying their behaviorally oriented approach to depression: (1) a low rate of positive reinforcement acts as an eliciting stimulus for some depressive behaviors such as statements of dysphoric mood, fatigue, and other somatic complaints, (2) a number of different environmental events, loss through death, separation, rejection, poverty, and misfortunes as well as organismic traits and states, e.g., lack of social skills and ignorance, are presumed to be causally related to a state of low positive reinforcement. Social skill, defined as the emission of behaviors which are positively reinforced by others, is an area of deficit especially important in the development of depressive behavior, (3) a low rate of positive reinforcement constitutes a sufficient explanation for other parts of the

depressive syndrome, such as the low rate of activity and verbal statements,(4) the social environment provides reinforcement in the form of sympathy, interest and concern which strengthens and maintains depressive behaviors. These reinforcers are typically provided by a small segment of the depressed person's social environment, e.g., his immediate family (Lewinsohn et al., 1969, p. 4). He presents observational data from coded interactions of depressed and non-depressed subjects that show depressed subjects emitting fewer interactions as well as receiving fewer interactions directed toward them (Lewinsohn et al., 1969). Additional coded observations from case studies (Lewinsohn & Atwood, 1969; Lewinsohn & Shaw, 1969) show imbalanced patterns of interaction in the dyadic marriage relationship of depressed individuals and their spouses.

Lewinsohn and Atwood (1969) report a case study of Mrs. G. who displayed a wide range of complaints including feeling fatigued and ill, imagining her children in mortal danger, feeling no love for her husband, etc. Coded home observations revealed that Mrs. G. initiated many interchanges with others, but that others initiated few interchanges with her. Additionally, most of the topics of conversation centered around food, the children's school, the dog, and the children's clothing, all of which appeared to have little intrinsic interest to either Mr. or Mrs. G. Therapy proceeded initially by pointing out and modifying



the patterns of communication in the marriage relationship. Mrs. G. was instructed to structure enjoyable activities for herself such as seeing friends in the mornings, swimming in the afternoon, etc. A short time following improvement, Mrs. G. suffered a relapse causing a deterioration in her marriage and return of her previous symptoms. This relapse was treated by instructing both Mr. and Mrs. G. in methods of reinforcing each other and reinstating their previous sexual harmony. At the end of the three month therapy limit, Mrs. G. had generally fulfilled her pre-set therapy goals and showed dramatic improvement on her MMPI profile and the Grinker Feelings and Concern checklist.

Burgess's (1969) treatment procedure for depression is dependent on the quality of reinforcement loss. If there is a loss of a specific reinforcer, efforts to reinstate it are undertaken. If the reinforcement loss is more generalized or nonspecific, the client is required to emit a few behaviors which require minimal effort for successful completion. According to Burgess (1969), depressed individuals undertake tasks which they often fail to complete. Therefore, in order to obtain reinforcement for task completion, it is important to select simple easily executed behaviors for which the probability of completion is high. In a hierarchial fashion, task requirements are accelerated in frequency, duration, and quality.

Burgess (1969) reports treating a case of depression through reinstatement of past reinforcers. The client was a 21-year-old mathematics major who sought treatment for persistent suicidal thoughts. A complete assessment revealed that he was lacking in one of his prime reinforcers, self-satisfaction for academic pursuits. The therapeutic plan of picking the brightest student in the class with whom to study and socialize was sufficient to relieve the depression.

In another case, Burgess (1969) reports treating a 26-year-old married graduate student whose depression onset coincided with his first post-graduate employment. As a result of overestimating his abilities, he became increasingly less able to perform his work without assistance and viewed this inability as failure. The treatment strategy centered around task planning, starting with such easily accomplished behaviors as making a telephone call, mowing the lawn, or drying the dishes. As the tasks became increasingly more complicated, the client's wife was taught to reinforce completed performances with attention and praise and to extinguish depressive behaviors with inattention.

Lewinsohn and Libet (1972) have underscored the importance of the relationship between mood and the number of pleasant activities engaged in. Depressed and control subjects completed for 30 days an activity schedule of 160 individual items taken from the Pleasant Events Schedule

(MacPhillamy & Lewinsohn, 1971). Concomitantly, these subjects filled out the Depression Adjective Checklists (Lubin, 1965). The results indicated a significant correlation between mood and pleasant activities engaged in on the same day. The empirical question of whether an individual's mood is more strongly associated with involvement in prior activities as opposed to subsequent activities awaits further experimental investigation (Lewinsohn & Libet, 1972).

Recently, Costello (1972) has put forth an alternative hypothesis to explain depression within a behavioral framework. For him, depression results when there is a general loss of reinforcer effectiveness. He suggests that this loss of reinforcer effectiveness is due to (1) endogenous biochemical and neurophysiological changes and/or (2) the disruption of a chain of behavior, one kind of disruption being the loss of one of the reinforcers in the chain. He proposed that reinforcer effectiveness of all components of the chain of behavior is contingent upon the completion of the chain at either an overt or covert level (Costello, 1972, p. 241). Lazarus (1972) notes that using a "general loss of reinforcer effectiveness" explanation to point out the fact that stimuli, to which the depressed individual was formerly responsive, no longer have any effect, neither explains the phenomena nor generates a logical treatment modality. For Lazarus, the



logical treatment based on his etiological hypothesis of a "loss and a lack" is to give the depressed person the wherewithal to reassemble his reinforcement sources (Lazarus, 1972). Costello (1972) believes this strategy will meet with limited success because the general loss of reinforcer effectiveness leaves no available reinforcers.

Experimental verification of the behavioral hypotheses cited above is as yet missing from the literature. Acceptance of any of the behavioral formulations of depression has been based solely on theoretical consistencies and results from case studies (Lewinsohn, Weinstein, & Shaw, 1969; Burgess, 1969).

The purpose of the present study is twofold. The initial part of this study will attempt to differentiate depressed and non-depressed college students on the basis of both the quantity and quality of activities engaged in over a six-day period. In addition, differentiation of these groups on the basis of response classes will be investigated.

The second part of the present study will compare different therapy techniques in treating depression. The effectiveness of two behavioral treatment methods will be compared with that of two other treatment approaches as well as no-treatment control procedures. The first behavioral program will teach reinforcement techniques to a group of depressed subjects in order to increase their skills in audience behaviors. This group, then will

indirectly test the hypothesis of the lack of social skills in depressed subjects (Lewinsohn et al., 1969; Patterson & Rosenberry, 1969). The second method will program activities for depressed subjects in order to assess the possibility of directly manipulating the depressed individual's environment into a potentially more reinforcing one. This group will serve as an indirect test of Costello's (1972) proposition of a general lack of reinforcement effectiveness. These experimental groups will be compared with a problem ventilation group which will discuss present problems, a group which will discuss childhood experiences, a depressed no-treatment control group, and a non-depressed no-treatment control group on measures of depression and activity preference.

## CHAPTER II

## METHOD

Experimental Design

The initial part of the study concerned the comparison of both depressed and non-depressed subjects (Ss) on their activity preferences. Twenty Ss with the highest scores on the Depression Adjective Checklists (DACL) (Lubin, 1965) served as the experimental group. Twenty additional Ss randomly selected from the remaining DACL scores formed the non-depressed group in this segment. The Activity Checklist (AC) was constructed by the author to yield information regarding both the quantity and quality of activity preference over a six day interval.

The second part of the study concerned the analysis of both activity preference and self-reported depression following treatment procedures. Forty-five students with the highest scores on the DACL, who agreed to participate, were assigned to four treatment groups and a no-treatment control group according to a within-sample matching procedure (Goldstein, Heller, & Sechrest, 1966). Nine additional Ss, randomly selected from the control group in the initial part of the study served as the non-depressed control group. Groups were compared on change scores on

the AC, DACL and the Personal Feelings Scales (PFS) (Wessman & Ricks, 1966).

### Subjects

The subjects of this study were 54 female undergraduates selected from 400 students enrolled in the Introductory Psychology class at the University of North Carolina at Greensboro who were required to participate in one experiment to fulfill the course requirement. All 400 students were asked to complete both an Activities Checklist constructed by the author and the Depression Adjective Checklist during the lecture period. Students with a history of psychotherapy or hospitalization for any emotional disorder were excluded from participating in the experiment.

