## A Thesis

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## ABSTRACT

SELF-EVALUATION AND DEPRESSION: THE EFFECTS OF SELF-ESTEEM VERSUS SELF-ACCEPTANCE ON MEASURES OF AFFECT, BELIEFS AND INTELLECTUAL PERFORMANCE. (August 1983)

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Whereas the self-esteem model for self-evaluation permeates the field of psychology, Albert Ellis, in his theory of rational emotive therapy, proposes an alternative in a self-acceptance model. While self-esteem is based on significant others and personal competencies, self-acceptance occurs irrespective of these factors. This study compares self-esteem with self-acceptance.

A $4 \times 2 \times 2$ factorial design was used. One factor was treatment: (a) positive self-esteem, (b) negative self-esteem, (c) selfacceptance, and (d) control. The second factor was a subject variable, namely depression, and included individuals scoring high or low on the MMPI Depression Scale. The last factor was expectancy and included high and low expectancy. Eighty female university students divided into two levels of depression were randomly assigned to one of the treatment groups and to an expectancy level. The
dependent variables included measures of affect, beliefs and intellectual performance.

Results showed significant differences between levels of depression on several indices of affect and beliefs lending further validation for a cognitive theory of depression. Significant results of treatment indicated that the positive and self-acceptance treatments produced less reported depressed affect and that the self-acceptance treatment reduced irrational beliefs pertaining to significant others and personal competencies. These results lend support to Ellis' theory of self-evaluation and to the methodology employed. They suggest the need for further research.

Other significant results suggest that the negative treatment produced more reported depressed and anxious beliefs and feelings in reaction to written situations involving interpersonal conflict and support the theory accepted by all psychologists that negative selfesteem is basically unhealthy. Significant interactions raise important questions about why the negative treatment produced higher performance by high depressed subjects on a specific task and about the role that expectancy played in the study.

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## INTRODUCTION

## The Covert Process

The inclusion of covert events in behavioristic theory.
Conventional behaviorism, perhaps as a reaction to the earlier insight therapies, downgraded the usefulness of mentalistic concepts, such as thoughts, feelings and images, in a scientific account of human behavior. The ideas were retained only because they could be diligently redefined in terms of observable events. In a radical departure from this point of view, present-day behaviorists include private events in the experimental analysis of behavior (Upper \& Cautela, 1979).

Lazarus (1971) speaks of a collapse of behavioristic S-R theories which avoid anything mental to account for those events which occur between $S$ and $R$. The emphasis on covert events (behaviors which perform a mediating function between stimulus and response) was strengthened with the publication of Principles of Behavior Modification by Bandura (1969).

Covert events and classical conditioning. Within the classical conditioning paradigm (Staats, Staats, \& Crawford, 1962) it has been shown how neutral words may come to elicit an emotional response as a result of having been paired with aversive stimulation. If at a later time these same verbal cues are paired with visual (i.e.,
snake) cues, one would expect that by higher order conditioning the visual cue would come to elicit the same emotional response. The ease with which evaluative words may function as unconditioned stimuli in a higher order conditioning paradigm has been demonstrated by Staats and Staats (1958). Important in this particular process is that the mediating event is a cognitive one and often operating at a covert level.

The covert event defined. Upper and Cautela (1979) classified behavior responses into three categories:

1. overt events;
2. covert physiological responses of body systems;
3. covert psychological responses.

Since the third category is the primary concern of this thesis, further explanation follows. Included in this category, according to Upper and Cautela are: (a) thinking, or talking to oneself; (b) imaging, or making responses similar to those that are made to particular stimuli when these stimuli are not present; and (c) feeling, or reproducing sensations (bodily cues) which one learns (via the verbal community) to apply to certain inferred responses (e.g., pain).

Elaborating further on their definition of the covert process, Upper and Cautela (1979) described three main assumptions upon which the process is based:

1. Homogeneity: a continuity between overt and covert behavior so that both processes share similar importance and properties in explaining, maintaining, and modifying behavior.
2. Interaction: an interaction between covert and overt events so that covert responses can influence overt and covert behavior in a manner similar to overt behaviors.
3. Learning: a process whereby covert and overt events are similarly governed by laws of learning.

The efficacy of covert conditioning procedures based on these assumptions is well documented by Upper and Cautela (1979). While the actual procedures of covert conditioning are not a concern of this thesis, an understanding of the covert process as a very potent and pervasive factor in human behavior is essential. To investigate how the covert process of cognition affects the covert processes of feelings and beliefs and the overt process of intellectual performance is the major task of this paper.

The importance of covert events in psychology. The importance of cognitions in human experience has long been emphasized in the field of psychology. Dollard and Miller (1950) state that an individual's response to an activating experience is mediated by labels. Reactions are seen as responses to the way a person labels a situation, and not necessarily to the situation itself. Adler (1927) states that no experience is a cause of success or failure...humans are self-determined by the meaning they give experience. Kelly (1955) suggests that the world is one of meaningful interpretations or points of view...it is not that humans 'make up' the world to suit their fancy. Events are handled in such a way that human interpretations 'fit' them. Freud (1965), in his first work with Josef Breuer, noted that many hysterical phenomena are ideogenic.

The cognitive behavior therapists support and practice a theory which most solidly acclaims the significance of cognitions in human behavior. Of particular value to psychotherapists is the recent focus of this theory on the role of covert events in the etiology, maintenance and treatment of various types of psychopathology (Bandura, 1977; Beck, 1976; Ellis \& Grieger, 1977; Goldfried \& Davison, 1976; Mahoney, 1977). While cognitive behavior therapists acknowledge the interrelation of cognition, emotion and behavior, they assert that central to their whole theory is the hypothesis that thinking creates emotion and affects behavior.

Covert events preceding behavior. Providing partial support for the supposition that thinking precedes, accompanies and significantly influences emotion is the two-factor attribution theory of emotion as proposed by Schacter and Singer (1962). According to this theory, emotions react both to change in arousal or activation level and to a cognitive interpretation--an attribution--that explains the change.

In a classic study by Schacter and Singer (1962) the two-factor attribution theory of emotion was tested. Subjects received what they thought was a vitamin injection in an experiment purportedly designed to assess the effects of the "vitamin" on vision. The injection was actually adrenalin (except in the case of the control group). One group of subjects was told that the "vitamin" would have such side effects as heart palpitations and tremor (the real effects of adrenalin); the second group of subjects were told that side effects included itching and headache (not usually associated
with adrenalin); and a third group was told to expect no side effects.

While waiting for the "vision test," each subject sat in a room with another person who acted very happy and frivolous or very angry and annoyed. The major finding was that subjects who did not expect the arousal symptoms produced by adrenalin were likely to experience and express the emotion displayed by the confederate. Important to the results is that the cognitive interpretation of the situation, rather than the actual effects of the drug, affected the expression of emotion.

Rimm and Litvak (1969) lend further support to the hypothesis that thinking precedes and influences behavior. In a study on selfverbalization and emotional arousal it was shown that experimental subjects showed a greater response on galvanic skin response and respiration rate if they read affectively loaded sentences rather than control subjects who read neutral sentences.

In a study of physiological responses to self-statements, Rogers and Craighead (1977) found (using skin conductance as the dependent variable) that negative, moderately discrepant selfstatements induced greater arousal than positive, moderately discrepant self-statements. Maudel and Shrauger (1980) conducted a study in which subjects received either self-enhancing or selfcritical statements to concentrate on and experience. The two groups differed significantly in their self-descriptions with the self-enhancing group reporting feeling less anxiety, depression, anger and fatigue than the self-critical group and at the same time
feeling significantly more happy and cheerful. Subsequent heterosexual approach by the subjects showed that the self-enhancing group had a significantly shorter latency in initiating conversation and spent significantly more time conversing. Further research by Russell and Brandsma (1974) give support to the previously cited research. In their study the galvanic skin responses of the experimental group (with emotionally loaded stimuli) were significantly higher than the control group (with neutral stimuli).

Research by Velten (1968) and Meichenbaum (1972) demonstrated a relationship between self-verbalizations and behavioral efficiency. Velten had subjects read statements intended to be elating or depressing. The elation group performed better than the depression group on a number of subsequent speed tasks. Meichenbaum taught schizophrenics and hyperactive children to talk to themselves in a directive, self-regulatory way. They did significantly better on several behavioral tasks than those not receiving such instruction. Specific to this thesis is a particular form of the covert process as postulated by Albert Ellis (1972). The above research lends support to his theory but does not directly test it.

Irrational beliefs. The theory of rational emotive therapy as outlined by Albert Ellis (1971, 1972, 1973) is based on many of the same principles as cognitive behavior therapy. Cognition or thinking is viewed as a semantic process which includes self-referent statements. According to Ellis, people invariably talk to themselves; what they say to themselves, and how they say these things, significantly affect their emotions and behavior and
sometimes lead them to feel emotionally disturbed. Ellis termed these beliefs, the covert basis for psychopathology, as "irrational beliefs."

Ellis (1973) further define irrational beliefs as strong beliefs in some magical, unverifiable hypothesis; namely, that something is terrible, that it should not exist; and that in order to be the least happy it must be changed.

Employing an ABC framework Ellis (1973) contends that at point $A$ an activating experience occurs. At point $C$ a reaction is made to $A$ in terms of emotional and/or behavioral consequences. However, $C$ is not a direct result of $A$, but of $B$, the belief (the selfstatements, the words and ideas said to the self) about A. When B is irrational, the belief may be a basis for emotional or behavioral disorder. As in cognitive behavior therapy, the idea that cognitions create emotion and behavior is primary to the theory of rational emotive therapy.

Studies investigating the effect of irrational beliefs.
Goldfried and Sobocinski (1975) investigated the relationship between irrational beliefs and emotional arousal. Their subjects were two groups of college students, one group which held an irrational belief in the importance of social approval and one group which did not. As a result of imagining social rejection scenes, the subjects subscribing to the irrational belief reported that they became more anxious and hostile than did the subjects who did not hold this belief.

In a study by Alden and Safran (1978) nonassertive individuals completed a measure of Ellis' irrational beliefs. Subjects were then divided into a high-endorsement and a low-endorsement group. Subjects who endorsed the irrational beliefs were observed to be less assertive and described themselves as more uncomfortable when role-playing assertion situations. In addition, the high-endorsement group described themselves as less frequently assertive in real life and as far more uncomfortable when confronted with assertion situations. The two statements which most effectively distinguished between the high and low endorsers were those concerning competence and the reactions of others.

Irrational beliefs and depression. Nelson (1977) attempted to assess irrational beliefs relating to depression by administering a test of irrational beliefs to undergraduates who scored as depressed and nondepressed on the Beck Depression Inventory. Depressed subjects endorsed beliefs that were irrational regarding high selfexpectations, frustration reactivity, anxious overconcern, and helplessness significantly more than normals. One problem with this particular study is that using the cut off of 10 on the Beck may not have resulted in a group of subjects with a depressive response. All the subjects may have been essentially normal.

In studying the relationship of irrational beliefs to selfreported depression, LaPointe and Crandell (1980) compared normal individuals and persons reporting themselves to be psychologically distressed but not depressed to persons describing themselves as depressed and psychologically distressed. Depressed persons scored
as significantly more irrational than either psychologically distressed or normal persons. In addition, psychologically distressed persons scored as significantly more irrational than normals.

Depressed persons in this study scored as more irrational than other equally distressed persons on needing to excel in everything in order to feel worthwhile and being terribly upset when things are not as one wishes. Depressed persons also endorsed the beliefs that unhappiness is caused by events outside of personal control and that problems are best avoided. Depressed people may feel particularly vulnerable in controlling aversive events and because they are prone to setting such high expectations, failure and emotional distress ensue (LaPointe \& Crandell, 1980). While the results of this study are indeed suggestive of a strong relationship between depression and irrational beliefs, they are limited due to the lack of behavioral results.

The specific self-talk of Ellis. Research by Schill, Evans, Romanaiah and Monroe (1978) directly tests the specific self-talk proposed by Ellis. In the study subjects performed a trial of mirror tracing and then concentrated on rational self-talk ("Mistakes do not mean I am stupid. They give me a lot of information which hopefully I can use to become better at this"); irrational self-talk ("If I do not do this perfectly well next time it will prove I am stupid"); or neutral sentences prior to performing three subsequent trials. In all cases subjects were led to believe that concentrating on these sentences would help reduce errors. The
rational sentences group reduced errors and completed their tracings more quickly over trials than the other two groups.

In general, the data collected in this research suggest that researchers ought to pay closer attention to cognitive elements when attempting to account for individual differences in performance situations. Further research to determine whether the type of selftalk used in this study is equally influential on other tasks as well is needed (Schill et al., 1978).

Disputing irrational beliefs. Ellis (1973) extends the A-B-C's therapeutically to D-E's. At point $D$, the individual can be taught to dispute his irrational beliefs. And, at point $E$, the emotional and/or behavioral effects of this disputation will most likely occur-the effects being a clearly less abnormal response than before $D$ was employed. Many studies appear in the literature that demonstrate the effectiveness of rational-emotive therapy technique (Digiuseppe, Miller, \& Trexler, 1977).

Behavioral versus cognitive therapeutic approaches. Gardner and Oei (1981) investigated the relative effectiveness of the behavioral and cognitive approaches to the treatment of depression using clinically depressed clients and the relationship between self-esteem and depression before and after treatment. Sixteen depressed patients matched for sex, age, and levels of depression were assigned to either the cognitive or the behavioral treatment group. The cognitive treatment consisted of presentations, discussions and
tasks around Ellis' ABC theory. The behavioral treatment consisted of learning to overcome helplessness by participating in previously avoided but potentially rewarding activities. A three-week baseline followed by an eight-week treatment program was given to subjects in each group. The results of statistical analyses show that both treatment groups were effective in alleviating depression, but the cognitive treatment group improved at a faster rate than the behavioral treatment group. No significant correlation between selfesteem and depression was observed at baseline. However, a significant inverse relationship was observed at posttreatment and follow-up.

The findings that both behavioral and cognitive approaches were effective in the treatment of depression are consistent with recent literature (Beck, Rush \& Shaw, 1979; Ellis \& Harper, 1975; Seligman, 1978; Shaw, 1977). More important is that the study by Gardner and Oei (1981) showed that cognitive treatment decreased depression in clinically depressed patients at a faster rate than behavior treatment and, although the results indicated no significant differences between the treatment conditions, they suggested a tendency for those in the cognitive treatment group to have a more effective selfconcept than those in the behavioral treatment group.

Cognitive behavior therapy (CBT) and rational emotive therapy (RET). In a discussion of the similarities and differences between CBT and RET, Ellis (1980) cites a major difference that is central to this thesis. He states that: RET differs significantly from behavior therapy, from cognitive behavior modification, and from
almost all other humanistic existential therapies in that it does not espouse positive self-rating--of clients acquiring what is often called "self-confidence" or "self-esteem." Like the other therapies, it emphasizes the danger of self-downing or self-disesteem, but it takes the position that all ratings or evaluations of the self tend to be illegitimate. It holds that although people biologically and socially tend to rate themselves as well as their acts and performances, they can learn to omit the first and to stick only with the second rating. That is, they can set up goals and values and then rate what they do in terms of whether it helps them to achieve these goals, without giving a global rating to their 'selves' for the achievement or nonachievement of such goals. Considerable experimental evidence exists showing that humans do rate themselves and that they affect their emotions and behaviors enormously by the level of self-ratings they choose. Verifying studies include those by Cunningham and Berberian (1976), Forrest and Hokanson (1975), Glasgow and Arkowitz (1975), Kingsbury, Stevens, and Murray (1975), Mischel, Ebbesen, and Zeiss (1976), Shrauger and Terbovic (1976).