### Dependent Measures

An Activity Checklist (See Appendix A for test forms) was constructed by the author from a large pool of activities in which college students ordinarily participate. A total of thirty-nine activities was included in this checklist. Ss were required to estimate, as closely as possible, the amount of time spent engaging in these activities, either alone or with other people, for the preceding three days. The AC was administered on both Monday and Friday of the same week in order to eliminate

variance due to differential activity preference for weekends and week days.

Along with each administration of the AC, two different lists of the Depression Adjective Checklists (Lubin, 1965; Lewinsohn & Atwood, 1969) were administered. Lists A and B were administered on Monday and lists C and D were administered on Friday in order to minimize the effects of daily mood fluctuations and mood changes due to menstrual cycles. Lists A, B, C, and D were chosen because these lists consist of non-overlapping items and were originally item-analyzed on a female population. Each list contains 12 positive adjectives and 20 negative adjectives. High intercorrelations between these lists suggest the possibility that they are equivalent.

Six of the 16 Personal Feelings Scales (Wessman & Ricks, 1966; Patterson & Rosenberry, 1969) were used as an additional measure of mood change during treatment. The PFS were used to rate daily mood changes on a ten point continuum with one being the most negative. The six scales chosen were considered to yield the most information regarding the hypotheses investigated in this study. The six scales chosen were: Fullness vs. Emptiness in Life, Receptivity toward and Stimulation by the World, Own Sociability vs. Withdrawal, Companionship vs. Being Isolated, Energy vs. Fatigue, and Elation vs. Depression.

### Experimenters

Three first year graduate students served as Experimenters (Es). All of the Es had approximately equal academic experience and were enrolled in a Behavior Modification practicum seminar during the course of this study. Each E met with one discussion group of each of the four treatment conditions weekly. Es were not informed about the hypotheses being investigated in this study.

### Procedures

#### Pre-treatment Assessment of Depression

The AC was administered to all enrolled students in the Introductory Psychology class on both Monday and Friday of the same week in order to eliminate variance due to differential activity preference for weekends and weekdays. Ss were required to estimate the amount of time spent engaging in these activities, either alone or with other people, for the preceding three days.

Along with each administration of the AC, two different lists of the Depression Adjective Checklists were administered. Ss were instructed to check all of the adjectives that applied to the way they felt at the time the DACL was administered.

#### Assessment of Depression During Treatment

All Ss selected to participate in therapy and the no-treatment control groups were asked to complete six of



the sixteen Personal Feelings Scales (Wessman & Ricks, 1966) each day for the six weeks duration of the experiment. Ss were required to hand in their daily ratings on these scales once a week for the duration of the experiment. In order not to divulge the nature or intent of the study, these checklists were entitled "The College Feeling Scales." Two additional confederate scales, College Experience and College Work, were also included in each S's daily ratings to insure nondisclosure of the nature of the study.

#### Post-treatment Assessment of Depression

All Ss selected for this study as well as the other students enrolled in the Introductory Psychology class received post-treatment administration of both the AC and the DACL eight weeks after the pre-treatment administration. This evaluation occurred on the Monday and Friday following the termination of treatment procedures and was conducted in the Introductory Psychology class in a manner similar to the pre-treatment evaluation. Absentees were contacted the following week. After completion of the post-treatment assessment, Ss were informed as to the nature of the study.

#### Treatment Procedures

The initial part of the study was designed to investigate the hypothesis that Ss who rate themselves high on a self-report measure of depression show differential activity preference compared to a non-depressed control

group. The Activities Checklist was designed to yield information regarding this hypothesis. All Ss were instructed to estimate as carefully as possible the number of hours spent engaging in the activities listed on the AC for the preceding three days. Data used in this part of the study were gathered from the two pre-treatment administrations of the AC and the DACL.

The second part of this study was designed to show the effects of different therapy approaches on measures of activity and depression. All treatment groups received one weekly session lasting 45 minutes for a total of six weeks. In addition, each S was required to complete a brief homework assignment pertinent to her specified group. Ss were uninformed as to the nature of the study or criteria for participation, as well as any possible therapeutic effects of participating in the discussion groups. Participating Ss were told they were taking part in a study "to evaluate the effects of small discussion groups on the college experience."

Ss were divided into small groups ( $n = 3$  per group) in order to facilitate the discussions. Ss were randomly assigned (with few exceptions due to schedule conflicts) to the small groups using a within-subjects matching procedure (Goldstein, Heller, & Sechrest, 1966).

Each therapy session was devoted to the specific discussions and activities designed for each group, the



collection of weekly homework data, and the discussion of homework assignments. A manual consisting of the topics, questions, and procedures utilized each week was given to each E in order to equalize the content of each treatment group weekly (see Appendix B). Two behavioral treatment groups, Reinforcement Training and Programmed Activities, were compared to two other treatment approaches, a Problem Ventilation group, a Childhood Experiences group and a Depressed and Non-Depressed no-treatment control group.

#### Reinforcement Training Group (RT)

Ss in this group received training in reinforcement techniques. This training included instruction in non-verbal communication, grooming, appropriate audience behavior, assertive training, methods of reinforcing directed behavior, emitting behavior reinforced by others, and initiating and maintaining conversations. This group completed homework assignments based on each week's discussion.

#### Programmed Activities Group (PA)

Ss in this group were required to construct three activity preference lists. The topic headings for the lists were: (1) Required Activities List (RAL), (2) Personal Recreational Activities List (PRAL), and (3) Social Activities List (SAL). Each S in this group was required to engage in an increasing number of activities weekly,

selected from these lists, as a homework assignment. The number of activities to be completed each week increased in an arithmetic progression. In this hierarchical fashion, Ss chose activities initially from the RAL, then from both the RAL and the PRAL, and finally from all three lists. This procedure was designed to optimize the completion of these activities and hence maximize the possibility of obtaining reinforcement for engaging in these activities. The effects of engaging in these and associated activities were discussed weekly.

#### Problem Ventilation Group (PV)

Ss in this group participated in discussions concerning their present problems. The Es reinforced dysphoric statements about present problems with statements designed to show sympathy and understanding.<sup>1</sup> The homework assignment for this group involved writing either a brief account of a problem or situation that caused these Ss to be depressed. Group discussions centered around these assignments.

#### Childhood Experience Group (CE-Placebo Control)

The discussions in this group were centered around early childhood experience judged by the author to be irrelevant to the variables under investigation. These

---

<sup>1</sup>Although some of the techniques used in the non-behavioral treatment groups might resemble techniques used in other therapy approaches, it was not intended to imply that these groups were receiving standard psychotherapy by an alternative established school of thought.

discussions were concerned with early parent-child relationships, grade school experiences, childhood friends, early religious and ethical training, siblings or the effects of being an only child and early influences on later life. Homework assignments concerned writing a brief account of the topic to be covered the following week.

No-treatment Control Group (Depressed) (NT-D)

No-treatment Control Group (Non-depressed) (NT-nD)

The requirements for both no-treatment groups were exclusively to complete and hand in the PFS once a week for the six weeks of the study. A specific place and time were designated to insure confidentiality

## CHAPTER III

## RESULTS

Pre-Treatment Assessment of Activity Checklist

The initial purpose of the study was to investigate the quantity and quality of activities engaged in by both depressed and non-depressed college students. Twenty Ss with the highest ratings on the DACL formed the experimental group. Twenty other Ss randomly selected from the remaining DACL scores served as the control group. A Stepwise Discriminant Analysis was performed on the total Activity Checklist (the sum of the two separate pre-treatment administrations) by the Biomedical Computer Program, program number BM9-07M. This program provided a multiple group discrimination analysis on the thirty-nine variables of the AC. In the analysis, variables are added one at a time beginning with the variables which maximally discriminate between the groups. If at any time a variable duplicates the information already provided by the previous variables included, the F value falls below the cutoff value and is deleted from the analysis. Values for inclusion were  $F > 1.0$  and for deletion  $F < 0.99$ .

As can be noted from Table 1, the inclusion of the first variable discriminated between groups ( $F = 6.78$ ,  $df = 1/38$ ) at the .05 level of significance. However,

Table 1

Predicted and Obtained Case Classification Using  
the Stepwise Discriminant Analysis Following  
Step 1, Step 19 and Step 28

---



---

Predicted and Obtained Case Classification Following Step 1  
( $F = 6.75$ ,  $df = 1/38$ ,  $p < .05$ )

	experimental		control	
	predicted	obtained	predicted	obtained
experimental	20	15	0	5
control	0	11	20	9

---

Predicted and Obtained Case Classification Following Step 19  
( $F = 6.06$ ,  $df = 15/24$ ,  $p < .001$ )

	experimental		control	
	predicted	obtained	predicted	obtained
experimental	20	20	0	0
control	0	0	20	20

---

Predicted and Obtained Case Classification Following Step 28  
( $F = 7.28$ ,  $df = 20/19$ ,  $p < .001$ )

	experimental		control	
	predicted	obtained	predicted	obtained
experimental	20	20	0	0
control	0	0	20	20

---

accurate classification of Ss into the appropriate groups was incomplete. With the inclusion of the nineteenth variable, a perfect classification of all Ss into their respective groups was accomplished ( $F = 7.28$ ,  $df = 15/24$ ,  $p < .001$ ). The addition of further variables (step 28) served to maintain the discrimination between the experimental and control groups ( $F = 7.28$ ,  $df = 20/19$ ,  $p < .001$ ).

Table 2 shows the  $F$  values for inclusions and deletions in the analysis and the mean scores for each activity variable. It can be seen that among the initial nineteen variables, the depressed group showed higher means for five of the seven activity variables which involved interacting with others and lower means on seven of the nine activity variables performed alone.

One-way univariate ANOVAs were then performed on the thirty-nine dependent variables on the AC. The results of these analyses showed that the experimental group ate alone less often ( $F = 6.78$ ,  $df = 1/38$ ,  $p < .05$ ), ate with others more often ( $F = 4.53$ ,  $df = 1/38$ ,  $p < .05$ ) and engaged in athletics alone less often ( $F = 6.40$ ,  $df = 1/38$ ,  $p < .05$ ) than controls. All other ANOVAs failed to reach significance.

A multivariate ANOVA performed on the four selected response classes, Required Activities Alone, Required Activities with Others, Optional Activities Alone and Optional Activities with Others failed to reach significance ( $F = .05$ ,  $df = 4/30$ ).



Table 2

F Values for Inclusion and Deletion and Mean Scores for Each Activity Variable

Step No.	Variables Entered	Removed	Mean # Hrs./6 Days Experimental	Mean # Hrs./6 Days Control	F Values to Enter or Delete
1	Eating/A		0.41	1.52	6.78
2	Sleeping		43.79	46.14	4.48
3	Reading				
	Pleasure/O		0.62	0.15	2.70
4	Watching				
	TV/A		0.75	1.67	4.38
5	Reading				
	School/O		1.37	2.85	3.33
6	Athletics/A		0.00	0.54	4.32
7		Eating/A			0.57
8	Writing				
	Letters		1.57	1.31	2.89
9	Volunteer				
	Work/O		0.97	0.00	2.43
10	Religion/A		0.78	0.94	3.34
11	Volunteer				
	Work/A		1.57	0.40	1.92
12	Athletics/O		1.17	1.07	2.10
13	House				
	Chores/A		1.90	2.65	2.06
14	Salaried				
	Work/O		1.40	2.39	1.44
15	Driving/A		0.86	1.09	4.00
16		Religion/A			0.87
17	Attending				
	Class		12.75	11.89	2.69
18	Shopping/O		2.29	1.52	2.73
19	Movies/O		1.90	0.95	1.71
20	TV/O		6.46	5.90	1.85
21		TV/A			0.40
22	Talking		23.20	21.43	2.72
23	Eating/A				3.19
24	Religion/O		1.57	1.25	2.15
25	Drugs/A		0.00	0.05	1.60
26	Shopping/A		0.47	0.60	1.78
27	Other				
	Activ./O		0.17	0.50	1.34
28		Religion/O	0.78	0.94	0.94

A--alone

O--with others

Post-Treatment Assessment of Depression and Activity Checklist

In order to assess the effectiveness of the treatment procedures, the difference between pre- and post-treatment measures of depression and activity preference were determined for each S. Means and standard deviation scores for pre-test, post-test and change scores on the Depression Adjective Checklists are presented in Table 3. Inspection of the data suggests that all groups, regardless of treatment, reported less depression as measured by this device. Two Ss, both from the PV group, terminated therapy before completion of the study. A one-way ANOVA for unequal n's performed on DACL change scores failed to reach significance ( $F = 0.37$ ,  $df = 4/38$ ). The non-depressed no-treatment group showed an increase of 6.89 depressed adjectives on the post-test DACL.

A Stepwise Discriminant Analysis was also performed on the change scores of the activity variables on the AC following termination of treatment. Three Ss failed to complete the final administration of the AC, and two Ss dropped out of the study prior to its completion leaving 9 Ss in the RF group, 9 Ss in the CE group, 8 Ss in the PA group, 6 Ss in the PV group, and 8 Ss in the NT-D group.

Table 4 shows the F matrix and case classification following the inclusion of the twenty-seventh step. All groups were significantly different from each other on the basis of all of the activities analyzed up to this step



Table 3

Mean Scores and Standard Deviations for Pre-Test,  
Post-Test and Change Scores on the DACL  
(Number of Depressed Adjectives)

Pre-Test Scores						
Group	RF	PA	CE	PV	NT-D	NT-nD
Mean Scores	21.11	20.55	21.00	21.22	20.78	1.67
Standard Deviations	6.43	8.33	6.39	5.79	6.96	1.33

Post-Test Scores						
Group	RF	PA	CE	PV	NT-D	NT-nD
Mean Scores	10.78	6.56	12.22	6.29	10.87	8.44
Standard Deviations	10.35	8.43	11.46	7.44	11.16	7.23

Change Scores						
Group	RF	PA	CE	PV	NT-D	NT-nD
Mean Change Scores	-10.33	-14.0	-8.70	-13.0	-9.80	+6.89
Standard Deviations	7.63	10.60	13.28	10.86	7.42	6.09

Table 4

F Matrix and Predicted and Obtained Case Classification  
Using the Stepwise Discriminant Analysis  
Following Step 27

F Matrix Following Step 27				
	RF	PA	CE	PV
PA	5.68**			
CE	16.13**	3.10*		
PV	42.01**	19.09**	9.56**	
NT-D	20.01**	5.46**	1.22	6.61**

Predicted and Obtained Case Classification  
Following Step 27

	RF		PA		CE		PV		NT-D	
	Predicted	Obtained	Predicted	Obtained	Predicted	Obtained	Predicted	Obtained	Predicted	Obtained
RF	9	9	0	0	0	0	0	0	0	0
PA	0	0	8	8	0	0	0	0	0	0
CE	0	0	0	0	9	9	0	0	0	0
PV	0	0	0	0	0	0	6	6	0	0
NT-D	0	0	0	0	0	0	0	0	8	8

\*  $p < .05$

\*\* $p < .01$

with the exception of the CE group which did not significantly differ from the NT-D group. It should be noted, however, that classification of each subject into each respective group was perfect following this step. With the inclusion of additional variables, changes in the F matrices were obtained due to changes in the degrees of freedom, but case classification remained unchanged. Table 5 presents the F matrix and case classification following step 38.

One-way univariate ANOVAs were performed on the thirty-nine difference scores for the variables on the AC. Reading for pleasure with others was found to be significant ( $F = 4.02$ ,  $df = 4/35$ ,  $p < .01$ ). A Newman-Keuls post hoc analysis for unequal n's showed that all groups spent significantly less time Reading for pleasure than the PV group but that these groups did not differ between each other. Going for walks with others was also significant at the  $p < .05$  level ( $F = 3.07$ ,  $df = 3/35$ ). A Newman-Keuls test revealed that the PA, RF, and CE groups did not differ from each other, but that all these groups spent significantly less time Going for walks with others than both the PV and NT-D groups which did not differ from each other.

A multivariate ANOVA on the change scores of the four response classes of activities used in the pre-assessment AC analysis (Required Activities Alone, Required Activities with Others, Optional Activities Alone

Table 5

F Matrix and Predicted and Obtained Case Classification  
Using the Stepwise Discriminant Analysis  
Following Step 38

F Matrix Following Step 38				
	RF	PA	CE	PV
PA	29.70*			
CE	205.51**	72.37*		
PV	363.82**	188.97**	39.76*	
NT-D	27.45*	85.52*	313.81**	475.14**

Cases Classified Step 38										
	RF		PA		CE		PV		NT-D	
	Predicted	Obtained	Predicted	Obtained	Predicted	Obtained	Predicted	Obtained	Predicted	Obtained
RF	9	9	0	0	0	0	0	0	0	0
PA	0	0	8	8	0	0	0	0	0	0
CE	0	0	0	0	9	9	0	0	0	0
PV	0	0	0	0	0	0	6	6	0	0
NT-D	0	0	0	0	0	0	0	0	8	8

\*p < .05

\*\*p < .01

and Optional Activities with Others) failed to reach significance ( $F = 0.96$ ,  $df = 16/68$ ).