## Self-Esteem and Self-Acceptance

Self-esteem. Two types of self-rating based on a continuum have been the concern of psychotherapists: thinking of oneself as worthless or as worthwhile. The latter is obviously deemed as more beneficial. This appears implicit in the work of Freud (1965) and more explicit in the writings of Adler (1927, 1929), Berne (1964), Fromm (1947, 1968) and Rogers (1961, 1970). Those ratings of
worthlessness versus worthwhileness comprise the self-esteem approach to the problem of self-evaluation and are based on competent behaviors and significant others.

The process of self-esteem, according to Secord and Bachman (1964), is the evaluation component of a person's self-concept and has three aspects: the cognitive, the affective, and the behavioral. These different features of identity generally have some judgment of feeling good or feeling bad associated with them. That this evaluative process involving judgments of good or bad is strongly related to how competently one behaves and with whom one interacts in the environment in terms of approval or disapproval has been validated by persons researching in the area of self-evaluation.

Vasta and Brockner (1979) conducted research in which they related self-esteem and self-evaluative covert statements. In the study self-esteem scores, as measured by two standardized inventories, were compared with self-monitored positive and negative selfevaluations in 33 college students. The results showed that: (a) self-esteem was negatively correlated with the absolute rate of negative self-evaluations; (b) self-esteem was negatively correlated with the relative rate of negative self-evaluations, as compared to the rate of all self-evaluations; and (c) only individuals higher in self-esteem produced significantly more positive self-evaluations than negative self-evaluations. These findings suggest that high and low self esteem individuals differ primarily in terms of their production of negative self-evaluations.

The difficulty with the self-esteem model. Miller (1976) states that psychotherapists seem to believe that low self-esteem can be reversed. Individuals can decide that they are more worthwhile by rating themselves more favorably. However, this decision can only be made, according to Miller, when the person decides he/ she is behaving more competently or he/she is receiving more approval from others. Therefore, the deduction is made that psychotherapy should promote interaction in ways that will help clients to increase their self-esteem by being more competent and through significant relationships.

Ellis (1972) presents an argument as to why it is difficult, if not impossible, for a human to have an accurate global rating. For people to have an accurate global rating, Ellis contends they would have to:

1. Be aware of all their past and present behaviors, the conscious and/or unconscious motivation, and the consequences of each of the behaviors.
2. Have a system to record (1).
3. Have an agreed-upon weighted scale to assign the recorded events a numerical value.
4. Have some sort of computer to calculate their present value.

Since people do not have the ability to do the above, it follows that a self-assigned rating would be less accurate. Therefore, people rate themselves on a few of their behaviors and traits that they decide are important. Because few people are capable of behaving well enough to merit a consistently high degree of
worthwhileness, they are most likely to suffer occasionally. The use of the concept of self-esteem is most likely to produce periods of anxiety, depression, hostility, and self-defeating behavior (Miller, 1976).

Self-acceptance - an alternative to self-esteem. According to Miller (1976) the concept of self-acceptance allows people to fully and unconditionally accept themselves, whether or not they behave competently and, whether or not they are approved, loved, and accepted by other people. The fundamental assumption of the selfacceptance system is that a person's "self" cannot be measured or evaluated, and "self" is defined as "being" and has the characteristics of implicit infallibility.

Following are some comparisons that Ellis $(1972,1973)$ suggests to distinguish between self-acceptance and self-esteem:

1. With self-esteem it is possible to logically assign a human being a global rating or value. With self-acceptance, this is not possible.
2. With self-esteem it is possible to evaluate the self. With self-acceptance, this is not possible.
3. With self-esteem people need love, approval and acceptance. With self-acceptance people only want them.
4. With self-esteem people need to be competent. With selfacceptance people only want this.
5. With self-esteem people ask "Who am I?" With selfacceptance, people ask "What are my traits?".
6. With self-esteem, people ask "What is my identity?" With self-acceptance people ask "What sort of things do I enjoy or not enjoy doing?"
7. With self-esteem people ask "What is my worth?" With self-acceptance people ask "How can I improve some of my traits and find more things to experience so that I will continue to live and to have a maximally satisfying existence?".
8. With self-esteem people measure, rate, and evaluate behaviors and/or traits and assign the self that rating. With selfacceptance people do the former but do not assign the self any rating.
9. With self-esteem people can be good, bad, or anywhere in between. With self-acceptance people can only be, and they can do behaviors or exhibit traits which can be judged to be good, bad, or anywhere in between.

Self-esteem vs. self-acceptance in psychotherapy. Ellis (1972) discussed the impact of the self-esteem model on the practice of psychotherapy and concluded with a strong recommendation to use the self-acceptance model. He stated that while almost all systems of therapy aim for self-acceptance, they fall short of this goal. So while Carl Rogers' (1961) "unconditional positive regard" is a great contribution to psychology, Ellis contends that Rogerian and existentialist therapies actually employ highly conditional positive regard through the warm therapeutic relationship and existential encounter with the client. The clients are shown that they are worthy by the therapist's acceptance and leave therapy with the basically irrational
idea that they are worthwhile because their therapist cares for them, and presumably others will care for them as well.

Ellis (1972) continues by stating that such conditional selfacceptance is similarly achieved by the client in most other types of therapy--including experiential, basic encounter, reality, Gestalt, Synannon and operant conditioning therapy. They all espouse the irrational idea that people need the approval of others and, therefore, these therapies teach better techniques of relating rather than disabusing clients of the idea that they have to relate well in order to consider themselves worthwhile human beings.

According to Ellis (1971, 1972), those psychotherapists who practice in terms of helping their clients achieve self-esteem or highly conditional positive regard are clearly misguided. A more realistic aim would be to help these clients attain self-acceptance or unconditional regard.

Miller's investigation of self-acceptance. Miller (1976) performed a partially confirming study of the specific hypothesis of RET that unconditional self-acceptance or self-regard would better consist of no rating of one's self or essence. The purpose of the exploratory investigation was to examine the relative effectiveness of the two different approaches to the problem of self-evaluation: self-acceptance and self-esteem. Subjects were divided into three groups--two therapeutic groups and a waiting list control. Both intervention groups received a baseline procedure of rational-emotive therapy. The only designed difference in the two therapeutic interventions was that of presenting the self-acceptance model or
the self-esteem model. The objective of both therapeutic interventions was to reduce social-evaluative anxiety on scales which measured fear of negative evaluation and social avoidance and distress. The results showed that the self-acceptance group had significantly less fear of negative evaluation than the self-esteem group or the control group. The results of this study were not seen as sufficient support for Ellis and Grieger's (1977) contention that those psychotherapists who employ the self-esteem model are clearly misguided since significant differences were not found on measures of social avoidance and distress. The tentative associations in favor of self-acceptance suggest that further research would be beneficial.

## The Methodology of Mood Induction Procedures

Recent laboratory analogues have made use of mood induction procedures derived from Velten (1968). This mood induction procedure involves having a subject read a number of depressing or elating self-referent statements such as "There is no one I can really call my friend," or "I am a likable person" (Hale \& Strickland, 1976; Natale, 1977; Teasdale \& Fogarty, 1979). The studies have found the procedure to be a very potent manipulator of mood.

Coleman (1975) modified Velten's statement-reading procedure in an attempt to directly manipulate self-esteem by means of a cognitive procedure, and then assessed the effect of such manipulations on depressive symptomology. In this study subjects read reconstructed sets of statements that tapped some aspect of self-esteem. Thus by using self-esteem statements rather than mood statements, a test was made of the assumption that self-esteem is a determinant of
depression. Significant differential effects for the positive, negative and neutral treatment groups were found on the depression scale of the adjective check list, a word association task and a general demeanor measure.

The results of a study by Wilson and Krane (1980) provide fairly strong support for Coleman's methodology and experimental data which suggest that self-esteem can be directly manipulated in the laboratory. More importantly the results indicate that levels of depression vary inversely as a function of self-esteem, and more specifically--a lowering of self-esteem is a determinant of depression. The research also provides implicit support for a cognitive mediation theory of depression in that cognitively induced changes in levels of self-esteem were found to predictably influence a variety of indices of depression.

While numerous investigations have shown evidence of a strong negative correlation between level of self-esteem and level of depression, the Coleman (1975) and Wilson and Krane (1980) studies directly manipulated self-esteem in order to demonstrate a causal, rather than a correlational, relationship between self-esteem and depression. Other experimental studies that have examined the effect of self-esteem manipulated self-esteem indirectly by indicating success or failure on some behavioral task (Flippo \& Lewinsohn, 1971; Loeb, Beck, Diggory, \& Tuthi11, 1964; Loeb, Feshback, Beck, \& Wolf, 1964).

Mirils and McPeek (1977) conducted a study in which self-esteem was manipulated within an attitudinal advocacy paradigm. Subjects
were asked to write three essays either about their positive personality attributes or about social propositions. Subjects who wrote the self-laudatory essays subsequently rated themselves more favorably than did subjects who wrote in support of social propositions.

Since much of the research which investigated self-esteem was done in the area of depression, this thesis also deals with depression and how self-acceptance affects its level in comparison to self-esteem. The literature suggests that there is a strong cognitive component in the experience of depression.

## Depression

Covert and overt processes in depression. According to DSMIII (1980), cognition (or attitude) and performance are affected during the depression state. Among the symptoms cited for depression DSM-III lists the following:

1. prominent depressed mood;
2. irratibility or excessive anger;
3. feelings of inadequacy, loss of self-esteem, or selfdepreciation;
4. pessimistic attitude toward the future;
5. decreased effectiveness or productivity at school, work, or home.

Among these symptoms we see both the covert and overt processes affected.

Beck (1967) lists various manifestations of depression also including covert and overt activity:

1. Emotional: dejected mood, negative feelings toward the self, reduction in gratification, loss of emotional attachments, crying spells.
2. Cognitive: low self-evaluation, negative expectations, self-blame and self-criticism, indecisiveness, distortion of body image.
3. Motivational and Physical: paralysis of the will, avoidance and withdrawal wishes, suicidal wishes, increased dependency, loss of appetite, sleep disturbance, loss of libido, fatigability. The covert process in depression. Hollon and Kendall (1980) found that 30 automatic thoughts (expressing the above listed symptoms) significantly discriminated between depressed and nondepressed subjects. This study supports the idea that depression is a cognitive event related to emotional and behavioral manifestations.

In applying a cognitive approach to understanding depression, Beck (1967) states that during the developmental period the depression prone individual learns certain negative attitudes regarding the self, the outside world, and the future...the person becomes sensitive to certain specific stresses... and responds disproportionately with ideas of personal deficiency and with pessimism.

These attitudes represent persistent cognitive patterns called schemas that influence the way the person responds to a situation and labels its features. When depressive schemas are evoked they lead to feelings of sadness, guilt, loneliness and pessimism. These schemas displace other more appropriate schemas and also disrupt the
cognitive processes involved in attaining self-objectivity and reality testing (Beck, 1967).

Learned helplessness. Behavior therapists have attempted to explain depression as a result of the relative absence of reinforcing consequences in a person's life. Seligman (1975) in his "learned helplessness" theory of emotion adds the cognitive component to the traditional behavioristic interpretation. Seligman states that a perceived absence of any contingency between the person's own efforts and the reinforcing nature of the consequences that follow may result in depression. He suggests that uncontrollable trauma first leads to a state resembling fear. If that trauma continues to be uncontrollable the fear will be replaced by a feeling of helplessness.

Miller and Seligman (1975) have tested the cognitive response to reinforcement of depressed and nondepressed humans. In accordance with the learned helplessness theory of depression, depressed subjects tended to view reinforcement as more response independent than nondepressed subjects when reinforcement was actually response dependent. According to this view the central goal in therapy would be to change the clients' cognitions--to have patients come to believe that their responses produce the gratification they desire-that they are, in short, effective human beings (Seligman, 1975).

The present thesis examines depression in light of the cognitive element and its effect on emotions, belief systems and performance.

## Statement of the Problem.

Research in the area of the covert process and cognitive behavior therapy indicate that particular cognitions both determine and accompany emotion and behavior. Studies which have investigated the theory of rational emotive therapy have demonstrated that "irrational beliefs" are correlated with various types of psychological maladjustment. Some studies have suggested a causal relationship between irrational self-talk and psychological disorder. In addition, research has demonstrated the efficacy of rational emotive therapy in the treatment of these disorders.

A specific kind of irrational self-talk is implicit in the process of self-esteem, according to Ellis and Grieger (1977). This irrational self-talk includes the two major components of the selfesteem model (Miller, 1976): (a) that it is a dire need to be competent in almost all behaviors to consider oneself worthwhile, and (b) that it is a dire need to be loved and approved by almost everyone to consider oneself worthwhile.

Investigations in the area of self-esteem have applied a cognitive methodological procedure. Self-esteem, in both its positive and negative forms, has been experimentally manipulated to determine the differential effects on emotion, beliefs, and performance.

Ellis has proposed an alternative to self-esteem which he has termed self-acceptance. While Ellis' rational and irrational selftalk have been experimentally manipulated in a cognitive procedure in a few studies, the self-acceptance model has not been manipulated
in the same manner as the self-esteem model to determine the differential effects (1977).

The present study investigated the differential effects of positive self-esteem (PSE), negative self-esteem (NSE), and selfacceptance (SA), as compared to a control group (CN), on measures of affect, beliefs, intellectual performance and psychomotor speed.

Because much of the self-esteem research deals with the psychological problem of depression and the differences in self-esteem between depressed and nondepressed persons, this study also included depression as a major variable.

It was hypothesized that there would be significant differential effects of positive self-esteem, negative self-esteem, selfacceptance and control group on measures of affect, beliefs and intellectual performance. The hypotheses included:

1. The PSE Group would report significantly more positive affect, more rational beliefs, and higher performance than the NSE Group or CN Group.
2. The SA Group would report significantly more positive affect, more rational beliefs, and higher performance than the PSE, NSE, or CN Groups.
3. Both the PSE and the SA Groups would significantly affect high depressed subjects in comparison to low depressed subjects.

## Design


#### Abstract

A $4 \times 2 \times 2$ factorial design was used. The first factor was type of treatment administered to subjects: (a) positive selfesteem statements, (b) negative self-esteem statements, (c) selfacceptance statements, and (d) control or neutral statements. The second factor was a subject variable, namely, depression, which included individuals scoring high and low on the MMPI D-Scale. The last factor was expectancy and included high and low expectancy. Subjects


Subjects were 80 female student volunteers solicited from undergraduate psychology classes for extra credit at Appalachian State University based on scores on the Depression Scale (D-Scale) of the Minnesota Multiphasic Personality Inventory (MMPI). (See Appendix A.) Subjects with raw scores 22 and above were placed in the high depressed group. Those with raw scores 19 and below were placed in the low depressed group. See Table I for a description of the means for high depressed and low depressed groups in each treatment. Independent Variables

The positive and negative self-esteem, self-acceptance and control statements and accompanying instructions for each treatment condition were typed, one statement per card, on $3 \times 5$ cards. (See

## TABLE I

MEANS AND T-SCORES FOR HIGH AND LOW DEPRESSED GROUPS WITHIN EACH TREATMENT GROUP

|  | High Depressed <br> Mean <br> T-Score | Low Depressed <br> Mean | T-Score |
| :--- | :---: | :--- | :--- | :--- |

Appendix B.) The experimental manipulation required subjects in each of the conditions to read a different set of 60 statements.

The statements used for the positive and negative self-esteem groups and the control group were the same as those used by Coleman (1975) and Wilson and Krane (1980).

Subjects in the positive self-esteem group received positive attitudinal statements suggesting self-confidence, energy, efficien$c y$, optimism and ease in interpersonal situations. Examples of such statements were "I think of myself as an okay person", "I am productive, I will get things done today", and "I am optimistic that I can get along well with most of the people I meet." Subjects in the negative self-esteem group received negative statements suggesting low self-esteem, lack of energy, inefficiency, pessimism and difficulty in interpersonal relationships. Examples of such statements were "I think of myself as an okay person, I guess", "I have little faith in my abilities", and "Sometimes I feel so alone. No one loves me."