Table 6 shows the direction of change of time allotment following treatment. Ss in the PA group showed the greatest decreases in the number of activities engaged in alone while the PV group showed the greatest increases in this category. The PV group also showed the greatest decreases in activities with others. Ss in the NT-D group exhibited the greatest increases in this category.

#### Additional Measure of Depression

A 5 X 5 two-way ANOVA (Treatments X Measures) with repeated observations on the second measure was performed for each scale of the Personal Feelings Scales. As can be noted from Table 7, no significant main effects for treatments were found.

F values for interactions of treatments X measures also failed to reach significance with all F values falling below 1.30 ( $p > .05$ ). All scales tended to show increases in positive self-ratings, except Companionship vs. Being Isolated. The only scale that showed a significant measure effect, however, was Fullness vs. Emptiness in Life ( $F = 3.20$ ,  $df = 4/\infty$ ,  $p < .05$ ). A Newman-Keuls post hoc analysis revealed that the final week's rating did not differ from weeks two and three but that ratings for weeks two, three and five did differ from weeks one and four which did not differ from each other.

Table 6

Changes in the Direction of Time Allotment  
Following Treatment

Group	Activities Alone			Activities with Others		
	Inc.	Dec.	N.C.	Inc.	Dec.	N.C.
RF	9	10	1	10	8	1
PA	7	12	1	9	10	0
CE	8	10	2	10	9	0
PV	14	6	1	6	13	0
NT-D	12	8	0	14	5	0



Table 7a  
ANOVAs for Three Personal Feeling Scales

Companionship vs. Being Isolated				
Source of Variance	df	Sum of Squares	Mean Square	F Value
Between Subjects				
Treatments	4	1.84	0.46	0.16
Error	36	103.72	2.88	
Within Subjects				
Measures	4	0.94	0.23	0.57
Treatments X Measures	16	5.09	0.31	0.80
Error	$\infty$	57.27	0.39	

Receptivity Toward the World				
Source of Variance	df	Sum of Squares	Mean Square	F Value
Between Subjects				
Treatments	4	7.36	1.84	0.92
Error	36	71.93	1.99	
Within Subjects				
Measures	4	1.94	0.48	1.40
Treatments X Measures	16	3.39	0.21	0.61
Error	$\infty$	49.80	0.34	

Own Sociability vs. Withdrawal				
Source of Variance	df	Sum of Squares	Mean Square	F Value
Between Subjects				
Treatments	4	2.21	0.55	0.25
Error	36	81.06	2.25	
Within Subjects				
Measures	4	1.72	0.43	1.30
Treatments X Measures	16	6.33	0.39	1.20
Error	$\infty$	47.28	0.32	

Table 7b  
ANOVAs for Three Personal Feeling Scales

Elation vs. Depression				
Source of Variance	df	Sum of Squares	Mean Square	F Value
Between Subjects				
Treatments	4	3.54	0.88	0.47
Error	36	68.06	1.87	
Within Subjects				
Measures	4	1.55	0.38	0.73
Treatments X Measure	16	7.07	0.44	0.84
Error	∞	76.07	0.52	

Energy vs. Fatigue				
Source of Variance	df	Sum of Squares	Mean Square	F Value
Between Subjects				
Treatments	4	6.71	1.67	0.80
Error	36	75.92	2.10	
Within Subjects				
Measures	4	1.90	0.47	1.20
Treatments X Measures	16	3.80	0.23	0.61
Error	∞	55.75	0.38	

Fullness vs. Emptiness in Life				
Source of Variance	df	Sum of Squares	Mean Square	F Value
Between Subjects				
Treatments	4	5.42	1.35	0.65
Error	36	74.94	2.08	
Within Subjects				
Measures	4	3.82	0.95	3.20*
Treatments X Measures	16	3.99	0.24	0.82
Error	∞	43.62	0.30	

\*p < .05

## CHAPTER IV

## DISCUSSION

Pre-Treatment Assessment of Depression

The results of this study are generally consistent with a behavioral conceptualization of depression. Behavioral theory would predict that depression, initiated through the loss or lack of positive reinforcement, can be maintained by the activities and interpersonal interactions of depressed individuals with their environment.

The results of the discriminant analysis showed that the depressed subjects in this study could be differentiated from controls on the basis of their activity preferences, as measured by the Activity Checklist. However, it was not until the inclusion of the nineteenth variable that a perfect classification of all Ss into their respective groups occurs.

The inclusion of additional activity variables was found to maintain the discriminability of each group. The fact that the inclusion of a large number of variables was necessary to form a perfect discrimination is seen as being consistent with the finding of a minimal number of significant outcomes of the univariate ANOVAs performed on each activity variable. Interesting to note was the

finding that only one variable, Eating alone, discriminated between the groups.

The large variance due to individual differences in daily scheduled activities appeared to be the major contributor to the lack of statistical significance of both the univariate ANOVAs performed on each activity variable and the MANOVA performed on the selected response classes of behavior. Large individual differences were also obtained by Lewinsohn and Libet (1972) in their study of the relationship between mood and the number of pleasant activities reported by depressed Ss. Their data showed a small although significant relationship between mood and pleasant activities.

It appears, then, that in analyzing the activity preference for both depressed and non-depressed students, there is no "depression constellation" or small group of activities that reliably differentiates the groups. Rather, a combination of a relatively large number of activities was necessary to discriminate between depressed and non-depressed college students. It would seem, then, that depression in a university population may be correlated with small changes in many activities. This finding is in contrast to the large reductions in emitted behavior described for "clinically" depressed individuals.

The analysis of the activities engaged in by both depressed and non-depressed groups revealed that the depressed Ss tended to engage in more "social" activities

than the control Ss. Of the initial 19 steps in the discriminant analysis, the depressed group showed higher mean scores for 5 out of the 7 variables which involved interacting with other people. Of the 9 activities performed alone, 7 showed lower mean scores for the depressed group. These findings may be viewed as consistent with Lewinsohn et al.'s (1969) assumption regarding the nature of the social environment of depressed individuals. In Lewinsohn's view, the social environment provides reinforcement in the form of sympathy, interest and concern which serves to strengthen and maintain depressive behavior.

This assumption of a strong operant component in maintaining depressed behavior gains strength considering the developmental stage and humanistic strivings of college students. Students in universities are often trying to "find themselves" and, as such, may be particularly good reinforcers of dysphoric statements about the self and the environment.

The higher rate of engaging in many activities for depressed college Ss would lead one to postulate that the quality rather than the frequency of interpersonal interactions serves a salient maintaining function. Therefore, a generalizability of these results to a "clinically" depressed population is limited. The marked decrease in the frequency, as well as alteration in the topography of both overt motor and verbal behavior, characteristic of

clinically depressed individuals, was not found for depressed college students. Further, the social environment of the university, which may initially serve to maintain depressive behavior, is actually programmed to provide many alternative ways of responding for its members. The increased possibility of others prompting alternative behavior in depressed persons in the college environment can be seen in analyzing the living environment of a dormitory. Much of the behavior of an individual living in a dormitory is under the discriminative control of one's roommate and other persons living in close proximity. The increased possibility of receiving reinforcement for exhibiting non-depressed behavior from these significant others is noted. Many of the activities that might require large amounts of "energy expenditure" on behalf of depressed individuals is provided by the university environment. Food is prepared for students; movies, lectures, athletics, and other forms of entertainment are supplied by the university and are considered part of the "university life style." The waxing and waning of academic pressure and the many opportunities for "getting away" must also be considered as significant controlling variables involved in the lifting of depressive affect in college students not often present in a more general population of depressed persons.



### Post-Treatment Assessment of Depression

The purpose of the second part of the study was to assess the effectiveness of different approaches to treating depression. Dependent variables included measures of depression and activity preference.