Subjects in the control group received non-self-referent statements to serve as a control for statement reading and experimental participation. Examples of such statements were "Oklahoma City is the largest city in the world in area, 631,166 square miles", "At the end appears a section entitled 'Bibliography Notes'", and "The System is supervised by the Board of Regents."

Subjects in the self-acceptance group received statements with attitudes suggesting a desire for self-confidence, energy, efficiency, optimism, and ease in interpersonal situations, but also
connoting that self-acceptance and self-worth are present whether the experience of these traits is present or not. Examples of such statements were "I accept myself as a worthwhile person whether other people accept me or not", "I want to do a good job but my self-worth does not depend on it", "I accept myself whether I make friends or not." The statements have not been used in previous research but are based on Miller's (1976) concept of self-acceptance versus self-esteem. As related to rational emotive therapy, Ellis ( $1971,1972,1973$ ) contends that such attitudinal self-talk is more rational compared to the self-talk in the positive and negative selfesteem statements and should lead to a decrease in emotional disturbance, e.g., in depression, as compared to positive or negative self-esteem self-talk.

The instructions for each of the treatment groups were to read and imagine the statements. The process, therefore, was an example of a covert event.

Expectancy was manipulated by presenting half of the subjects with a low-expectancy card at the beginning of the treatment cards and by presenting the other half with a high-expectancy card. The low-expectancy card read "These cards have been used previously in research to determine the effects that our thoughts have on learning. The previous research found only a weak relationship between the two." The high-expectancy card read "These cards have been used previously in research to determine the effects that our thoughts have on learning. The previous research found a strong relationship between the two." This manipulation was used to determine if demand
characteristics of the various treatment groups influenced the reported results on the dependent variables.

## Dependent Measures

The dependent measures included tests of affect, beliefs, and intellectual performance. Refer to Appendix C for copies of these measures.

Depression Adjective Checklist (Lubin, 1981), Form A. The checklist contains 22 negative adjectives and 10 positive adjectives, characteristic of a depressed or elated state. Subjects were asked to describe themselves in the present by checking the adjectives which apply. A depression score was obtained by adding the number of negative items checked plus the number of positive items not checked. The highest score is 32 and indicates maximum depression.

Irrational Values Scale (MacDonald \& Games, 1972). This scale contains nine irrational statements. Each statement is followed by a scale of one to nine, and subjects were asked to mark the number on the scale which indicated the extent of their belief in the statement. A composite irrational values score is derived by adding the scaled numerical values for each statement. The highest possible score is 81 and indicates maximum adherence to irrational values.

Irrational Values Score (MacDonald \& Games), Items One and Two.
Items one and two on the Irrational Values Scale, while not administered separately were scored separately. They pertain to personal competencies and significant others, the two major components of the self-esteem model (Miller, 1976). A score was derived by taking the average of the two scaled numerical values. The highest
possible score is nine and indicates maximum belief in these two irrational values.

The Situational Self-Statement and Affective State Inventory (Harrell, Chambless, \& Calhoun, 1981). The inventory consists of five hypothetical statements, all concerning interpersonal conflict. Following each situation, five sets of beliefs and five sets of affective state descriptors are listed. The statements and descriptors represent anger, anxiety, depression, suspicion, and rationality. Each statement and descriptor is followed by a five-point scale. Subjects were asked to rate how characteristic each statement and descriptor was of them. Composite scores for each statement or descriptor over all five situations were found by adding the total scaled values that applied for each and dividing by five. Scores were calculated for 12 subtests: Rational Beliefs, overall Irrational Beliefs (Anger, Anxiety, Depression, and Suspicion scores divided by four), Anger Beliefs, Anxiety Beliefs, Depression Beliefs, Suspicion Beliefs, Rational Affect, overall Irrational Affect (Anger, Anxiety, Depression, and Suspicion scores divided by four), Anger Affect, Anxiety Affect, Depression Affect, and Suspicion Affect. The highest possible score on each of these measures was five, indicating maximum rationality, irrationality, anger, anxiety, depression or suspicion.

Inductive Reasoning Test (Baldwin, 1946). This test, a cognitive task measuring numerical ability, consisted of 20 items on legal size paper, each containing a number series. Subjects were asked to choose and mark two of five numbers after each series which
successfully completed the original series. A total score was derived by adding the number of items completed successfully. The highest score possible was 20 and indicated the successful completion of all series.

Anagrams (Moon, 1974). This test, a cognitive task measuring verbal ability, contained 10 anagrams arranged in order of difficultty. Subjects were asked to solve each anagram. The total number of anagrams successfully completed comprised the overall score. The highest possible score was 10 and indicated successful completion of all anagrams. This was a cognitive task measuring verbal ability.

Estimation of Probability of Success on Anagrams. Before completing each anagram subjects were asked to rate what their estimate of success would be on each anagram on a scale of $0 \%$ to $100 \%$, with intervals of 10 . Scales were presented on the same page before each anagram. A composite estimation score was derived by adding the 10 separate percentages and dividing by 10 . The highest possible score was $100 \%$.

Digit Symbol Subtest WAIS-R (Weschler, 1981). This is a test of psychomotor speed in which subjects were asked to pair symbols with numbers according to a presented pattern. The total score was calculated by adding the number of correct pairings. The highest possible score was 93 and indicated that all correct pairings were made.

## Procedure

Subjects were classified as high or low depressed according to scores on the MMPI D-Scale. The high and low depression groups were
randomly assigned to the eight treatment groups based on their order of appearance. They were also randomly assigned to the high or low expectancy groups.

The experiment was conducted in small groups in Room 200 of Smith-Wright Hall, Appalachian State University between 6:30 and 8:00 p.m. on Monday, Wednesday and Thursday nights. After signing a consent form (see Appendix D), the subjects were seated in desks facing the experimenter in front of the room.

After subjects were seated, the experimenter presented each with a pack of 64 cards. The high or low expectancy card was presented first. Three cards of instructions were then read by the subjects followed by 60 cards of statements particular to one of the conditions. As far as possible, all conditions were represented at each group meeting. Subjects were asked to read through the cards one time at the same rate, going from one card to another upon a signal from the experimenter every ten seconds.

Following the independent variable manipulation the subjects were presented with the dependent measures. The Depression Adjective Check List, the Irrational Values Scale, and the Situational Self-Statement and Affective State Inventory were presented first, in that order, for subjects to complete independently. Instructions for completing the measures were written on the forms.

The last three measures, the Anagram task, the Inductive Reasoning task, and the Digit Symbol test, were administered with oral instructions by the experimenter. There were time limits for these tasks: ten minutes for each of the first two tasks and 90
seconds for the last task. The order of administration was counterbalanced over testing sessions.

Following collection of the performance tasks all subjects were debriefed. The experimenter explained briefly the nature of the experiment to the subjects, explaining what questions it hoped to answer, the difference among treatments and randomization. Subjects were given an opportunity to ask questions and express their feelings. No subjects expressed or exhibited distress during the debriefing period. Subjects were told that the results of the experiment would be placed on a bulletin board in Smith-Wright Hall. They were displayed fall semester, 1982. As such, the experiment met ethical standards set forth by American Psychological Association guidelines.

A 2(depression) $\times 2$ (expectation) $\times 4$ (treatment) univariate analysis of variance was conducted on all the dependent variables. An alpha level of .05 was adopted for the interpretation of results.

## RESULTS

As seen in Table II, significant main effects of depression were found on the Depression Adjective Check List scores, on the Irrational Values Scale and on ratings for Rational Beliefs, Anxious Beliefs, Depressive Beliefs, Irrational Affect, and Depressive Affect on the Situational Self-Statement and Affective State Inventory (SSASI).

A main effect of treatment was found on the Depression Adjective Check List, $\underline{F}(3,64)=5.590, \mathrm{P}<.01$ (see Table I). ANOVA tables are found in Appendix E. Duncan's Multiple Range Test was used to detemine which groups were significantly different (see Table I). Duncan's Multiple Range Test tables are found in Appendix F.

The mean scores of the positive group ( $M=3.65$ ) and the selfacceptance group ( $M=5.20$ ) were both significantly lower (less depressed) than the mean scores of either the negative group ( $M=9.70$ ) or the control group $(M=8.70)$. However, there was not a significant difference between mean scores of the positive group and the self-acceptance group.

A main effect of treatment was found on the average of the mean scores of the first two irrational beliefs of the Irrational Values scale, $\underline{F}(3,64)=3.999, \mathrm{P}<.01$ (see Table II). The two irrational

## TABLE II

MEAN SCORES ON DEPENDENT VARIABLES PRODUCING SIGNIFICANT MAIN EFFECTS FOR DEPRESSION

| Dependent Variable | Means |  |
| :---: | :---: | :---: |
|  | High Depressed Group | Low Depressed Group |
| Depression Adjective Check List | 9.900 | 3.725*** |
| Irrational Values Scale | 32.025 | 25.950* |
| Situational Self-Statement and Affective State Inventory (SSASI) Rational Beliefs | 3.865 | 4.140* |
| SSASI Anxious Beliefs | 2.475 | 2.060* |
| SSASI <br> Depressive Beliefs | 2.398 | 2.025* |
| SSASI <br> Irrational Affect | 2.750 | 2.370** |
| SSAI <br> Depressive Affect | 2.705 | 2.115** |

[^0]beliefs dealt with the major components of self-esteem (Miller, 1976) :

1. The need to have the approval of virtually all significant others, and
2. The need to be competent in everything one does.

To determine which groups were significantly different, Duncan's Multiple Range Test was used (see Table II). The mean score of the positive group ( $M=5.25$ ) was significantly higher (more irrational) than the mean score of the control group ( $M=$ 3.76). Mean scores of the positive group ( $M=5.25$ ) and the negative group ( $M=4.65$ ) were both significantly higher than the mean score of the self-acceptance group ( $M=3.05$ ).

A main effect of treatment was found on four measures on the SSASI. The significant effect was found on depressive beliefs, $\underline{F}(3,64)=2.983, \underline{p}<.05$; on irrational affect, $\underline{F}(3,64)=4.702$, $\mathrm{p}<.01$; on anxious affect, $\underline{F}(3,64)=3.278, \mathrm{p}<.05$; and on depressed affect, $\underline{F}(3,64)=10.866, \mathrm{p}<.001$ (see Tables III, IV, V, and VI). Duncan's Multiple Range Tests were used to find which groups were significantly influenced (see Tables III through VI).

As can be seen in Table III, the mean ratings of the negative group were significantly higher on three subscales than the mean ratings of the other three groups. The mean rating of the negative group was significantly higher (more anxious) than the mean ratings of the positive or self-acceptance groups on anxious affect.

A main effect of expectancy was found on anxious affect on the SSASI, $\underline{F}(1,64)=5.573, \mathrm{p}<.05$ (see Table V). Subjects who were

TABLE III
MEAN SCORES ON FOUR SSASI MEASURES PRODUCING
SIGNIFICANT MAIN EFFECTS FOR TREATMENT

|  | Means of Treatment Groups |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Dependent <br> Variable <br> SSASIa | Positive <br> Group | Negative <br> Group | Self-Acceptance <br> Group | Control <br> Group |
| Depressive <br> Beliefs | 1.98 | $2.69^{\mathrm{b}}$ | 2.07 | 2.07 |
| Irrational <br> Affect | 2.40 | $3.02^{\mathrm{c}}$ | 2.36 | 2.47 |
| Anxious <br> Affect | 2.76 | $3.30^{\mathrm{d}}$ | 2.59 | 2.92 |
| Depressed <br> Affect | 2.13 | $3.07^{\mathrm{e}}$ | 2.13 | 2.31 |

${ }^{\text {Highest }}$ SSASI Score $=5$
${ }^{\mathrm{b}}$ Significantly higher than Positive, Self-Acceptance and Control Groups, p < . 05 .
${ }^{\mathrm{C}}$ Significantly higher than Positive, Self-Acceptance and Control Groups, p < . 05.
${ }^{\mathrm{d}}$ Significantly higher than Positive and Self-Acceptance Group, $\mathrm{p}<.05$.
${ }^{\mathrm{e}}$ Significantly higher than Positive, Self-Acceptance and Control Groups, $\mathrm{p}<.05$.
given the high expectancy statement had a significantly higher mean rating ( $M=3.09$ ) on a scale of anxious affect in reaction to written situations involving interpersonal conflict than the mean rating ( $M=2.70$ ) of subjects given the low expectancy statement.

A main effect of expectancy was also found on the Estimation of Success Probability for the Anagram task, $\underline{F}(1,64)=5.309$, $\mathrm{p}<.05$ (see Table VII). These results show that the mean estimation score ( $M=79.2$ ) of subjects given the high expectancy statement was significantly lower than the mean estimation score ( $M=86.7$ ) of subjects given the low expectancy statements.

A two-way interaction was found between Depression and Treatment on Digit Symbol scores, $\underline{F}(3,64)=3.637$, $\mathrm{p}<.02$ (see Table VIII). As shown in Figure I, a large difference occurs between the mean Digit Symbol scores of the high and low depressed groups in the negative and control treatment groups. (negative: high depressed $M=75.5$; low depressed $M=66.0$; control: high depressed $M=65.7$; low depressed $M=77.3$ ). Unexpectedly, high depressed subjects in the negative group had a mean score higher than the low depressed subjects.

Finally, a three-way interaction among treatment, depression, and expectancy was found on Rational Beliefs (SSASI), $\underline{F}(3,64)=$ $3.994, \mathrm{p}<.01$ (see Table IX). As indicated in Figure II, high depressed subjects scored highest on rational beliefs on the SSASI in the self-acceptance group when given the low expectancy statement $(M=4.48)$. When given the high expectancy statement in the selfacceptance group, high depressed subjects scored the lowest ( $M=3.52$ ).


Figure 1. Two-way interaction between depression and treatment on digit symbol scores.


Figure 2. Three-way interaction among treatments depression and expectancy on rational beliefs (SSASI) scores.

## DISCUSSION

The present data clearly validate the MMPI D-Scale as a measure of depression. Although the subjects for the study were from a nonclinical population, the two groups of subjects were significantly different on various dependent measures: the Depression Adjective Check List, the Irrational Values Scale, and on SSASI scales for Rational Reliefs, Anxious Beliefs, Depressive Beliefs, Irrational Affect and Depressive Affect. Subjects in the high depressed group scored significantly higher than subjects in the low depressed group on these indices of depression. This is consistent with a large body of literature which exists to support the validity of the MMPI scales.

The largest mean difference between the high and low depressed groups was found in the control group. It is believed that this fact had little bearing on results, but will be taken into consideration in discussion when deemed warranted.

Based on the data in this study it is evident that the high depressed subjects claim significantly more irrational values than low depressed subjects. They also adhere to significantly more anxious and depressed beliefs and significantly less rational beliefs in reaction to written situations which involve interpersonal conflict. This is consistent with previous research which supports a
cognitive theory of depression (Beck, 1967, 1976, 1979; Coleman, 1975; Ellis, 1971, 1972, 1973; Flippo \& Lewinsohn, 1971; Forrest \& Hokanson, 1975; Gardner \& Oei, 1981; Goldfried \& Davison, 1976; Hale \& Strickland, 1976; Hollon \& Kendell, 1980; LaPointe \& Crandell, 1980; Miller \& Seligman, 1975; Natale, 1977; Nelson, 1977; Shaw, 1977; Teasdale \& Fogarty, 1979; Wilson \& Krane, 1980).

Affectively, higher depressed subjects scored as significantly more irrational and more depressed in reaction to written statements concerning interpersonal conflict than low depressed subjects. This idea also supports cognitive theory in that the depressed and less rational thoughts of the more highly depressed subjects correspond with the higher level of depression. That beliefs but not anxious affect were present in high depressed persons may have resulted from subject grouping according to depressed symptoms only. While anxiety is part of the experience of the high depressed individual in this study at a cognitive level, the anxious beliefs may not have been strong enough to affect the emotional level.

Apparently, according to these results, high depressed people experienced neither angry nor suspicious thoughts or feelings in response to the SSASI. One explanation may be that more depressed persons are less responsive to their environment; therefore, those beliefs and feelings which would be directed toward others (e.g., anger and suspicion) are insignificant symptoms of the high depressed individual used in this study.

Significant differential effects of depression alone were not found on any of the performance tasks presented in this study. This may be because subjects were from a nonclinical population--ranges where beliefs or feelings were not disturbed enough to slow down performance.

Results of the effect of treatment on the Adjective Check List scores clearly suggest that the induction of both positive and selfacceptance attitudes are equally important in reducing depressive affect. The fact that a positive attitude reduces depressive affect reinforces many previous findings (Hale \& Strickland, 1976; Natale, 1977; Teasdale \& Fogarty, 1979; Coleman, 1975; Wilson \& Krane, 1980).

This is the first study in which self-acceptance statements were used in the same way as positive and negative self-referent statements were used in previous laboratory manipulations of selfesteem. The finding suggests that the induction of the selfacceptance statements is evidence, at least in comparison to negative and neutral statements, that self-acceptance can also be manipulated experimentally. Attempts to make the self-acceptance statements more potent and further research comparing them with positive self-statements are needed.

The main effect of treatment found on the average score of the first two irrational values of the Irrational Values Scale (two major components of Self-Esteem) clearly supports Ellis' (1971, 1972, 1973) contention that self-acceptance reduces the strength of these irrational beliefs in one's mind significantly more so than
negative or even positive self-talk and also supports the study done by Miller (1976). These results also lend further support to a methodology which included the manipulation of the selfacceptance attitude.

The fact that subjects were significantly less irrational on these two components of the self-esteem model when they read selfacceptance statements than when they read positive or negative statements clearly suggests that Ellis' self-acceptance model is a viable alternative to the self-esteem model. Further, it suggests that self-acceptance may be a more effective alternative. Results show that it had a significant effect in reducing irrational beliefs compared to the self-esteem model.

This study suggests that while positive and negative selfesteem lead to different kinds of affective responses, they produce similar beliefs. A person's belief system is usually less unstable than one's feelings, and the fact that these were significantly reduced in the self-acceptance group suggests the hypothesis that self-acceptance may have a more healthy long-term effect than positive self-esteem on those who adhere to it. Further studies are needed to test this hypothesis.

It stands to reason that self-acceptance, since it is a cognitive approach, would affect the belief system first. It is predicted that with long-term exposure to self-acceptance, the more rational values about significant others and personal competencies would become firmly entrenched in a person's belief system and would
naturally lead to more rational feelings and behaviors that would remain stable and less vulnerable to stress.

The result which showed that the positive treatment group was more irrational on these two values than the control group pointedly suggests that adherence to positive self-esteem is less effective than having no model for self-evaluation. This finding certainly raises the question of the effectiveness of the self-esteem model and needs further research.

Results of the main effect of treatment on depressive beliefs, irrational affect, anxious affect and depressed affect in response to written situations of interpersonal conflict suggests that the induction of the negative mood state is more potent than any of the other mood states within this context. Advocates of both the selfacceptance model and the self-esteem model would agree that negative self-talk has an unhealthy effect compared to self-acceptance or positive self-talk (Ellis, 1973; Rogers, 1961, 1970; Adler, 1927, 1929). The results suggest that this effect is more noticable when one is reacting to conflict-laden, yet realistic, situations involving people. It is hypothesized that persons reading statements indicative of depressed symptoms may become less responsive to the environment as does the naturally depressed individual. When confronted with interpersonal realities, the affect was internal and focused on the self and thus shown with depression and anxiety. This is consistent with the previous finding in this study that high depressed people showed depressed and anxious beliefs and depressed affect in response to the same situations.

The main effect of expectancy on anxious affect in response to written situations involving interpersonal conflict shows that high expectancy produced more anxiety in these situations. It is speculated that the anxiety reported as a result of high expectancy was of a healthy kind which is motivating. That is appeared in reaction to situations of conflict may indicate that the degree of anxiety facilitated problem-solving and action in relationships.

The main effect of expectancy on Estimation of Probability of Success, however, can be interpreted in the same manner or in a different way. With the effect of high expectancy about the statements which were read, persons were less confident of their success. This may mean that subjects were more realistic, and therefore more healthy, in their estimations or that such expectations about an environmental stimulus (the statements) actually reduced the subjects' confidence about their success in an unheal thy manner.

The two-way interaction found between depression and treatment on Digit Symbol scores was not expected. High depressed subjects in the negative group had a mean score significantly higher than low depressed subjects. It is speculated that because high depressed subjects were reading statements congruent with their more depressed state, their performance was not affected. Whereas, because the low depressed subjects were reading statements incongruent with their less depressed state, their performance was affected adversely as would be expected.

Expected differences were found in the positive, self-acceptance and control groups where high depressed subjects scored lower than
low depressed subjects. The greatest mean difference was found in the control group and may be reflective of the previously mentioned fact that the largest mean difference between the high and low depressed groups was found in the control group.

The three-way interaction among treatment, depression and expectancy on the SSASI subscale Rational Beliefs, first of all, showed that the positive and control groups produced the ordering that would be expected. In the negative group there was essentially no difference. However, in the self-acceptance group it appears that expectancy was the major factor that differentiated scores among high depressed subjects. With low expectancy, high depressed subjects were more rational than with high expectancy.

In surmary, this thes is confirmed previous findings which show that high depressed and low depressed people differ in their reports of affect and cognitive state. These results support previous knowledge about the state of depression and about a cognitive theory of depression. These effects were found on reports of affect and beliefs, internal in nature, and not on intellectual performance.

Findings showed that the self-acceptance alternative to selfesteem proposed by Ellis (1972) is a viable option and needs further research. In relation to positive self-esteem, self-acceptance appears to affect the belief system more readily than feelings. Selfacceptance, according to these results, produced more rational beliefs than either negative or positive self-esteem which are similar in the beliefs they produce.

Negative self-esteem appears to have a more potent effect in areas of interpersonal conflict, and in a more unhealthy manner. Expectancy had an effect on reported anxiety and estimation of success probability which may or may not have facilitated interpersonal problem solving and feelings of confidence. Significant interactions raised points about the congruency between reading negative statements and the already depressed state in the effect on performance and on the effect which expectancy has on high depressed subjects in the self-acceptance treatment.

REFERENCES

## REFERENCES

Adler, A. The science of living. New York: Greenberg Publishing Co., 1929.

Adler, A. Understanding human nature. New York: Garden City Publishing Company, 1927.

Alden, L., \& Safran, J. Irrational beliefs and nonassertive behavior. Cognitive Therapy and Research, 1978, 2, 357-364.

American Psychiatric Association. Diagnostic and statistical manual of mental disorders (3rd ed.). Washington, D.C.: Author, 1980.

Baldwin, G. Inductive reasoning test. Nashville: Educational Testing Bureau, 1946.

Bandura, A. Principles of behavior modification. New York: Holt, Rinehart and Winston, 1969.

Bandura, A. Self-efficacy: Toward a unifying theory of behavior change. Psychological Review, 1977, 84, 291-315.

Beck, A. T. Cognitive therapy and the emotional disorders. New York: International Universities Press, 1976.

Beck, A. T. Depression: Clinical, experimental and theoretical aspects. New York: Harper and Row Publishing Co., 1967.

Beck, A. T., Rush, J., \& Shaw, B. Cognitive therapy and depression. New York: Guilford Press, 1979.

Berne, E. Games people play. New York: Grove Press, 1964.
Coleman, R. E. Manipulation of self-esteem as a determinant of mood of elated and depressed women. Journal of Abnormal Psychology, 1975, 84, 693-700.

Cunningham, T., \& Berberian, V. Sex differences in the relationship of self-concept to locus of control in children. Personality and Social Psychology Bulletin, 1976, 2, 227-281.

Digiuseppe, R., Miller, N., \& Trexler, L. Outcome studies of rational-emotive therapy. The Counseling Psychologist, 1977, ㄱ, 64-72.

Dollard, J., and Miller, N. E. Personality and psychotherapy: An analysis in terms of learning, thinking, and culture. New York: McGraw-Hill Book Co., Inc., 1950.

Ellis, A. Growth through reason. Palo Alto: Science and Behavior Books, 1971.

Ellis, A. Humanistic psychotherapy: The rational-emotive approach. New York: Julian Press, 1973.

Ellis, A. Psychotherapy and the value of a human being, in Davis, J. W. (Ed), Value and valuation: essays in honor of Robert S. Hartman. Knoxville: University of Tennessee Press, 1972.

Ellis, A. Rational-emotive therapy and cognitive behavior therapy: Similarities and differences. Cognitive Therapy and Research, 1980, 4, 325-340.

Ellis, A., \& Grieger, R. Handbook of rational-emotive therapy. New York: Springer Publishing Co., 1977.

Ellis, A., \& Harper, R. A new guide to rational living. Englewood Cliffs, N. J.: Prentice Hall Publishing Co., 1975.
Flippo, J. R., \& Lewinsohn, P. M. Effects of failure on the selfesteem of depressed and nondepressed subjects. Journal of Consulting and Clinical Psychology, 1971, 36, 151.
Forrest, M. S., \& Hokanson, J. E. Depression and autonomic arousal reduction accompanying self-punitive behavior. Journal of Abnormal Psychology, 1975, 84, 346-357.
Freud, S. Standard edition of the complete psychological works of Sigmund Freud. London: Hogarth Publishing Co., 1965.
Frorm, E. Escape from freedom. New York: Holt, Rinehart and Winston, 1968.
Fromm, E. Man for himself. New York: Holt, Rinehart and Winston, 1947.

Gardner, P., \& Oei, T. P. S. Depression and self-esteem: An investigation that used behavioral and cognitive approaches to the treatment of clinically depressed clients. Journal of Clinical Psychology, 1981, 37, 128-135.

Glasgow, R. E., \& Arkowitz, H. The behavioral assessment of male and female social competence in dyadic heterosexual interactions. Behavior Therapy, 1975, $\underline{6}, 488-498$.

Goldfried, M. R., \& Davison, G. C. Clinical behavior therapy. New York: Holt, Rinehart and Winston Publishing Co., 1976.

Goldfried, M., \& Sobocinski, D. Effects of irrational beliefs on emotional arousal. Journal of Consulting and Clinical Psychology, 1975, 43, 504-510.

Hale, W. D., \& Strickland, B. R. Induction of mood states and their effect on cognitive and social behaviors. Journal of Consulting and Clinical Psychology, 1976, 44, 155.

Harrell, T. H., Chambless, D. L., \& Calhoun, J. F. Correlational relationship between self-statements and affective states. Cognitive Therapy and Research, 1981, 5, 159-173.

Hathaway, S. R. \& McKinley, M. D. Minnesota multiphasic personality inventory manual. New York: The Psychological Corporation, 1967.

Hollon, S. D., \& Kendall, P. C. Cognitive self-statements in depression: Development of an automatic thoughts questionnaire. Cognitive Therapy and Research, 1980, 4, 383-395.

Kelly, G. A. The Psychology of Personal Constructs. Volume One: A Theory of Personality. New York: W. W. Norton \& Co., Inc., 1955.

Kingsbury, S. J., Stevens, D. P., \& Murray, E. J. Evaluation apprehension in verbal conditioning: Test of four subject effects models. Journal of Personality and Social Psychology, 1975, 32, 271-277.

LaPointe, K. A., \& Crandell, C. J. Relationship of irrational beliefs to self-reported depression. Cognitive Therapy and Research, 1980, 4, 247-250.

Lazarus, A. A. Behavior therapy and beyond. New York: McGrawHill, 1971.

Loeb, A., Beck, A. T., Diggory, J. C., \& Tuthill, R. Expectancy, level of aspiration, performance, and self-evaluation in depression. Proceedings of the 75th. Annual Convention of the American Psychological Association, 1964, 2, 193-194.

Loeb, A., Feshbach, S., Beck, A. T., \& Wolf, A. Some effects of reward upon the social perception and motivation of psychiatric patients varying in depression. Journal of Abnormal and Social Psychology, 1964, 68, 609-616.

Lubin, B. Depression adjective check list (1981 edition). San Diego: Educational and Industrial Testing Service.

MacDonald, A. P., Jr., \& Games, R. G. Ellis' irrational values: A validation study. Rational Living, New York: Institute for Rational Living, 1972, 7, 25-28.

Mahoney, M. Reflections on the cognitive-learning trend in psychotherapy. American Psychologist, 1977, 32, 5-13.

Maudel, N. M., \& Shrauger, J. S. The effects of self-evaluative statements on heterosocial approach in shy and nonshy males. Cognitive Therapy and Research, 1980, 4, 369-381.
Meichenbaum, D. H. Ways of modifying what clients say to themselves. Rational Living, 1972, 1, 23-28.

Miller, T. W. An Exploratory investigation comparing self-esteem with self-acceptance in reducing social-evaluative anxiety. Ann Arbor, MI: University Microfilms International, 1976.

Miller, W., \& Seligman, M. E. Depression and learned helplessness in man. Journal of Abnormal Psychology, 1975, 84, 228-238.

Mirils, H. L., \& McPeek, R. W. Self-advocacy and self-esteem. Journal of Consulting and Clinical Psychology, 1977, 45, 1132-1138.

Mischel, W., Ebbesen, E. B., \& Zeiss, A. Determinants of selective memory about the self. Journal of Consulting and Clinical Psychology, 1976, 44, 564-572.
Moon, T. W. Anagram solution ability: A function of verbal intelligence. Unpublished master's thesis, Appalachian State University, Boone, NC, 1974.

Natale, M. Effects of induced elation-depression on speech in the initial interview. Journal of Consulting and Clinical Psychology, 1977, 45, 45-52.

Nelson, R. E. Irrational beliefs in depression. Journal of Consulting and Clinical Psychology, 1977, 45, 1190-1191.

Rimm, D., \& Litvak, S. G. Self-verbalizations and emotional arousal. Journal of Abnormal Psychology, 1969, 14, 181-187.

Rogers, C. R. On becoming a person. Boston: Houghton-Miflin Publishing Co., 1961.

Rogers, C. R. Carl Rogers on encounter groups. New York: Harper and Row Publishing Co., 1970.

Rogers, T., \& Craighead, E. Physiological responses to selfstatements: The effects of statement valence and discrepancy. Cognitive Therapy and Research, 1977, 1, 99-119.

Russel1, P. L., \& Brandsma, J. M. A theoretical and empirical interpretation of the rational-emotive and classical conditioning theories. Journal of Consulting and Clinical Psychology, 1974, 42, 389-398.

Schacter, S., \& Singer, J. Cognitive, social and physiological determinants of emotional state. Psychological Review, 1962, 69, 379-399.

Schill, R., Evans, R., Romanaiah, N. V., \& Monroe, S. The effects of self-verbalizations on performance: A test of the rationalemotive position. Psychotherapy: Theory, Research, and Practice, 1978, 15, 2-7.

Secord, P. \& Bachman, C. Social psychology. New York: McGrawHill, 1964.

Seligman, M. E. P. Comment and integrations. Journal of Abnormal Psychology, 1978, 87, 165-179.

Seligman, M. E. P. Helplessness: On depression, development and death. San Francisco: W. H. Freeman, 1975.

Shaw, B. F. Comparison of cognitive therapy and behavior therapy in the treatment of depression. Journal of Clinical Psychology, 1977, 45, 543-551.

Shrauger, J. S., \& Terbovic, M. L. Self-evaluation and assessment of performance by self and others. Journal of Consulting and Clinical Psychology, 1976, 44, 564-572.

Staats, A. W., \& Staats, C. K. Attitudes established by classical conditioning. Journal of Abnormal and Social Psychology, 1958, 57, 37-40.