All treatment groups presented a decreased number of depressed adjectives following treatment, although these decreases were not significantly different from the no-treatment group. This finding may be viewed as consistent with clinical reports relating to the duration of depressive episodes. Beck (1967), in discussing the course of depression, reported that the median duration of depressive "attacks" among outpatients is approximately three months. The fact that all groups reported decreases in depression is compatible with the idea of a "natural course of depression" in less severe cases. This hypothesis is especially relevant in light of the increased potential for alternative modes of responding programmed by the college environment. It was further noted that the non-depressed no-treatment control group reported more depression on the post-treatment administration of the DACL. This finding is consistent with the notion that a group selected for extreme characteristics will tend to regress toward the mean. The mean number of adjectives checked for all groups on the post-test fell between 6.29 and 12.22 demonstrating a similar level of reported depression.

The lack of differential effectiveness for any treatment procedure questions the applicability of the "lack of social skill" hypothesis (Patterson & Rosenberry, 1969; Lewinsohn et al., 1969) as well as the "lack of reinforcement effectiveness" hypothesis (Costello, 1972) to this population of depressed individuals. The fact that Ss in all treatment groups reported less depression points out that depressed college students have the social skill to "reassemble their reinforcement sources." The additional measure of mood ratings, the PFS, further questions the reinforcement effectiveness hypothesis. Although all groups tended to show increased positive ratings over time on most of the scales, the fact that only one scale, Fullness vs. Emptiness in Life, showed a significant measure effect, suggests that there may be multiple effective reinforcers in the college environment. Further, the fact that all weekly ratings for all groups were above five (scores above five are considered positive) demonstrates that these Ss were not refractory to reinforcing stimuli.

It is interesting to note that the treatment groups showing the greatest decreases in depression were the Activities and Problem Ventilation groups. Although the Problem Ventilation group was designed to "ventilate" problem situations, it is possible that the substance of the therapy sessions served as antecedents to problem solving strategies. A fruitful avenue for future research

would be to investigate the effects of teaching problem-solving strategies and more direct activity programming for depressed college students.

Despite the fact that the treatment groups did not differ from each other with respect to changes in self-ratings of depression, these approaches did result in different activity preferences following termination of therapy. As in the pre-treatment assessment of activity preference, the discriminant analysis performed on change scores required the inclusion of a large number of activity variables to place all Ss into their respective therapy groups. Due to large individual differences, the univariate ANOVAs for each activity variable and the MANOVA performed on the four classes of activities did not aid in assessing the specific changes accruing as a result of differential therapy participation. Analyzing the direction of time allotment change in activities, however, revealed that Ss in the Programmed Activities group showed the greatest decreases in the amount of time spent engaging in solitary activities. Ss in the Problem Ventilation group showed the greatest increases in the number of activities engaged in alone. Further, Ss in the Problem Ventilation group manifested the greatest number of decreases in activities with others, while the no-treatment group showed the greatest number of increases in number of activities with others. It seems reasonable to speculate that Ss

in the PV group manifested these changes as a result of avoidance behaviors of others, due to the possibility that these Ss are maintaining their "problem ventilating" behavior. Further speculation would lead to the hypothesis that these Ss would be most prone to future depressive episodes due to the limited availability of positive reinforcement from others. It was not possible to assess the long range effects of differential activity preference resulting as a function of therapy participation because Ss left the university for summer vacation immediately after the conclusion of the study.

Implications from these findings are relevant to the choice of therapy for depressed college students. Although all therapy techniques as well as the depressed no-treatment group tended to report decreases in depression, the possibility that the kinds of activities engaged in by students following therapy may have a differential effect on future "attacks" of depression remains a question for future research. The interaction of mood and daily activity schedules is seen as an important area for further investigation. Investigation into the quality of interactions of depressed students with their environment would yield further information regarding the environmental maintenance of depressive behavior.

## CHAPTER V

## SUMMARY

The first goal of this study was to determine whether depressed and non-depressed college students could be discriminated on the basis of both the quantity and quality of reported everyday activities. Results of a multivariate discriminant analysis demonstrated that with the inclusion of a large number of activity variables depressed students can be differentiated from non-depressed students.

The second goal of the study was to compare the effectiveness of different therapy techniques in alleviating the reported depression of college students. Two behavioral treatment groups, a Reinforcement Training group which attempted to increase skills in audience behavior and a Programmed Activities group which attempted to directly manipulate the depressed individual's environment into a potentially more reinforcing one, were compared with two other treatment approaches, a Problem Ventilation group, which discussed current personal problems, a Childhood Experiences group which discussed early experiences and depressed and non-depressed No-Treatment control groups on measures of depression and activity preference. Results of the analyses showed that all of the depressed



groups reported equivalent reductions in depression at the end of the study. However, the different treatment approaches resulted in different activity preferences at the termination of treatment. These results were discussed as being consistent with a behavioral view of depression and previous clinical findings.



## BIBLIOGRAPHY

- Abraham, K. Notes on the psychoanalytic investigation and treatment of manic-depression insanity and allied conditions (1911). In Selected papers on psychoanalysis. New York: Basic Books, 1954.
- Beck, A. T. Depression: clinical, experimental and theoretical aspects. New York: Harper & Row, 1967.
- Benedek, T. Toward the biology of the depressive constellation. Journal of the American Psychoanalytical Association, 1965, 4, 389-397.
- Burgess, E. P. The modification of depressive behaviors. In R. Rubin & C. M. Franks (Eds.), Advances in behavior therapy, 1968. New York: Academic Press, 1969.
- Costello, C. G. Depression: Lack of reinforcers or loss of reinforcement effectiveness. Behavior Therapy, 1972, 3, 240-247.
- Ferster, C. B. Classification of behavior pathology. In L. E. Krasner & L. P. Ullman (Eds.), Research in behavior modification. New York: Holt, Rinehart and Winston Inc., 1965. Pp. 6-26.
- Ferster, C. B. Animal behavior and mental illness. Psychological Record, 1966, 16, 345-356.
- Ferster, C. B. A functional analysis of depression. American Psychologist, Oct. 1973, 857-869.
- Freud, S. Mourning and melancholia (1917). In Collected papers, Vol. 4. London: Hogarth Press and the Institute of Psychoanalysis, 1950. Pp. 152-172.
- Goldstein, A., Heller, K., & Sechrest, L. Psychotherapy and the psychology of behavior change. New York: Wiley Press, 1966.
- Grinker, R. R., Miller, J., Sabshun, M., Nunn, J. E., & Nunnally, J. D. The phenomena of depression. New York: Paul B. Hoeber, Inc., 1961.

- Lazarus, A. A. Learning theory and the treatment of depression. Behavior Research and Therapy, 1968, 6, 83-89.
- Lazarus, A. A. Reactions to Costello's paper on depression. Behavior Therapy, 1972, 3, 240-250.
- Lewinsohn, P. M., & Atwood, G. E. Depression: A clinical-research approach. Psychotherapy, Theory, Research and Practice, 1969, 6, 166-171.
- Lewinsohn, P. M., & Libet, J. Pleasant events, activity schedules and depression. Journal of Abnormal Psychology, 1972, 79, 291-295.
- Lewinsohn, P. M., Shaffer, M., & Libet, J. Depression: A clinical-research approach. Paper presented at the meeting of the Western Psychological Association, 1969.
- Lewinsohn, P. M., & Shaw, D. A. Feedback about interpersonal behavior as an agent of behavior change: A case study in the treatment of depression. Psychotherapy and Psychosomatics, 1969, 17, 82-88.
- Lewinsohn, P. M., Weinstein, M. S., & Shaw, D. Depression: A clinical-research approach. In R. D. Rubin & C. M. Frank (Eds.), Advances in behavior therapy 1968. New York: Academic Press, 1969. Pp. 231-240.
- Loeb, A., Beck, A. T., Diggory, J. C., & Tuthill, C. The effects of success and failure on mood, motivation and performance of depressed and nondepressed patients. Unpublished, 1966. In A. T. Beck, Depression: clinical, experimental and theoretical aspects. New York: Harper and Row, 1967.
- Lubin, B. Adjective checklists for the measurement of depression. Archives of General Psychology, 1965, 12, 57-62.
- MacPhillany, D. J., & Lewinsohn, P. M. Pleasant events schedule. Mimeograph, University of Oregon, 1971.
- Mendels, J. Concepts of depression. New York: John Wiley and Sons, Inc., 1970.
- Patterson, G. R., & Rosenberry, C. A social learning formulation of depression. Paper presented at International Conference of Behavior Modification, Banff, Alberta, 1969.

Rosenberry, C. Frequency and skill of emitted social reinforcement in depressed and non-depressed subjects. Unpublished M. A. Thesis, University of Oregon, 1968.

Wessman, A., & Ricks, D. Mood and personality. New York: Holt, Rinehart and Winston, Inc., 1966.