Staats, A. W., Staats, C. K., \& Crawford, M. L. First order conditioning of meaning and the paralleled conditioning of GSR. Journal of General Psychology, 1962, 67, 159-167.

Teasdale, J. D., \& Fogarty, S. J. Differential effects of induced mood on retrieval of pleasant and unpleasant events from episodic memory. Journal of Abnormal Psychology, 1979, 88, 248-257.

Upper, D., \& Cautela, J. R. (Eds.). Covert conditioning. New York: Pergamon Press, 1979.

Vasta, R., \& Brockner, J. Self-esteem and self-evaluative covert statements. Journal of Consulting and Clinical Psychology, 1979, 47, 776-777.

Velten, E. A. A laboratory task for induction of mood states. Behavior Research and Therapy, 1968, 6, 432-482.

Wechsler, D. WAIS-R manual: Wechsler adult intelligence scalerevised. New York: The Psychological Corporation, 1981.

Wilson, A. R., \& Krane, R. V. Change in self-esteem and its effect on symptoms of depression. Cognitive Therapy and Research, 1980, 4, 419-421.

APPENDIX A
MMPI D-Scale Pretest

## MMPI D-SCALE PRETEST

This inventory consists of numbered statements. Read each statement and mark $A$ on the answer sheet if it is true as applied to you. Mark B on the answer sheet if the statement is false as applied to you.

1. Once in a while I think of things too bad to talk about.
2. I have a good appetite.
3. My daily life is full of things that keep me interested.
4. I am about as able to work as I ever was.
5. I am easily awakened by noise.
6. I am seldom troubled by constipation.
7. At times I feel like swearing.
8. I seldom worry about my health.
9. At times I feel like smashing things.
10. My judgment is better than it ever was.
11. I find it hard to keep my mind on a task or job.
12. I do not always tell the truth.
13. When I am with people I am bothered by hearing very queer things.
14. I am in just as good physical health as most of my friends.
15. I am liked by most people who know me.
16. I have periods of days, weeks, or months when I couldn't take care of things because I couldn't "get going."
17. I am a good mixer.
18. My sleep is fitful and disturbed.
19. I do not read every editorial in the newspaper every day.
20. Everything is turning out just like the prophets of the Bible said it would.
21. I like poetry.
22. I prefer to pass by school friends, or people I know but have not seen for a long time, unless they speak to me first.
23. I sometimes keep on at a thing until others lose their patience with me.
24. I sometimes tease animals.
25. I usually feel that life is worth while.
26. It takes a lot of argument to convince most people of the truth.
27. I wish I could be as happy as others seem to be.
28. I get angry sometimes.
29. I go to church almost every week.
30. Once in a while I put off until tomorrow what I ought to do today.
31. Much of the time I feel as if I have done something wrong or evil.
32. I believe in the second coming of Christ.
33. I am happy most of the time.
34. I am certainly lacking in self-confidence.
35. Sometimes when I am not feeling well I am cross.
36. I seem to be about as capable and smart as most others around me.
37. I don't seem to care what happens to me.
38. I do not worry about catching disease.
39. At times I like picking a fist fight with someone.
40. Someone has it in for me.
41. I have never vomited blood or coughed up blood.
42. Most nights I go to sleep without thoughts or ideas bothering me.
43. My table manners are not quite as good at home as when I am out in company.
44. My conduct is largely controlled by the customs of those about me.
45. During the past few years I have been well most of the time.
46. Criticism or scolding hurts me terribly.
47. I never had a fit or convulsion.
48. I certainly feel useless at times.
49. If I could get into a novie without paying and be sure I was not seen, I would probably do it.
50. I am neither gaining or losing weight.

APPENDIX B
Independent Variables

High Expectancy
THESE CARDS HAVE BEEN USED PREVIOUSLY IN RESEARCH TO DETERMINE THE EFFECTS THAT OUR THOUGHTS HAVE ON LEARNING. THE PREVIOUS RESEARCH FOUND A STRONG RELATIONSHIP BETWEEN THE TWO.

Low Expectancy
THESE CARDS HAVE BEEN USED PREVIOUSLY IN RESEARCH TO DETERMINE THE EFFECTS THAT OUR THOUGHTS HAVE ON LEARNING. THE PREVIOUS RESEARCH FOUND ONLY A WEAK RELATIONSHIP BETWEEN THE TWO.

Positive, Negative, Self Acceptance Statements
Instructions

## Card 1

IN THE FIRST PART OF THIS EXPERIMENT, I WILL BE SHOWN A SERIES OF CARDS WITH STATEMENTS TYPED ON THEM. THESE STATEMENTS REPRESENT CERTAIN PSYCHOLOGICAL ATTITUDES. MY SUCCESS WILL BE LARGELY A QUESTION OF MY WILLINGNESS TO BE RECEPTIVE AND RESPONSIVE TO THE IDEA IN EACH STATEMENT, AND TO ALLOW EACH IDEA TO ACT UPON ME WITHOUT INTERFERENCE. THESE IDEAS ARE CALLED SUGGESTIONS.

## Card 2

I WILL ALWAYS ATTEMPT TO RESPOND TO THE IDEAS SUGGESTED BY EACH ITEM. I WILL THEN TRY TO THINK OF MYSELF WITH AS MUCH CLARITY AND REALISM AS POSSIBLE AS DEFINITELY BEING AND MOVING INTO THAT PSYCHOLOGICAL ATTITUDE. I AM LETTING MYSELF BE RECEPTIVE TO THESE IDEAS. DIFFERENT PEOPLE MOVE INTO ATTITUDES IN DIFFERENT WAYS. WHATEVER INDUCES THE IDEA AND ATTITUDE IN ME FASTEST AND MOST DEEPLY IS THE BEST WAY FOR ME. SOME PEOPLE SIMPLY REPEAT THE STATEMENTS OVER AND OVER AGAIN TO THEMSELVES WITH THE INTENTION OF EXPERIENCING THEM.

## Card 3

the next card will begin the series of statements. I Will read each TO MYSELF, THEN I WILL READ IT OUT LOUD. THEN I WILL TRY TO EXPERIENCE THE IDEA AS WELL AS I CAN AND CONTINUE TO DO SO AS THE EXPERIMENTER PRESENTS THE CARDS AND I MOVE FURTHER INTO THE IDEAS. AFTER THE CARDS WILL BE A BRIEF SERIES OF SIMPLE TASKS TO PERFORM.

## Control Statements

Instructions

## Card 1

IN THE FIRST PART OF THIS EXPERIMENT, I WILL BE SHOWN A SERIES OF CARDS WITH STATEMENTS TYPED ON THEM.

## Card 2

FIRST, AS EACH STATEMENT IS PLACED BEFORE ME, I WILL SIMPLY READ IT TO MYSELF, AND THEN I WILL READ IT ONCE OUT LOUD IN A MANNER APPROPRIATE TO ITS INTENDED SERIOUSNESS. THEN I'LL GO OVER EACH STATEMENT AGAIN AND AGAIN IN MY HEAD WITH DETERMINATION AND WILLINGNESS TO REALLY BELIEVE IT.

## Card 3

the next card will begin the series of statements. I will read each TO MYSELF, THEN I WILL READ IT OUT LOUD. THEN I WILL TRY TO EXPERIEnce the idea as well as i can. after the cards will be a brief SERIES OF SIMPLE TASKS TO PERFORM.

## Positive Treatment Attitude Statements

Card 1
I THINK OF MYSELF AS AN OK PERSON
Card 2
in FACT I AM RATHER SATISFIED WITH MYSELF TODAY
Card 3
I AM GAining energy and confidence by the minute
Card 4
I AM ALERT AND CAN CONCENTRATE VERY CLEARLY
Card 5
If yOU HAVE A GOOD ATTITUDE TOWARD YOURSELF THINGS WILL WORK OUT I AM TAKING A POSITIVE ATTITUDE TOWARD MYSELF TODAY

Card 6
PEOPLE CAN DEPEND ON ME: I AM RELIABLE
Card 7
PEOPLE RESPOND TO ME NITH WARMTH AND FRIENDLINESS
Card 8
my parents are pretty proud of me most of the time

## Card 9

I WILL BE ABLE TO WORK VERY HARD TODAY
Card 10
WHEN I MAKE STRONG DEMANDS ON MYSELF I COME THROUGH

## Card 11

IT IS SENSELESS TO WORRY
A GOOD POSITIVE ATTITUDE IS WHAT IS IMPORTANT
I HAVE A GOOD ATTITUDE
Card 12
I KNOW I WILL ACCOMPLISH THE THINGS I WANT TO
Card 13
I AM OPTIMISTIC ABOUT THE FUTURE
Card 14
I AM FORTUNATE I AM IN COLLEGE--IT IS THE KEY TO SUCCESS
Card 15
WHEN I WANT I CAN MAKE FRIENDS EASILY
Card 16
PEOPLE LIKE ME
I AM POPULAR WITH MEN AND WITH WOMEN

## Card 17

I AM PRODUCTIVE
I WILL GET THINGS DONE TODAY
Card 18
WHEN I SET MY MIND TO IT I CAN MAKE THINGS TURN OUT FINE IN MY LIFE Card 19

THIS IS ONE OF THOSE DAYS I CAN GRIND OUT SCHOOLWORK WITH PRACTICALLY NO EFFORT AT ALL

Card 20
A FEW FAILURES NEED NOT BOTHER ME
I WILL GIVE LITTLE THOUGHT TO THEM FROM NOW ON

## Card 21

IN THE LONG RUN IT'S OBVIOUS THAT THINGS HAVE GOTTEN BETTER AND BETTER DURING MY LIFE

Card 22
I AM LUCKY BECAUSE A LOT OF GOOD COMES TO ME MY POSITIVE ATTITUDE HELPS THAT HAPPEN

Card 23
I AM REALLY ABLE TO STAND ON MY OWN TWO FEET
Card 24
I EXPECT TO SUCCEED IN WHAT CONCERNS ME MOST
Card 25
I AM GOING TO SUCCEED, STARTING NOW!
Card 26
I AM INTELLIGENT AND SOMETIMES SURPRISE MYSELF WITH MY CREATIVE ABILITY

Card 27
I AM AN INTERESTING STIMULATING PERSON TO BE WITH
Card 28
I AM FULL OF ENERGY AND REALLY THINK THE THINGS ON CAMPUS I AM DOING ARE WORTHWHILE

Card 29
I KNOW GOOD AND WELL I CAN ACHIEVE THE GOALS I SET
Card 30
LIFE IS VERY MUCH WORTH LIVING
Card 31
FOR THE REST OF THE DAY THINGS WILL WORK OUT RIGHT FOR ME
Card 32
I AM FULL OF ENERGY
Card 33
IT WOULD REALLY TAKE SOMETHING TO STOP ME NOW!

## Card 34

I AM OPTIMISTIC THAT I CAN GET ALONG WELL WITH MOST OF THE PEOPLE I MEET

Card 35
I FEEL VERY PERCEPTIVE AND WITTY
Card 36
I CAN WORK AT ANY TASK RIGHT NOW CONFIDENTLY AND WELL
Card 37
THINGS LOOK GOOD THINGS LOOK GREAT!

## Card 38

THINGS REALLY WILL COME MY WAY TODAY
Card 39
AT WORK OR AT PLAY OTHER PEOPLE FIND IT HARD TO KEEP UP WITH THE PACE I SET

Card 40
I HAVE THE ENERGY AND ABILITY TO DO ANYTHING
Card 41
I WISH SOMEONE WERE HERE TO TELL HOW CONFIDENT I AM
Card 42
I CAN TALK ANYONE INTO MY POINT OF VIEW
Card 43
I AM FULL OF STRENGTH AND PURPOSE
Card 44
LIFE IS FIRMLY IN MY CONTROL
Card 45
I FEEL I CAN DO MY WORK RIGHT NOW CONFIDENTLY AND WELL

Card 46
I AM FULL OF AMBITION
Card 47
THIS IS ONE OF THOSE DAYS WHEN I AM READY TO GO
Card 48
MY LIFE IS FULL
Card 49
I REALLY HAVE FAITH THAT THINGS WILL GET BETTER AND BETTER FROM NOW ON

Card 50
I CAN CONCENTRATE HARD ON ANYTHING I DO
Card 51
I FEEL REALLY CONFIDENT ABOUT MYSELF NOW
Card 52
I CAN MAKE DECISIONS RAPIDLY AND CONFIDENTLY
Card 53
I WANT TO GO TALK TO FRIENDS
I FEEL NEEDED AND LOVED
Card 54
I WANT TO GET TO WORK
Card 55
I COULD EXCEL IN ANYTHING I DO
Card 56
I CAN THINK ACCURATELY, EFFICIENTLY, AND RAPIDLY
Card 57
WHEN I UNDERTAKE THINGS TODAY I WILL REALLY ACCOMPLISH SOMETHING

Card 58
IT IS REALLY GREAT TO FEEL SO WONDERFUL ABOUT MYSELF
Card 59
LIFE OFFERS SO MANY SOURCES OF FULFILLMENT
Card 60
I AM REALLY CONFIDENT

## Negative Treatment Attitude Statements

Card 1
I THINK OF MYSELF AS AN OK PERSON, I GUESS
Card 2
BUT, TODAY I AM NOT VERY SATISFIED WITH MYSELF
Card 3
I AM TIRED AND SLUGGISH TODAY
Card 4
THINGS SEEM TO BE GOING WRONG TODAY
IT'S NO USE
Card 5
I AM LOSING ENERGY AND CONFIDENCE IN MYSELF BY THE MINUTE
Card 6
SOMETIMES I WONDER WHETHER SCHOOL IS ALL THAT WORTHWHILE
Card 7
IT HAS OCCURRED TO ME MORE THAN ONCE THAT STUDY IS BASICALLY USELESS BECAUSE YOU FORGET ALMOST EVERYTHING YOU LEARN ANYWAY

Card 8
I HAVE HAD IMPORTANT DECISIONS TO MAKE IN THE PAST AND I HAVE SOMETIMES MADE THE WRONG ONES

## Card 9

I CANNOT SEEM TO BE ABLE TO GET GOING AS FAST AS I USED TO
Card 10
MY BEHAVIOR MAY HAVE CAUSED MY PARENTS NEEDLESS WORRY
Card 11
A Little bit of effort tires me out
Card 12
PERHAPS COLLEGE TAKES MORE TIME, MORE EFFORT, AND MONEY THAN IT'S WORTH

Card 13
JUST TO STAND UP WOULD TAKE A BIG EFFORT
Card 14
I AM TIRED; MY BODY IS EXHAUSTED AND HEAVY
Card 15
I'VE DOUBTED THAT I AM A WORTHWHILE PERSON
Card 16
IT SEEMS THAT NO MATTER HOW HARD I TRY THINGS GO WRONG
Card 17
I HAVE NOTICED THAT NO ONE SEEMS TO REALLY UNDERSTAND OR CARE
Card 18
I AM UNCERTAIN ABOUT MY FUTURE
Card 19
I LOSE SO MUCH SLEEP AT NIGHT WORRYing, I HATE MYSELF
Card 20
I HAVE LITTLE FAITH IN MY ABILITIES
Card 21
THE WAY I SEE MYSELF, THE FUTURE LOOKS BAD FOR ME

Card 22
I DON'T SEEM TO BE ABLE TO WORK ON THE THINGS I KNOW MUST GET DONE TODAY

Card 23
WHEN I COMPARE MYSELF WITH OTHERS I ALWAYS COME OFF SECOND BEST
Card 24
I DO NOT THINK I CAN REACH PEOPLE
Card 25
I MUST BE STUPID NOTHING WORKS OUT FOR ME
Card 26
I AM NOT OUTGOING
Card 27
I DON'T GET THE BREAKS
Card 28
IT TAKES TOO MUCH EFFORT TO CONVINCE PEOPLE OF ANYTHING THERE IS NO POINT IN TRYING

Card 29
I DON'T EXPECT TO GET WHAT I REALLY WANT SO ITS FOOLISH TO WANT ANYTHING

Card 30
I AM BORING TO OTHERS
Card 31
I AM A NOBODY
Card 32
I AM NO GOOD AT ALL FROM A SOCIAL STANDPOINT
Card 33
I FAIL TO COMMUNICATE WITH PEOPLE ABOUT MY PROBLEMS

## Card 34

I CAN'T SEEM TO CONCENTRATE
I JUST WANT TO FORGET EVERYTHING
Card 35
MY LIFE IS FULL OF BAD THINGS
Card 36
IT SEEMS FUTILE TO TRY ANYTHING BECAUSE I WOULD JUST FAIL
Card 37
I HAVE BEEN CHEATED AND VICTIMIZED BY LIFE
Card 38
I CAN'T GET MY THOUGHTS OFF THE BAD THINGS THAT HAVE HAPPENED TO ME Card 39

PEOPLE ARE DISSATISFIED WITH MY WORK
Card 40
I JUST DON'T RESPECT MYSELF
Card 41
IT IS EASIER TO GIVE UP
I DON'T HAVE THE STRENGTH
Card 42
IT IS DIFFICULT TO FIGURE MY WAY OUT OF EVEN MINOR DIFFICULTIES
Card 43
I AM CONFUSED
Card 44
I HAVE MADE FOOLISH MISTAKES
Card 45
I AM UNIMPORTANT TO PEOPLE

Card 46
SOMETIMES I FEEL SO ALONE NO ONE LOVES ME

Card 47
I HAVE HAD INADEQUATE TRAINING FOR COLLEGE WHAT AM I DOING HERE?