## APPENDIX A

## Test Forms

Name \_\_\_\_\_

Male \_\_\_\_\_ Female \_\_\_\_\_

DACL-A

Date \_\_\_\_\_

Below you will find words which describe different kinds of moods and feelings. Check the words which describe How You Feel Now--Today. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly and check all of the words which describe how you feel today.

- |                          |                         |
|--------------------------|-------------------------|
| 1. _____ Wilted          | 17. _____ Strong        |
| 2. _____ Safe            | 18. _____ Tortured      |
| 3. _____ Miserable       | 19. _____ Listless      |
| 4. _____ Gloomy          | 20. _____ Sunny         |
| 5. _____ Dull            | 21. _____ Destroyed     |
| 6. _____ Gay             | 22. _____ Wretched      |
| 7. _____ Low-spirited    | 23. _____ Broken        |
| 8. _____ Sad             | 24. _____ Light-hearted |
| 9. _____ Unwanted        | 25. _____ Criticized    |
| 10. _____ Fine           | 26. _____ Grieved       |
| 11. _____ Broken-hearted | 27. _____ Dreamy        |
| 12. _____ Down-cast      | 28. _____ Hopeless      |
| 13. _____ Enthusiastic   | 29. _____ Oppressed     |
| 14. _____ Failure        | 30. _____ Joyous        |
| 15. _____ Afflicted      | 31. _____ Weary         |
| 16. _____ Active         | 32. _____ Droopy        |

Name \_\_\_\_\_ Age \_\_\_\_\_ Male \_\_\_\_\_ Female \_\_\_\_\_

Below you will find words which describe different kinds of moods and feelings. Check the words which describe How You Feel Now--Today. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly and check all of the words which describe how you feel today.

- |                      |                         |
|----------------------|-------------------------|
| 1. _____ Downhearted | 17. _____ Clean         |
| 2. _____ Lively      | 18. _____ Dispirited    |
| 3. _____ Unfeeling   | 19. _____ Moody         |
| 4. _____ Alone       | 20. _____ Pleased       |
| 5. _____ Unhappy     | 21. _____ Dead          |
| 6. _____ Alive       | 22. _____ Sorrowful     |
| 7. _____ Terrible    | 23. _____ Bleak         |
| 8. _____ Poor        | 24. _____ Light         |
| 9. _____ Forlorn     | 25. _____ Morbid        |
| 10. _____ Alert      | 26. _____ Heavy-hearted |
| 11. _____ Exhausted  | 27. _____ Easy-going    |
| 12. _____ Heartsick  | 28. _____ Gray          |
| 13. _____ Bright     | 29. _____ Melancholy    |
| 14. _____ Glum       | 30. _____ Hopeful       |
| 15. _____ Desolate   | 31. _____ Mashed        |
| 16. _____ Composed   | 32. _____ Unlucky       |



Name \_\_\_\_\_ Age \_\_\_\_\_ Male \_\_\_\_\_ Female \_\_\_\_\_

Date \_\_\_\_\_

Below you will find words which describe different kinds of moods and feelings. Check the words which describe How You Feel Now--Today. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly and check all the words which describe how you feel today.

- |                      |                       |
|----------------------|-----------------------|
| 1. _____ Cheerless   | 17. _____ Buoyant     |
| 2. _____ Animated    | 18. _____ Tormented   |
| 3. _____ Blue        | 19. _____ Weak        |
| 4. _____ Lost        | 20. _____ Optimistic  |
| 5. _____ Dejected    | 21. _____ Low         |
| 6. _____ Healthy     | 22. _____ Deserted    |
| 7. _____ Discouraged | 23. _____ Burdened    |
| 8. _____ Bad         | 24. _____ Wonderful   |
| 9. _____ Despondent  | 25. _____ Crushed     |
| 10. _____ Free       | 26. _____ Somber      |
| 11. _____ Despairing | 27. _____ Interested  |
| 12. _____ Uneasy     | 28. _____ Joyless     |
| 13. _____ Peaceful   | 29. _____ Crestfallen |
| 14. _____ Grim       | 30. _____ Lucky       |
| 15. _____ Distressed | 31. _____ Chained     |
| 16. _____ Whole      | 32. _____ Pessimistic |

Name \_\_\_\_\_ Age \_\_\_\_\_ Male \_\_\_\_\_ Female \_\_\_\_\_

Date \_\_\_\_\_

Below you will find words which describe different kinds of moods and feelings. Check the words which describe How You Feel Now--Today. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly and check all of the words which describe how you feel today.

- |                        |                      |
|------------------------|----------------------|
| 1. _____ Depressed     | 17. _____ Fit        |
| 2. _____ Elated        | 18. _____ Lonesome   |
| 3. _____ Awful         | 19. _____ Unloved    |
| 4. _____ Lifeless      | 20. _____ Glad       |
| 5. _____ Griefstricken | 21. _____ Grave      |
| 6. _____ Inspired      | 22. _____ Sunk       |
| 7. _____ Woeful        | 23. _____ Shot       |
| 8. _____ Lonely        | 24. _____ Merry      |
| 9. _____ Suffering     | 25. _____ Wasted     |
| 10. _____ Mellow       | 26. _____ Washed out |
| 11. _____ Drooping     | 27. _____ Clear      |
| 12. _____ Rejected     | 28. _____ Gruesome   |
| 13. _____ Fortunate    | 29. _____ Tired      |
| 14. _____ Dreary       | 30. _____ High       |
| 15. _____ Lousy        | 31. _____ Worse      |
| 16. _____ Good         | 32. _____ Drained    |

## COLLEGE RATING SCALES (PERSONAL FEELINGS SCALES)

1. Overall College Experience (how you felt about the overall college experience today)
  10. Absolutely the most complete experience of my life
  9. Stands extremely high in terms of my life experiences
  8. Considerably rewarding and complete experience
  7. Fairly rewarding experience
  6. Pretty rewarding, more or less complete
  5. A little less complete than I had expected
  4. Somewhat disappointed in the whole experience
  3. Disappointed. Forced to do things I dislike
  2. An oppressing experience--very disappointing
  1. The worst experience of my whole life
  
2. Fullness vs. Emptiness of Life (how emotionally satisfying, abundant or empty your life felt today)
  10. Consummate fulfillment and abundance
  9. Replete with Life's abundant goodness
  8. Filled with warm feelings of contentment and satisfaction
  7. My life is ample and satisfying
  6. Life seems fairly adequate and satisfying
  5. Some slight sense of lack, vague and mildly troubling
  4. My life seems deficient, dissatisfying
  3. Life is pretty empty and barren
  2. Desolate, drained dry, impoverished
  1. Gnawing sense of emptiness, hollowness, void
  
3. Receptivity toward and Stimulation by the World (how interested and responsive you felt to what was going on around you)
  10. Passionately absorbed in the world's excitement. My sensations and feelings incredibly intensified
  9. Tremendously stimulated. Enormously receptive
  8. Senses lively. Great interest and delight in everything around me
  7. Open and responsive to my world and its happenings
  6. Moderately interested and fairly responsive
  5. Slightly disinterested and unresponsive
  4. Bored. Life pretty monotonous and uninteresting
  3. Dull and apathetic. Almost no interest or desire for anything
  2. Mired down in apathy. My only desire is to shut off the world
  1. Life is too much trouble. Sick of everything, want only oblivion

4. Sociability vs. Withdrawal (how socially outgoing or withdrawn you felt today)
  10. Immensely sociable and outgoing
  9. Highly outgoing, congenial and friendly
  8. Very sociable and involved in things
  7. Companionable. Ready to mix with others
  6. Fairly sociable. More or less accessible
  5. Not particularly outgoing. Feel a bit unsociable
  4. Retiring, would like to avoid people
  3. Feel detached and withdrawn. A great distance between myself and others
  2. Self-contained and solitary
  1. Completely withdrawn. Want no human contact
  
5. College Work (how satisfied or dissatisfied you were with your college work)
  10. Tremendous, intense delight in my work. Proud of purpose, skill and accomplishments
  9. Great pleasure and enjoyment in my work. Much fulfillment through work
  8. Considerable satisfaction with my work. Eager to continue
  7. Satisfied with my work. Encouraged to go on with it.
  6. More or less satisfied with my work. Keep plugging along
  5. Somewhat dissatisfied with my work. Not much enjoyment doing it
  4. Dissatisfied with my work. Can't see much good in it. Moderately frustrating
  3. Greatly dissatisfied with my work. Not doing a good job. Markedly frustrating
  2. Tremendously dissatisfied and frustrated in my work befuddled. Disorganized
  1. Completely dissatisfied and frustrated in my work. Hopeless, useless chaos
  
6. Companionship vs. Being Isolated (the extent to which you felt emotionally accepted or isolated by other people)
  10. Complete participation in warm, intimate friendship
  9. Enjoy the warmth of close companionship
  8. Thoroughly and genuinely liked
  7. Feel accepted and liked
  6. More or less accepted
  5. Feel a bit left out
  4. Feel somewhat neglected and lonely
  3. Very lonely, no one seems to care much about me
  2. Tremendously lonely. Friendless and forlorn
  1. Completely isolated and forsaken. Abandoned. Ache with loneliness

7. Energy vs. Fatigue (how energetic, or tired and weary you felt today)
  10. Limitless zeal. Surging with energy. Vitality spilling over
  9. Exuberant vitality, tremendous energy, great zest for activity
  8. Great energy and drive
  7. Very fresh, considerable energy
  6. Fairly fresh, adequate energy
  5. Slightly tired, indolent. Somewhat lacking in energy
  4. Rather tired. Lethargic. Not much energy
  3. Great fatigue. Sluggish. Can hardly keep going. Meager resources
  2. Tremendously weary. Nearly worn out and practically at a standstill. Almost no resources
  1. Utterly exhausted. Entirely worn out. Completely incapable of even the slightest effort
  
8. Elation vs. Depression (how elated or depressed, happy or unhappy you felt today)
  10. Complete elation. Rapturous joy and soaring ecstasy
  9. Very elated and in high spirits. Tremendous delight and buoyancy
  8. Elated and in high spirits
  7. Feeling very good and cheerful
  6. Feeling pretty good, "O.K"
  5. Feeling a little bit low, just so-so
  4. Spirits low and somewhat "blue"
  3. Depressed and feeling very low. Definitely "blue"
  2. Tremendously depressed. Feeling terrible, miserable, "just awful"
  1. Utter depression and gloom. Completely down. All is black and leaden

Name \_\_\_\_\_ Date \_\_\_\_\_ Day of the Week \_\_\_\_\_

DAILY RECORD OF COLLEGE FEELINGS

Please use the sheet below to rate the College Feelings Scales. Please fill in completely, 3 ratings on each scale, before retiring every day. Remember to record the "highest" and "lowest" you felt even though they may have been experienced for only a brief moment. The "average" represents your overall summary for the day

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| 1. Overall College Experience     | 5. College Work                     |
| Highest _____                     | Highest _____                       |
| Lowest _____                      | Lowest _____                        |
| Average _____                     | Average _____                       |
| 2. Fullness vs. Emptiness of Life | 6. Companionship vs. Being Isolated |
| Highest _____                     | Highest _____                       |
| Lowest _____                      | Lowest _____                        |
| Average _____                     | Average _____                       |
| 3. Receptivity towards the World  | 7. Energy vs. Fatigue               |
| Highest _____                     | Highest _____                       |
| Lowest _____                      | Lowest _____                        |
| Average _____                     | Average _____                       |
| 4. Own Sociability vs. Withdrawal | 8. Elation vs. Depression           |
| Highest _____                     | Highest _____                       |
| Lowest _____                      | Lowest _____                        |
| Average _____                     | Average _____                       |



Date \_\_\_\_\_ Name \_\_\_\_\_ Male \_\_\_\_\_  
 Female \_\_\_\_\_

ACTIVITIES CHECKLIST

Please estimate the number of hours you have engaged in the following activities during the past three days. Begin your estimate when you woke up three days ago. Fill in your estimate of each activity for each day; add the total number of hours and place the sum under the column marked TOTAL. (If you spent 8 hours eating alone and 0 hours eating with others three days ago, 4 hours eating alone and 2 hours eating with others yesterday, enter 12 hours Alone and 2 hours With Others under the column marked TOTAL.) Please note that "With Others" means engaging in some kind of interaction (not just the presence of other people.) Please read through all of the sheets before filling in your estimates. Thank you!

		3 days ago	2 days ago	yester- day	TOTAL
Salaried Work	Alone				
	With Others				
Sleeping					

		3 days ago	2 days ago	yester- day	TOTAL
Volunteer Work	Alone				
	With Others				
Talking	(no other primary activity)				
Attending Classes					
Eating	Alone				
	With Others				
Reading or Studying for School	Alone				
	With Others				
Reading for Pleasure	Alone				
	With Others				
Watching T.V.	Alone				
	With Others				
Listening to Music	Alone				
	With Others				

		3 days ago	2 days ago	yester- day	TOTAL
Athletics (Not for P.E.)	Alone				
	With Others				
Shopping	Alone				
	With Others				
Sexual Activities					
Movies and Concerts	Alone				
	With Others				
Using Alcohol and Drugs	Alone				
	With Others				
Writing Letters					
Religious Activities	Alone				
	With Others				

		3 days ago	2 days ago	yester- day	TOTAL
Going for Walks	Alone				
	With Others				
Driving in Car	Alone				
	With Others				
Grooming (personal hygiene, cosmetic care)					
Talking on Phone					
	With Others				
Household Chores	Alone				
	With Others				
Other (Specify)	Alone				
	With Others				

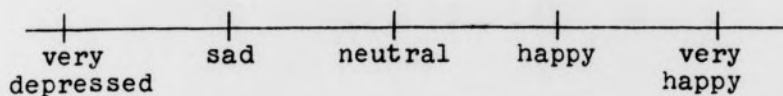
In engaging in the above activities, what percentage of the time was spent with

members of the same sex \_\_\_\_\_

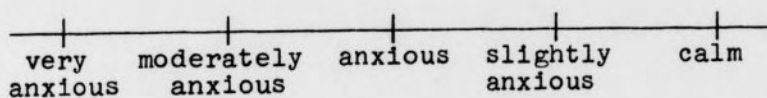
members of the opposite sex \_\_\_\_\_

mixed groups \_\_\_\_\_

Please rate your mood at the present time on the following scale:



Please rate your anxiety at the present time on the following scale:



Do you have a history of psychotherapy (more than four sessions) or hospitalization for any emotional disorder?

\_\_\_\_\_no      \_\_\_\_\_yes

APPENDIX B

Manual of Weekly Therapy Procedures



Programmed Activities Group (PA)

Headings of Activity Hierarchy

- A. Required Activities List (RAL)
- B. Personal Recreational Activities List (PRAL)
- C. Social Activities List (SAL)

Week #1

- A. Explanation of importance and procedure of data collection and purpose of experiment.  
Hand out Contingency Contract to sign as to the credit and responsibility
- B. Construction of Required Activities List--at least 7 items
  - 1. Question: What kinds of activities are you required to perform during the week, both academic and non-academic? . . . the kinds of activities you feel good about when you get them out of the way.

Examples

- a. Studying \_\_\_\_\_ # of hours for \_\_\_\_\_ course
- b. papers that have to be done
- c. Work--both salaried and volunteer
- d. house or room cleaning
- C. Hand out Homework Sheet. Explain that each S should choose from his list 2 activities to perform before the next meeting and write the date the activity was performed in the appropriate place. The completed sheet is to be handed in next week along with the completed College Feelings Scale--to be filled out daily.

Week #2

- A. Discussion of last week's activity. Compliance should be reinforced
  - 1. Emphasis should be placed on the consequences (if positive) or possible reinforcing consequences of the activity. How could you make this activity more enjoyable to engage in?
- B. Collection of last week's data--Reinforcement for compliance
- C. Construction of Personal Recreational Activities List
  - 1. Question: What activities do you enjoy doing, or did you enjoy doing in the past that you perform alone?

Examples

- a. hobbies; guitar; dancing; painting, etc.
- b. reading novels or magazines

- c. going for walks or rides
  - d. athletics performed alone: running, exercising
  - e. listening to records
  - f. special grooming
- D. Hand out homework assignment sheet. Tell Ss to choose 2 activities from the RAL and 2 activities from the PRAL and write them down. Write in date completed. Hand out College Feelings Scales for following week

Week #3

- A. Discussion of last week's activities--usual emphasis
- B. Collection of data from last week + reinforcement
- C. Construction of Social Activities List
  - 1. Question: What kinds of activities do you or did you enjoy engaging in with other people?