Card 48
I AM UNLUCKY
Card 49
LIfe has been a raw deal

## Card 50

I PONDER MY DISAPPOINTMENTS
I CAN'T GET OVER THEM
Card 51
I have been seriously slighted or hurt more than once
Card 52
I DON'T kNOW Where I belong in the world
Card 53
SOMETIMES I WISH I'D NEVER BEEN BORN
Card 54
I AM HELPLESS WHEN FACED WITH ANY TASK
Card 55
I don't feel like doing anything
Card 56
EVERYTHING SEEMS FUTILE AND USELESS
Card 57
the failures of my life are taking possession of me

Card 58
I DON'T WANT TO THINK ABOUT ANYTHING AT ALL
Card 59
I CAN'T HELP BLAMING MYSELF
Card 60
I LACK CONFIDENCE AND AM INSECURE

## Self-Acceptance Treatment Attitude Statement

Card 1
I ACCEPT MYSELF AS A WORTHWHILE PERSON WHETHER OTHER PEOPLE ACCEPT ME OR NOT

## Card 2

I WANT TO DO A GOOD JOB, BUT MY SELF-WORTH DOES NOT DEPEND ON IT

## Card 3

I DO NOT EVALUATE MYSELF SINCE IT IS ONLY POSSIBLE TO EVALUATE BEHAVIORS AND TRAITS

## Card 4

I WANT TO HAVE ENERGY AND CONFIDENCE BUT I ACCEPT MYSELF WHEN I DON'T

## Card 5

I WANT TO BE ALERT AND CONCENTRATE CLEARLY BUT I DO NOT BERATE MYSELF IF I FEEL OTHERWISE

Card 6
SOME PEOPLE CAN DEPEND ON ME AND I WANT TO BE RELIABLE

## Card 7

I LIKE FOR PEOPLE TO RESPOND TO ME WITH WARMTH AND FRIENDLINESS BUT I ACCEPT MYSELF WHEN THEY DON'T

Card 8
I WANT MY PARENTS TO BE PROUD OF ME BUT I DON'T NEED FOR THEM TO BE Card 9

I WANT TO BE ABLE TO WORK HARD TODAY BUT MY WORTHINESS AS A HUMAN DOES NOT DEPEND ON IT

Card 10
I LIKE TO COME THROUGH WHEN I MAKE STRONG DEMANDS ON MYSELF BUT I ACCEPT MYSELF EVEN WHEN I DON'T

Card 11
IT IS SENSELESS TO WORRY
A GOOD POSITIVE ATTITUDE IS IMPORTANT
I WANT TO HAVE A GOOD ATTITUDE BUT MY SELF WORTH DOES NOT DEPEND ON IT

Card 12
I ACCEPT MYSELF WHETHER I ACCOMPLISH THE THINGS I WANT TO OR NOT Card 13

I WANT TO BE OPTIMISTIC ABOUT THE FUTURE BUT I DO NOT BERATE MYSELF WHEN I DON'T FEEL THAT WAY

Card 14
I WANT THE BEHAVIORS AND TRAITS I DEVELOP IN COLLEGE TO CONTRIBUTE TO EVENTUAL SUCCESS

Card 15
I ACCEPT MYSELF WHETHER I MAKE FRIENDS OR NOT

## Card 16

I WANT PEOPLE TO LIKE ME. MY SELF-WORTH, HOWEVER, DOES NOT DEPEND ON MY POPULARITY WITH MEN OR WOMEN

## Card 17

I WANT TO BE PRODUCTIVE BUT I ACCEPT MYSELF WHETHER I GET THINGS DONE TODAY OR NOT

Card 18
I PREFER THAT THINGS TURN OUT FINE IN MY LIFE BUT I DO NOT NEED FOR THEM TO

Card 19
I WANT TO GRIND OUT SCHOOLWORK TODAY WITH PRACTICALLY NO EFFORT AT ALL, BUT I REFUSE TO EVALUATE MYSELF AS A HUMAN ON THAT BASIS

Card 20
FAILURES NEED NOT BOTHER ME. IT IS IMPOSSIBLE TO RATE MYSELF ON THE BASIS OF PAST PERFORMANCES

Card 21
WHETHER THINGS HAVE GOTTEN BETTER AND BETTER DURING MY LIFE WILL NOT AFFECT MY UNCONDITIONAL ACCEPTANCE OF MYSELF

Card 22
I ACCEPT MYSELF WHETHER I'M LUCKY OR UNLUCKY; WHETHER MY ATTITUDE IS POSITIVE OR NEGATIVE

Card 23
I WANT TO STAND ON MY OWN TWO FEET, BUT WILL NOT CRITICIZE MYSELF WHEN I DON'T

Card 24
I ACCEPT MYSELF UNCONDITIONALLY WHETHER OR NOT I SUCCEED IN WHAT CONCERNS ME MOST

Card 25
I WANT TO SUCCEED BUT MY SELF-WORTH DOES NOT DEPEND ON IT
Card 26
I PREFER TO ACT IN AN INTELLIGENT MANNER BUT IT IS IMPOSSIBLE TO RATE MY TOTAL SELF AS INTELLIGENT OR NOT INTELLIGENT

Card 27
I WANT TO BE AN INTERESTING, STIMULATING PERSON BUT I ACCEPT MYSELF UNCONDITIONALLY EVEN WHEN I'M NOT

## Card 28

## I AM A WORTHWHILE PERSON WHETHER OR NOT I HAVE ENERGY OR WHETHER THE THINGS I AM DOING ON CAMPUS ARE WORTHWHILE OR NOT

Card 29
I WANT TO ACHIEVE THE GOALS THAT I HAVE SET BUT I REFUSE TO RATE MYSELF IN A TOTAL WAY BY THOSE STANDARDS

Card 30
I AM A WORTHWHILE PERSON WHETHER LIFE IS MUCH WORTH LIVING OR NOT Card 31

I PREFER THAT THINGS WORK OUT RIGHT FOR ME FOR THE REST OF THE DAY BUT I ACCEPT MYSELF WHETHER THEY DO OR NOT

Card 32
I PREFER TO HAVE ENERGY BUT MY SELF-WORTH DOES NOT DEPEND ON IT Card 33

I ACCEPT MYSELF TOTALLY IN BOTH SUCCESS AND FAILURE Card 34

I TRULY WANT TO GET ALONG WITH MOST OF THE PEOPLE I MEET, BUT MY WORTH AS A HUMAN DOES NOT DEPEND ON IT

Card 35
I PREFER TO FEEL PERCEPTIVE AND WITTY BUT ACCEPT MYSELF EVEN WHEN I DON'T

Card 36
MY SELF-WORTH DOES NOT DEPEND ON WHETHER I CAN WORK AT ANY TASK NOW CONFIDENTLY AND WELL

Card 37
I PREFER THAT THINGS LOOK GOOD OR GREAT
Card 38
I WANT THINGS TO REALLY COME MY WAY TODAY BUT MY SELF-WORTH DOES NOT DEPEND ON IT

Card 39
I REFUSE TO EVALUATE MY TOTAL SELF AT WORK OR AT PLAY DEPENDING ON WHETHER OR NOT OTHER PEOPLE FIND IT HARD TO KEEP UP WITH THE PACE I SET

Card 40
I WANT THE ENERGY AND ABILITY TO DO ANYTHING BUT MY EVALUATION OF SELF DOES NOT DEPEND ON IT

Card 41
I DON'T NEED FOR SOMEONE TO BE HERE TO TELL HOW CONFIDENT OR UNCONFIDENT I AM

Card 42
I WOULD LIKE TO BE ABLE TO TALK ANYONE INTO MY POINT OF VIEW BUT I ACCEPT MYSELF EVEN WHEN I CAN'T

Card 43
I REFUSE TO RATE MYSELF AS STRONG OR PURPOSIVE, ALTHOUGH I PREFER TO SHOW THESE TRAITS

Card 44
I ACCEPT MYSELF WHETHER OR NOT MY LIFE IS FIRMLY IN MY CONTROL
Card 45
THERE ARE BEHAVIORS I CAN PERFORM NOW CONFIDENTLY AND WELL, BUT MY SELF-WORTH DOES NOT DEPEND ON A GOOD PERFORMANCE

Card 46
I ACCEPT MYSELF WHETHER I'M AMBITIOUS OR NOT
Card 47
I REFUSE TO EVALUATE MYSELF IN TERMS OF HOW MUCH ENERGY I HAVE

## Card 48

I WANT MY LIFE TO BE FULL BUT I AM A WORTHWHILE HUMAN BEING WHETHER IT IS OR NOT

Card 49
I WANT THINGS TO GET BETTER AND BETTER FROM NOW ON BUT MY VALUE AS A HUMAN DOES NOT DEPEND ON IT

Card 50
THE ABILITY TO CONCENTRATE IS A TRAIT I WANT TO HAVE BUT I DO NOT RATE MYSELF AS A PERSON DEPENDING ON THAT TRAIT

Card 51
CONFIDENCE IS A TRAIT I PREFER BUT MY VALUE DOES NOT RELY ON IT
Card 52
I REFUSE TO EVALUATE MYSELF AS A HUMAN ON THE BASIS OF WHETHER I MAKE RAPID OR CONFIDENT DECISIONS

Card 53
I ACCEPT MYSELF WHETHER OR NOT I AM NEEDED OR LOVED
Card 54
I WANT TO GET TO WORK BUT I DO NOT EVALUATE MY VALUE AS A HUMAN ON THAT BASIS

Card 55
I WANT TO EXCEL IN THE BEHAVIORS I PERFORM, BUT I DO NOT EVALUATE MY HUMAN WORTH ON THOSE TERMS

Card 56
I ACCEPT MYSELF WHETHER OR NOT I BEHAVE IN THE WAY WHICH I PREFER: ACCURATELY, EFFICIENTLY, AND RAPIDLY

Card 57
I WANT TO ACCOMPLISH REALLY SOMETHING TODAY, BUT I WILL NOT EVALUATE MY VALUE AS A HUMAN ON THAT BASIS

Card 58
I LIKE TO FEEL GOOD ABOUT MYSELF, BUT I WILL ALWAYS ACCEPT MYSELF WHETHER OR NOT THAT FEELING IS GOOD

## Card 59

I UNCONDITIONALLY ACCEPT MYSELF AS A VALUABLE HUMAN BEING WHETHER OR NOT LIFE IS A SOURCE OF FULFILLMENT

Card 60
I AM REALLY ACCEPTING OF MYSELF AND WANT TO BE CONFIDENT

## Neutral Treatment Attitude Statements

Card 1
OKLAHOMA CITY IS THE LARGEST CITY IN THE WORLD IN AREA, 631.166 SQUARE MILES

Card 2
JAPAN WAS ELECTED TO THE UNITED NATIONS ALMOST FOURTEEN YEARS AFTER PEARL HARBOR

Card 3
AT THE END APPEARS A SECTION ENTITLED "BIBLIOGRAPHY NOTES"

## Card 4

WE HAVE TWO KINDS OF NOUNS DENOTING PHYSICAL THINGS: INDIVIDUAL AND MASS NOUNS

## Card 5

THIS BOOK OR ANY PART THEREOF MUST NOT BE REPRODUCED IN ANY FORM

## Card 6

AGRICULTURAL PRODUCTS COMPRISED SEVENTY PERCENT OF THE INCOME
Card 7
SATURN IS SOMETIMES IN CONJUNCTION, BEYOND THE SUN FROM THE EARTH, AND IS NOT VISIBLE

Card 8
SOME STREETS WERE STILL SAID TO BE LISTED UNDER THEIR OLD NAMES
Card 9
THE SYSTEM IS SUPERVISED BY THE BOARD OF REGENTS
Card 10
THERE IS A LARGE ROSE-GROWING CENTER NEAR TYLER, TEXAS
Card 11
MANY STATES SUPPLY MILK FOR GRAMMAR SCHOOL CHILDREN

Card 12
IT IS GOD'S WILL THAT THE FITTEST SURVIVE
Card 13
THE TYPOGRAPHY, PAPER, AND BIND WERE OF THE HIGHEST QUALITY
Card 14
THE MACHINE DOMINATED COUNTY POSTS FOR AS LONG AS ANYONE COULD REMEMBER

Card 15
THE DESK WAS OLD, AND SCRATCHED INTO ITS SURFACE WAS A PROFUSION OF DATES, INITIALS, AND PLEADING MESSAGES

Card 16
THE ORIENT EXPRESS TRAVELS BETWEEN PARIS AND ISTANBUL
Card 17
WHEN THE BANYAN BENT DOWN UNDER ITS OWN WEIGHT, ITS BRANCHES BEGAN TO TAKE ROOT

Card 18
THERE ISN'T A SCIENTIFIC EXPLANATION FOR EVERY U.F.O. SIGHTING Card 19

THE HOPE DIAMOND WAS SHIPPED FROM SOUTH AFRICA TO LONDON THROUGH THE REGULAR MAIL SERVICE

Card 20
THE REVIEW IS CONCERNED WITH THE FIRST THREE VOLUMES
Card 21
THE SHIP WAS ANCIENT, AND WOULD SOON BE RETIRED FROM THE FLEET
Card 22
SLANG IS A CONSTANTLY CHANGING PART OF THE LANGUAGE
Card 23
THERE IS A SMALL ARTICLE IN THE LOCAL NEWSPAPER WHICH INDICATES ACCEPTANCE OF THE KIDNAPPER'S TERMS

## Card 24

THERE ARE SOME FORMS IN WHICH NO OATH IS REQUIRED

## Card 25

INTRAMATICS FINDS MATES FOR THE LONELY

## Card 26

$99.1 \%$ OF ALASKA IS OWNED BY THE FEDERAL GOVERNMENT
Card 27
TWO MEN DRESSED AS REPAIRMEN WILL APPEAR SHORTLY AFTER THE VAN PULLS UP

Card 28
THE WOOD WAS DISCOLORED AS IF IT HAD BEEN HELD IN A FIRE
Card 29
A LIGHT WAS NOTICED IN THE DARK OUTSIDE, AND IT MOVED EERILY TOWARDS THE HOUSE