Examples

- a. eating with other people
  - b. talking " " "
  - c. going shopping with other people
  - d. going to the movies, listening to records, concerts etc.
  - e. athletics with other people
- D. Hand out homework assignment sheet. Ss should choose 2 activities from RAL, 2 activities from PRAL and 2 activities from SAL--write them down with date completed

Week #4

- A. Discussion of last week's activities with usual emphasis
- B. Collection of data + reinforcement
- C. Hand out homework sheet--Ss should choose 3 activities from RAL, 3 activities from PRAL and 2 activities from SAL. Have Ss write them down with date completed  
Hand out College Feelings Scales

Week #5

- A. Discussion of last week's activities--usual emphasis
- B. Collection of last week's data + reinforcement
- C. Hand out homework assignment sheet. Ss should choose 2 activities from RAL, 3 activities from PRAL and 3 activities from SAL  
Hand out College Feelings Scales

Week #6

- A. Discussion of last week's activities
- B. Collection of data
- C. THANX

## Childhood Experiences Group (CE)

## Week #1

- A. Explanation of importance and procedure of data collection, purpose of the experiment and Contingency Contract
- B. Topic for discussion: Your Parents When You Were Young

## Subtopics for consideration

- a. your mother and father and your relationship with them
- b. what was the worst thing about your relationship with them
- c. what did they want you to "grow up to be"
- d. what were some of the ideals your parents taught you
- f. what were some of the ideals your parents failed to teach you
- C. Homework assignment for following week's discussion--  
What was one of your memories of grade school?  
Write it down briefly to hand in next week  
Hand out College Feelings Scales

## Week #2

- A. Topic for discussion: Grade School
  - a. discuss homework assignments
  - b. describe your favorite teacher
  - c. describe your worst teacher
  - d. what was one of the best experiences for you in grade school
  - e. what was one of the worst experiences for you in grade school
- B. Collection of last week's data--reinforcement
- C. Homework assignment--Describe briefly one of your childhood friends. Write it down to be handed in next week  
Hand out College Feelings Scales

## Week #3

- A. Topic for discussion: Childhood Friends
  - a. discuss homework assignments
  - b. what were your favorite games and play activities with your friends
  - c. what was the worst experience you had with your friends
  - d. did you have a childhood boyfriend
  - e. how did your early relationships affect you later in life
- B. Collection of last week's data + reinforcement
- C. Homework assignment--Briefly describe your early religious or ethical training--to be handed in next week  
Hand out College Feelings Scales

## Week #4

- A. Topic for discussion--Early religious or ethical training
    - a. discuss homework assignment
    - b. what principles were stressed in this training
    - c. what was the worst part of this training
    - d. how did this training affect you later in life
    - e. who were your ethical heroes when you were young
  - B. Collection of last week's data--reinforcement
  - C. Homework assignment: Briefly describe your siblings or if you were an only child describe how this affected you when you were young
- Hand out College Feelings Scales

## Week #5

- A. Topic for discussion: Siblings or the effect of being an only child
    - a. discuss the homework assignment
    - b. how did your siblings or lack of them affect your early learning experiences
    - c. what was the best thing about being an only child or having siblings
    - d. what was the worst thing about being an only child or having siblings
    - e. how did this situation affect you in later life
  - B. Collection of last week's data + reinforcement
  - C. Homework assignment: Discuss briefly your early experiences (both positive and negative) on your life--to be handed in next week
- Hand out College Feelings Scales

## Week #6

- A. Topic for discussion--Early influences--defined as any outstanding person, place or event that had a significant effect on your later life
  - a. discuss homework assignment
  - b. how did the influences affect you when you were young
  - c. how did the influences affect you later in life
  - d. what was the worst thing about these early influences
- D. Collection of data
- C. THANX

## Week #1

- A. Explanation of importance and procedure of data collection and purpose of the experiment  
Hand out Contingency Contract to sign as to credit and responsibility of participation
- B. Topic for conversation--Present Problem
  - 1. Suggested topics
    - a. social life, same and opposite sex
    - b. parents: responsibility to
    - c. money
    - d. academics
- C. Homework assignment--Write down a brief paragraph about a problem you are having now or have had that you would like to discuss next week. Hand out College Feelings Scales

## Weeks #2-5

- A. Discussion of homework assignment
- B. Collection of data
- C. Topic of conversation--same as above
- D. Homework Assignment--same as Week #1

## Week #6

- A. Discussion of homework assignment
- B. Collection of Data
- C. Topic of conversation--same as above
- D. THANX



## Reinforcement Training Group (RT)

## Week #1

- A. Explanation of importance and procedure of data collection and purpose of experiment  
Hand out Contingency Contract as to the credit and responsibility of participation
- B. Topics for discussion: Grooming and nonverbal communication
  - 1. Grooming
    - a. What can people do to make themselves personally more attractive
      - (1) cosmetics, showering, setting hair
      - (2) eliminate unappealing habits, i.e., nail biting
      - (3) wear attractive clothing
    - b. How do people react to the stereotype "slob"
    - c. How do people react to the stereotype compulsive person
  - 2. Nonverbal communication subtopics for discussion
    - a. posture--standing and sitting
    - b. proximity
    - c. nodding, smiling and eye contact
  - 3. Homework assignment for following week: wear your three most attractive outfits and notice other people's reaction. Record on homework sheet to be handed in  
Hand out College Feelings Scales

## Week #2

- A Discussion of homework assignment
- B. Topic for discussion: Audience behaviors
  - 1. How to be a good listener
    - a. review nonverbal components
    - b. emitting reinforcing comments, i.e., "that's interesting" "I agree," "I'm happy for you"
    - c. waiting until speaker is through
    - d. polite ways of disagreeing--model
  - 2. How to be a good speaker
    - a. don't persevere on self-statements, i.e., your own
    - b. don't persevere on depressing topics of conversation
    - c. talk about topics you know will interest the listener
  - 3. How can you be a good audience
- C. Collect past week's data and positively reinforce
- D. Homework assignment: Record part of conversation between yourself and another person including both the verbal and nonverbal components--to be handed in.  
Hand out College Feelings Scales



## Week #3

- A. Discussion of homework assignment
- B. Topic for discussion: Assertive training--distinction between assertive and aggressive and the need for assertion

## Modeling scenes

1. You received a grade of D on a paper returned to you. You feel you met all the qualifications stated by your professor to get a higher grade on the paper
  2. A fellow student is constantly borrowing things from you without returning them. You have to ask her for them back
  3. Your parents are constantly calling you to check up on your social activities. You would like them to call less frequently and allow you to be more independent
- C. Collect data from last week and reinforcement
  - D. Homework assignment: Write down one instance during the week when you were assertive--to be handed in. Hand out College Feelings Scales

## Week #4

- A. Discussion of homework assignment
- B. Topic for discussion: How to reinforce other people's behavior
  1. how often do you compliment other people, i.e., yesterday. discuss reinforcing comments, i.e., "you have on a nice . . ." "I like the way you . . .," "I admire you for . . ."
  2. If someone does something nice for you, reciprocate, i.e., answer letters, calls visits, verbal, social reinforcement
  3. accepting invitations reinforces invitation giving
- C. Collect data from last week and reinforcement
- D. Homework: Write down three occasions when you reinforced other people's behavior--to be handed in. Hand out College Feelings Scales

## Week #5

- A. Discussion of homework
- B. Topic of conversation: How to initiate behaviors others find reinforcing
  1. including people in your activities
    - a. I have two tickets for . . . , would you come along
    - b. I have a new . . . you might be interested in. Would you like to see it
    - c. I would like to talk to you; meet me for lunch
  2. do things for other people, offer your help
    - a. let me buy you a cup of coffee, beer

- b. I just listened to this record, it's very good, would you like to borrow it
  - 3. give things away
    - a. offer cigarettes, gum, candy to other people
    - b. I know you like . . . so I bought you some
  - C. Collect data from last week and reinforcement
  - D. Homework assignment: Write down 3 occasions when your emitted behaviors were reinforced by others--to be handed in.
- Hand out College Feelings Scales

Week #6

- A. Discussion of Homework
- B. Topic of discussion: initiating and maintaining a conversation
  - 1. verbalizations to initiate a conversation
    - a. how was your weekend
    - b. I heard you were . . .
    - c. what are you studying
    - d. ask opinions
  - 2. reinforce exchanges (review of nonverbal communication and how to reinforce others)
- C. Data collection and reinforcement
- D. THANK