Card 30
PAINTING IN A FEW OTHER NONEUROPEAN COUNTRIES IS TREATED IN A SEPARATE VOLUME

Card 31
A RECENT STUDY REVEALED THAT ONE HALF OF ALL COLLEGE STUDENTS WERE UNABLE TO FIND SUMMER JOBS

Card 32
PROVOKED AROUSAL AND ORIENTATION ARE ACCOMPANIED BY STEEPER NEGATIVE SHIFTS

Card 33
THE NAMES ON THE CHRISTMAS MAILING LIST ARE ALPHABETICALLY ORDERED

## Card 34

SIGNIFICANTLY, THESE CHANGES OCCUR DURING THE FULL MOON
Card 35
WEST SAMOA GAINED ITS INDEPENDENCE IN 1965

Card 36
THE MAGAZINE'S REPORT WAS SLANTED AS USUAL
Card 37
THE MAP WOULD PROVE USELESS AS A BEGINNING GUIDE
Card 38
THE SPEAKER OUTLINED A PLAN WHEREBY THE CURRENT DEFICITS COULD BE ELIMINATED

Card 39
BLACK AND WHITE PICTURES ARE ARRANGED IN TEN SECTIONS
Card 40
THE VOICES COME ONLY AT NIGHT, AND WHISPERS WORDS, TERRIBLE WORDS Card 41

THE PAPERS HAD BEEN FRONT PAGING IT FOR DAYS
Card 42
THE NOTICE MADE IT CLEAR THAT COFFEE BREAKS WERE BEING LIMITED
Card 43
NO MAN WORKED HARDER THAN HE
Card 44
POTTER WROTE NUMEROUS SATIRES ON SOCIAL CYNICISM
Card 45
BOEING'S MAIN PLANT IN SEATTLE EMPLOYS $\mathbf{3 5 , 0 0 0}$ PEOPLE
Card 46
THE DOORKEEPER WAS DRESSED IN RED
Card 47
dURING THE NEXT TEN YEARS, THE GROUP PARTICIPATED IN POLITICS
Card 48
THE ORGANIZATION DEPENDED ON PEOPLE FOR SUPPORT

## Card 49

IN 1965, ELIZABETH MADE THE FIRST STATE VISIT BY A BRITISH MONARCH TO GERMANY IN 56 YEARS

Card 50
IT WAS THEIR SIXTH CONSECUTIVE BEST SELLER
Card 51
IT ALL FITTED IN WITH THE OFFICER'S STORY
Card 52
THE MERGER DID NOT CHANGE THE COMPANY'S POLICY
Card 53
THE MANSION WAS RENTED BY THE DELEGATION
Card 54
NINETY OCCUPATIONS WERE LISTED AS ELIGIBLE FOR THE GRADS IN BUSINESS
Card 55
UTAH IS THE BEEHIVE STATE
Card 56
CHANGES WERE MADE IN TRANSPORT OF LUMBER AFTER THE BORDER INCIDENT
Card 57
THE CHINESE LANGUAGE HAS MANY DIALECTS, INCLUDING CANTONESE, MANDARIN, AND WU

Card 58
THINGS WERE BOOMING ONCE AGAIN IN THE LITTLE GOLD RUSH TOWN OF ANGEL Card 59

AT LOW TIDE THE HULK OF THE OLD SHIP COULD BE SEEN
Card 60
A FREE SAMPLE WILL BE GIVEN TO EACH PERSON

## APPENDIX C

Dependent Variables

## Depression Adjective Check List

Name $\qquad$ Age $\qquad$ Sex $\qquad$
Date $\qquad$ Highest grade completed in school $\qquad$

DIRECTIONS: 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. $\qquad$ 17. Strong
2. $\qquad$ Safe
3. $\qquad$
4. 

_Gloomy
19. $\qquad$
4. $\qquad$ Miserable
20. $\qquad$
5. $\qquad$ Dull
21. Destroyed
6. $\qquad$ Gay
7. $\qquad$ Low-spirited
22. $\qquad$ Wretched
8. $\qquad$ Sad
23. $\qquad$
24. Light-hearted
9. $\qquad$ Unwanted
25. $\qquad$
10. $\qquad$ Fine
26. $\qquad$
11. $\qquad$ Broken-hearted
27. $\qquad$
12. $\qquad$ Down-cast
28. $\qquad$ Hopeless
13. $\qquad$ Enthusiastic
29. $\qquad$ Oppressed
14. $\qquad$ Failure
30. $\qquad$ Joyous
15. $\qquad$ Afflicted
31.
$\qquad$ Weary
16. $\qquad$ Active
32.
$\qquad$ Droopy

## Irrational Values Scale

Read the following statements. On the rating scale that follows each statement, circle the number that indicates your level of agreement with the particular statement. The scale ranges from 1 (completely disagree) to 9 (completely agree).

1. It is a dire necessity for an adult human being to be loved or approved by virtually every significant other person in his/her community.

| completely <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | completely <br> agree |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

2. One should be thoroughly competent, adequate, and achieving in all possible respects if one is to consider oneself worthwhile.

| completely <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | completely <br> agree |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

3. Certain people are bad, wicked, or villainous and they should be severely blamed and punished for their villainy.

| completely <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | completely <br> agree |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

4. It is awful and catastrophic when things are not the way one would very much like them to be.

| completely <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | completely <br> agree |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

5. Human unhappiness is externally caused and people have little or no ability to control their sorrows and disturbances.

| completely <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | completely <br> agree |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

6. If something is or may be dangerous or fearsome one should be terribly concerned about it and should keep dwelling on the possibility of its occurring.

| completely <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | completely <br> agree |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

7. One should be dependent on others and needs someone stronger than oneself on whom to rely.

| completely <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | completely <br> agree |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

8. One should become quite upset over other people's problems and disturbances.

| completely <br> disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | completely <br> agree |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

9. There is invariably a right, precise, and perfect solution to human problems and it is a catastrophe if this perfect solution is not found.
completely
12
34
5
$\begin{array}{llll}6 & 7 & 8 & 9\end{array}$
completely agree

## Situational Self-Statement and Affective State Inventory

Please read each situation carefully, imagining yourself in the situation as vividly as possible. Following each situation, you will find a list of statements which are designed to reflect thoughts which you might be thinking if you were actually in that situation. After reading the situation indicate how characteristic or descriptive each of the statements is of you by using the answer code. When you have rated the thoughts, complete the next questions for the situation using the response options given with the question. After you have answered those questions, indicate how characteristic or descriptive each of the sets of feelings is of you in the situation, using the answer code.

## Answer Code

5 Quite characteristic or descriptive of me
4 Characteristic or descriptive of me
3 Neither characteristic/descriptive nor uncharacteristic/nondescriptive of me

2 Uncharacteristic or nondescriptive of me
1 Quite uncharacteristic or nondescriptive of me

## In this situation you would feel:

(These five affective phrases followed each situation.)

| 8. irritated/resentful/angry | 5 | 4 | 3 | 2 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 9. worried/nervous/anxious | 5 | 4 | 3 | 2 | 1 |
| 10. suspicious/distrustful/wronged | 5 | 4 | 3 | 2 | 1 |
| 11. concerned/determined/hopeful | 5 | 4 | 3 | 2 | 1 |
| 12. dejected/depressed/helpless | 5 | 4 | 3 | 2 | 1 |

(These two validity questions followed each situation)
6. Did this situation seem realistic to you?
$\begin{array}{ll}\text { (5) } & \text { Yes } \\ \text { (1) No }\end{array}$
7. Did you respond on the questionnaire
$\begin{array}{lllll}5 & 4 & 3 & 2 & 1\end{array}$ as you would have responded if the situation had occurred in real life?
(5) Yes
(1) No

## Situation 1

> You have been working for a large company for three years and have received a raise in salary every six months in the first two years, but have yet to receive one this year. You believe that you have been doing good work and have received no criticism from your supervisor, who is usually pleasant. You decide to see your supervisor and request a raise. He is not sympathetic, notes that you seem to have trouble working at the level of efficiency of other employees, and turns down your request.

## In this situation you would think:

1. Who does he think he is? I do my job as good as anybody else. He's never done anything for me! I just might quit!

Quite Characteristic Uncharacteristic

| 5 | 4 | 3 | 2 | 1 |
| :--- | :--- | :--- | :--- | :--- |

2. Perhaps I have been slacking off lately. I guess it shows more than I thought. If I want a raise, I'll have to put more effort into my work.

Quite Characteristic Uncharacteristic
$\begin{array}{lllll}5 & 4 & 3 & 2 & 1\end{array}$
3. I've really done a lousy job. I've let everybody down. My work just hasn't been any good. I don't think I can do any better. Quite Characteristic Uncharacteristic
5
4
3
2
1
4. Well, if I'm not getting a raise, I wonder who is! I bet that new fellow we just hired got one. I may see what I can find out about that.

Quite Characteristic
Uncharacteristic
5
4
3
2
1
5. Oh, no! What am I going to do? What if I lose my job! I don't know what will happen to me!

Quite Characteristic Uncharacteristic
5
4
3
2
1

## Situation 2

You and your partner have been dating regularly for one year, but in the past two months you have been having frequent arguments over petty, unimportant matters. You attempt to discuss the problem with him/her but this only leads to more argument, with your partner finally becoming quite angry and leaving as she/he states "I'll see you around."

In this situation you would think:
13. That liar! I know she/he's been seeing someone else for weeks. Somehow I'll find out who it is.

Quite Characteristic Uncharacteristic $\begin{array}{lllll}5 & 4 & 3 & 2 & 1\end{array}$
14. No one cares about me. All I do is make people mad. I'm no good for anyone. I'm not even much of a person. I should give up on dating relationships.

Quite Characteristic Uncharacteristic $\begin{array}{lllll}5 & 4 & 3 & 2 & 1\end{array}$
15. He/she's got a lot of nerve! Who does she/he think he/she is, anyway? I never could stand the way she/he picked on me about petty things. Wait till I see him/her again, am I going to tell her/him off!

Quite Characteristic Uncharacteristic
$\begin{array}{lllll}5 & 4 & 3 & 2 & 1\end{array}$
16. What am I going to do now? I won't have a date this weekend. What will I tell my friends? I wonder if they'11 think I don't know how to keep a steady?

Quite Characteristic Uncharacteristic $\begin{array}{lllll}5 & 4 & 3 & 2 & 1\end{array}$
17. I guess it really is difficult for two people to straighten things out sometimes. I hope when we see each other again we'll be able to talk without so much conflict.

Quite Characteristic
Uncharacteristic
5
4
3
2
1

## Situation 3

You have entered one of your paintings in an art contest. Your artistic abilities have been developing for some time and you have put a lot of time and effort into this piece. Further, if you should win a first or second prize in the contest, then you will be invited to have a showing of your other works. After the judging, you find that your painting has not even received an honorable mention.

In this situation you would think:
25. I'm no artist. I thought I could paint but I can't. I can't even win a little local contest. I'll never amount to anything in art.

Quite Characteristic Uncharacteristic
$\begin{array}{lllll}5 & 4 & 3 & 2 & 1\end{array}$
26. Not even a mention! They have some nerve--after all the work I did. They don't know a good painting when they see one. See if I enter their dumb show again!

Quite Characteristic Uncharacteristic
$\begin{array}{lllll}5 & 4 & 3 & 2 & 1\end{array}$
27. I wonder why those other people won? What did they have? I bet they are friends of the judges. People should be told about the favoritism that's going on here.

Quite Characteristic Uncharacteristic
$\begin{array}{lllll}5 & 4 & 3 & 2 & 1\end{array}$
28. I wish I had done better, but the competition was really stiff. I still think my work is good and with a little more persistence, I will do better in the next contest.

Quite Characteristic Uncharacteristic
$\begin{array}{lllll}5 & 4 & 3 & 2 & 1\end{array}$
29. I never should have shown my painting. I've made such a fool of myself! Why did I have to go and enter the contest? How can I show my face around these people again?

Quite Characteristic Uncharacteristic
$\begin{array}{lllll}5 & 4 & 3 & 2 & 1\end{array}$

## Situation 4

You have volunteered to serve on a community committee interested in developing local recreation programs. This is your first attempt to get involved in community activities and you are looking forward to meeting and working with the other members. During the week, you receive a call from the chairperson of the committee, who tells you that the committee as it now stands is too large for effective discussion, and that although they appreciate your interest, asks that you not serve on the committee.

In this situation you would think:
37. Well, they've got a lot of nerve! I went out of my way to help out their committee. I'll think twice before I volunteer for anything again!

Quite Characteristic Uncharacteristic
5
4
3
2
1
38. The committee isn't that large; I don't think that's the real reason. I bet they heard something about me and just didn't want me around. I'm going to keep an ear out for what they're saying about me.

Quite Characteristic Uncharacteristic
$\begin{array}{lllll}5 & 4 & 3 & 2 & 1\end{array}$
39. I think it's a good idea to limit the committee to an effective size. Maybe I'll call them back and see if there is another committee that might need more members.

Quite Characteristic Uncharacteristic
$\begin{array}{lllll}5 & 4 & 3 & 2 & 1\end{array}$
40. They really didn't want me on the committee. I don't fit in here. I shouldn't have volunteered in the first place. Why keep on trying, I don't have anything to contribute?

Quite Characteristic
Uncharacteristic
5
4
3
2
1
41. I don't know how I'm going to become part of this community. I've been left out again! They'll never accept me and I'll never have any friends here!

Quite Characteristic Uncharacteristic
5
4
3
2
1

## Situation 5

Your spouse is having some difficulties getting along with his/her boss at work. She/he comes home each day and explains it all to you and asks for suggestions about what to do. You aren't in the situation and don't know what to suggest. Your spouse says that you just don't care and that you are unable to understand the difficulties he/she is faced with.

In this situation you would think:
49. Maybe I haven't taken his/her concerns seriously enough. We need to talk about this some more and I'll try to understand the situation and make some suggestions.

Quite Characteristic Uncharacteristic
5
3
2
1
50. What am I going to do! She/he could lose this job and everything. We really need the money, I've got to think of something.

Quite Characteristic Uncharacteristic
5
4
3
2
1
51. Am I supposed to solve everything? If he/she had any initiative she/he would take care of these things and not hassle me with them?

Quite Characteristic Uncharacteristic
5
4
3
2
1
52. All I do is let her/him down. I never seem to be able to help. I can't be a good spouse to him/her. I can't seem to do anything for anyone.

Quite Characteristic Uncharacteristic
5
4
3
2
1
53. Always complaining! I wonder what she/he's been doing all the time he/she's supposed to be working? I'll have to think of a way to check up on what's going on down there.

Quite Characteristic Uncharacteristic
5
4
3
2
1

Inductive Reasoning Test
Directions: Look at the examples on the right. Decide what two numbers should come next in the series and mark them in the answer column. The test begins with very easy problems and becomes gradually more difficult. but only elementary arithmetic is needed. Note how the first sample problem is worked. Then mark the last three for practice.

This is not a speed test but work at your best rate for 10 minutes.

## Wait for the starting signal.



Name $\qquad$

$\begin{array}{lllllll}11 . & 3 & 6 & 7 & 14 & 15 & 30\end{array}$
$\begin{array}{lllll}31 & 16 & 32 & 64 & 62 \\ \square & \square & \square & \boxed{8}\end{array}$
12. $\begin{array}{llllllll}36 & 33 & 30 & 35 & 32 & 29 & 34\end{array}$
$\begin{array}{lllll}39 & 31 & 28 & 27 & 30 \\ \square & \boxed{B} & \square & \square\end{array}$
13. $\begin{array}{llllll}29 & 3 & 24 & 8 & 19 & 13\end{array}$
$\begin{array}{lllll}\square & 21 & 14 & 18 & \left.\begin{array}{ll}\square & 24 \\ \square & \boxed{B}\end{array}\right)\end{array}$
14. $2 \begin{array}{llllllll}2 & 3 & 6 & 4 & 5 & 20 & 6 & 7\end{array}$
$\begin{array}{lllll}13 & 34 & 42 & 30 & 8 \\ \square & \square & \square\end{array}$
15. $\begin{array}{llllll}45 & 43 & 39 & 33 & 25\end{array}$
16. $1 \begin{array}{lllllll}2 & 2 & 36 & 2 & 3 & 60 & 3\end{array}$
17. $\begin{array}{lllllll}16 & 14 & 15 & 12 & 13 & 9\end{array}$
18. $\begin{array}{llllllllll}20 & 5 & 2 & 5 & 30 & 4 & 3 & 4 & 40\end{array}$
$\stackrel{3}{\otimes}_{\boxed{3}}^{\square} \quad \stackrel{4}{\square} \quad \square^{5} \quad \stackrel{6}{\square}$
19. $\begin{array}{lllllll}125 & 5 & 64 & 4 & 27 & 3\end{array}$
$\square \quad \square^{16} \quad \square^{8} \quad \square^{4} \quad \otimes^{2}$
20. $3 \begin{array}{lllll}3 & 13 & 23 & 30 & 31\end{array}$


## Anagrams and Digit Symbol Subtest of WAIS-R

Rate the probability of your success on each of the following anagrams. Perfora each anagran that follows by rearranging the letters in each set to form a word. For example, the letters OCRK can be rearranged to form the work, ROCK.

Do one at time. For example, rate the probability of your success on anagram il. Then perform anagram 11. Proceed to the rating activity for anagram 12, perform anagram 12, and so forth. Begin when you are given the signal.

## Probability of Success

Anegrea

1. none $\begin{array}{lllllllllllllll} & 10 & 20 & 30 & 40 & 50 & 60 & 70 & 80 & 90 & 100 & \text { complete } 1 . & L O L Q I L\end{array}$
2. none $0 \quad 10 \quad 20 \quad 30 \quad 40 \quad 50 \quad 60 \quad 70 \quad 80 \quad 90 \quad 100$ complete 2. ENP $Q E \mathbb{N}$
3. none $0 \quad 10 \quad 20 \quad 30 \quad 40 \quad 50 \quad 60 \quad 70 \quad 80 \quad 90 \quad 100$ complete J. TENWEI
4. none $0 \quad 10 \quad 20 \quad 30 \quad 40 \quad 50 \quad 60 \quad 70 \quad 80 \quad 90 \quad 100$ camplete 4. RUETERUE
5. none $0 \quad 10 \quad 20 \quad 30 \quad 40 \quad 50 \quad 60 \quad 70 \quad 80 \quad 90 \quad 100$ complete 50 . STFOSQEI
6. none $0 \quad 10 \quad 20 \quad 30 \quad 40 \quad 50 \quad 60 \quad 70 \quad 80 \quad 90 \quad 100$ complete 6. RUGASSYGAR
7. none $0 \quad 10 \quad 20 \quad 30 \quad 40 \quad 50 \quad 60 \quad 70 \quad 80 \quad 90 \quad 100$ complete 1. GEINBREING
8. none $\begin{array}{llllllllllllll} & 10 & 20 & 30 & 40 & 50 & 60 & 70 & 80 & 90 & 100 & \text { complete 8. DOISLSQLIQ }\end{array}$
9. none $0 \quad 10 \quad 20 \quad 30 \quad 40 \quad 50 \quad 60 \quad 10 \quad 80 \quad 90 \quad 100$ complete 9. RONAWRNARRQW
10. none $\begin{array}{llllllllllllll} & 10 & 20 & 30 & 40 & 50 & 60 & 70 & 80 & 90 & 100 & \text { complete } 10 \text {. RINGEFEI KGES }\end{array}$


| 2 | 1 | 3 | 7 | 2 | 4 | 8 | 2 | 1 | 3 | 2 | 1 | 4 | 2 | 3 | 5 | 2 | 3 | 1 | 4 | 5 | 6 | 3 | 1 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |


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


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


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

APPENDIX D
Consent Form

## CONSENT FORM

I, $\qquad$ , AGREE TO PARTICIPATE

IN THE LEARNING EXPERIMENT. I UNDERSTAND THAT I MAY WITHDRAN AT

ANY TIME. I UNDERSTAND THAT I WILL BE GIVEN A FULL EXPLANATION

OF THE EXPERIMENT WHEN IT IS COMPLETED.

APPENDIX E
ANOVA Tables

## TABLE I

SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS OF DEPRESSION, TREATMENT AND EXPECTANCY ON DEPRESSION ADJECTIVE CHECK LIST SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square |
| :--- | ---: | ---: | :--- |
| Depression (D) | 762.61 | 1 | 762.61 |
| Treatment (T) | 490.04 | 3 | 163.35 |
| Expectancy (E) | 10.51 | 1 | 10.51 |
| D×T | 153.64 | 3 | 51.21 |
| S×E | 21.01 | 1 | 21.01 |
| of F |  |  |  |

## TABLE II

SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS OF DEPRESSION, TREATMENT AND EXPECTANCY ON AVERAGE OF THE MEAN SCORES OF BELIEFS 1 AND 2 OF IRRATIONAL VALUES SCALE

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | $F$ | Significance <br> of $F$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Depression (D) | 1786.05 | 1 | 1786.05 | 3.80 | .06 |
| Treatment (T) | 5638.15 | 3 | 1879.38 | 3.99 | .01 |
| Expectancy (E) | 994.05 | 1 | 994.05 | 2.12 | .15 |
| D×T | 444.15 | 3 | 148.05 | 0.32 | .81 |
| D×E | 42.05 | 1 | 42.05 | 0.09 | .77 |
| T×E | 900.15 | 3 | 300.05 | 0.64 | .59 |
| D×T×E | 292.15 | 3 | 97.38 | 0.21 | .89 |
| Error | 30075.07 | 64 | 469.92 | - | - |

## TABLE III

SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS OF DEPRESSION, TREATMENT AND EXPECTANCY ON DEPRESSIVE BELIEFS (SSASI) SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | F | Significance <br> of $F$ |
| :--- | ---: | ---: | :--- | ---: | :--- |
| Depression (D) | 312.05 | 1 | 312.05 | 4.30 | .04 |
| Treatment (T) | 649.90 | 3 | 216.63 | 2.98 | .04 |
| Expectancy (E) | 5.00 | 1 | 5.00 | 0.07 | .79 |
| D×T | 281.45 | 3 | 93.82 | 1.29 | .29 |
| D×E | 0.45 | 1 | 0.45 | 0.01 | .94 |
| T×E | 148.50 | 3 | 49.50 | 0.68 | .57 |
| D×T×E | 201.45 | 3 | 67.15 | 0.93 | .43 |
| Error | 4647.16 | 64 | 72.61 | - | - |

TABLE IV
SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS OF DEPRESSION, TREATMENT AND EXPECTANCY ON IRRATIONAL AFFECT (SSASI) SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | $F$ | Significance <br> of $F$ |
| :--- | ---: | :--- | :--- | :--- | :--- |
| Depression (D) | 288.80 | 1 | 288.80 | 7.07 | .01 |
| Treatment (T) | 576.50 | 3 | 192.17 | 4.70 | .005 |
| Expectancy (E) | 151.25 | 1 | 151.25 | 3.70 | .06 |
| D×T | 268.70 | 3 | 89.57 | 2.19 | .10 |
| D×E | 18.05 | 1 | 18.05 | 0.44 | .51 |
| T×E | 194.45 | 3 | 64.82 | 1.59 | .20 |
| D×T×E | 39.85 | 3 | 13.28 | 0.33 | .81 |
| Error | 2615.58 | 64 | 40.87 | - | - |

TABLE V
SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS OF DEPRESSION, TREATMENT AND EXPECTANCY ON ANXIOUS AFFECT (SSASI) SCORES

| Source of Variance | Sum of Squares | DF | Mean Square | F | Significance of $F$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Depression (D) | 208.01 | 1 | 208.01 | 3.76 | . 06 |
| Treatment ( $T$ ) | 543.64 | 3 | 181.21 | 3.28 | . 03 |
| Expectancy (E) | 308.11 | 1 | 308.11 | 5.57 | . 02 |
| D $\times$ T | 427.44 | 3 | 142.48 | 2.58 | . 06 |
| D $\times \mathrm{E}$ | 59.51 | 1 | 59.51 | 1.08 | . 30 |
| T $\times \mathrm{E}$ | 210.94 | 3 | 70.31 | 1.27 | . 29 |
| D $\times$ T $\times \mathrm{E}$ | 50.34 | 3 | 16.78 | 0.30 | . 82 |
| Error | 3538.32 | 64 | 55.29 | - | - |

TABLE VI
SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS OF DEPRESSION, TREATMENT AND EXPECTANCY ON DEPRESSIVE AFFECT (SSASI) SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | $F$ | Significance <br> of $F$ |
| :--- | ---: | ---: | :--- | ---: | :--- |
| Depression (D) | 696.20 | 1 | 696.20 | 10.87 | .002 |
| Treatment (T) | 1204.80 | 3 | 401.60 | 6.27 | .001 |
| Expectancy (E) | 51.20 | 1 | 51.20 | 0.80 | .38 |
| D×T | 386.20 | 3 | 128.73 | 2.01 | .12 |
| D×E | 5.00 | 1 | 5.00 | 0.08 | .78 |
| T×E | 160.80 | 3 | 53.60 | 0.84 | .48 |
| D×T×E | 114.20 | 3 | 38.07 | 0.59 | .62 |
| Error | 4100.74 | 64 | 64.07 | - | - |

## TABLE VII

SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS OF DEPRESSION, TREATMENT AND EXPECTANCY ON ESTIMATION OF SUCCESS PROBABILITY SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | F | Significance <br> of $F$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Depression (D) | 400.51 | 1 | 400.51 | 1.90 | .17 |
| Treatment (T) | 187.24 | 3 | 62.41 | 0.30 | .83 |
| Expectancy (E) | 1117.51 | 1 | 1117.51 | 5.31 | .02 |
| D×T | 534.44 | 3 | 178.15 | 0.85 | .47 |
| D×E | 5.51 | 1 | 5.51 | 0.03 | .87 |
| T×E | 255.24 | 3 | 85.08 | 0.40 | .75 |
| D×T×E | 686.84 | 3 | 228.95 | 1.09 | .36 |
| Error | 13471.50 | 64 | 210.49 | - | - |

TABLE VIII
SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS OF DEPRESSION, TREATMENT AND EXPECTANCY ON

DIGIT SYMBOL TASK SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | F | Significance <br> of $F$ |
| :--- | ---: | ---: | :--- | ---: | :--- |
| Depression (D) | 99.01 | 1 | 99.01 | 0.94 | .34 |
| Treatment (T) | 461.04 | 3 | 153.68 | 1.46 | .23 |
| Expectancy (E) | 122.51 | 1 | 122.51 | 1.16 | .28 |
| D×T | 1147.04 | 3 | 382.35 | 3.64 | .02 |
| D $\times$ E | 30.01 | 1 | 30.01 | 0.29 | .60 |
| T×E | 208.94 | 3 | 69.65 | 0.66 | .58 |
| D $\times T \times E$ | 293.84 | 3 | 97.94 | 0.93 | .43 |
| Error | 6728.71 | 64 | 105.14 | - | - |

TABLE IX
SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS OF DEPRESSION, TREATMENT AND EXPECTANCY ON RATIONAL BELIEFS (SSASI) SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | $F$ | Significance <br> of $F$ |
| :--- | ---: | ---: | :--- | ---: | :--- |
| Depression (D) | 151.25 | 1 | 151.25 | 4.19 | .05 |
| Treatment (T) | 40.95 | 3 | 13.65 | 0.37 | .77 |
| Expectancy (E) | 0.05 | 1 | 0.05 | 0.00 | .97 |
| D×T | 196.15 | 3 | 65.38 | 1.81 | .15 |
| D×E | 6.05 | 1 | 6.05 | 0.16 | .68 |
| $T \times E$ | 58.55 | 3 | 19.52 | 0.54 | .66 |
| D×T×E | 432.55 | 3 | 144.18 | 3.99 | .01 |
| Error | 2310.39 | 64 | 36.10 | - | - |

TABLE X
SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS OF DEPRESSION, TREATMENT AND EXPECTANCY ON IRRATIONAL BELIEFS SCALE SCORES

| Source of Variance | Sum of Squares | DF | Mean <br> Square | F | Significance of $F$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Depression (D) | 738.11 | 1 | 738.11 | 6.27 | . 02 |
| Treatment ( $T$ ) | 729.14 | 3 | 243.05 | 2.07 | . 11 |
| Expectancy (E) | 78.01 | 1 | 78.01 | 0.66 | . 42 |
| D $\times$ T | 2.24 | 3 | 0.75 | 0.01 | . 99 |
| D $\times \mathrm{E}$ | 1.01 | 1 | 1.01 | 0.01 | . 93 |
| $T \times E$ | 300.94 | 3 | 100.31 | 0.85 | . 47 |
| D $\times T \times E$ | 97.94 | 3 | 32.65 | 0.28 | . 84 |
| Error | 7531.51 | 64 | 117.68 | - | - |

TABLE XI
SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS
OF DEPRESSION, TREATMENT AND EXPECTANCY ON IRRATIONAL BELIEFS (SSASI) SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | $F$ | Significance <br> of $F$ |
| :--- | ---: | ---: | :--- | ---: | :--- |
| Depression (D) | 165.32 | 1 | 165.32 | 3.95 | .05 |
| Treatment (T) | 183.44 | 3 | 61.15 | 1.46 | .23 |
| Expectancy (E) | 23.11 | 1 | 23.11 | 0.55 | .46 |
| D×T | 88.54 | 3 | 29.51 | 0.75 | .55 |
| D×E | 0.31 | 1 | 0.31 | 0.01 | .93 |
| T×E | 136.94 | 3 | 45.65 | 1.09 | .40 |
| D×T×E | 255.74 | 3 | 85.25 | 2.04 | .12 |
| Error | 2677.59 | 64 | 41.84 | - | - |

TABLE XII
SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS
OF DEPRESSION, TREATMENT AND EXPECTANCY ON
ANGRY BELIEFS (SSASI) SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | F | Significance <br> of $F$ |
| :--- | ---: | ---: | :--- | ---: | :--- |
| Depression (D) | 32.51 | 1 | 32.51 | 0.61 | .43 |
| Treatment (T) | 36.64 | 3 | 12.21 | 0.23 | .88 |
| Expectancy (E) | 78.01 | 1 | 78.01 | 1.47 | .23 |
| D×T | 121.94 | 3 | 40.65 | 0.76 | .52 |
| D×E | 0.31 | 1 | 0.31 | 0.01 | .94 |
| T×E | 124.84 | 3 | 41.61 | 0.78 | .51 |
| D×T×E | 279.34 | 3 | 93.11 | 1.75 | .16 |
| Error | 3404.79 | 64 | 53.20 | - | - |

## TABLE XIII

SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS OF DEPRESSION, TREATMENT AND EXPECTANCY ON ANXIOUS BELIEFS (SSASI) SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | F | Significance <br> of $F$ |
| :--- | ---: | ---: | :--- | ---: | :--- |
| Depression (D) | 344.45 | 1 | 344.45 | 5.82 | .02 |
| Treatment (T) | 149.75 | 3 | 49.92 | 0.84 | .48 |
| Expectancy (E) | 61.25 | 1 | 61.25 | 1.04 | .31 |
| D×T | 79.35 | 3 | 26.45 | 0.45 | .72 |
| D×E | 61.25 | 1 | 61.25 | 1.04 | .31 |
| T×E | 143.35 | 3 | 47.78 | 0.81 | .49 |
| D×T×E | 214.55 | 3 | 71.52 | 1.21 | .31 |
| Error | 4839.52 | 64 | 61.26 | - | - |

## TABLE XIV

SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS
OF DEPRESSION, TREATMENT AND EXPECTANCY ON SUSPICIOUS BELIEFS (SSASI) SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | F | Significance <br> of $F$ |
| :--- | ---: | ---: | :--- | ---: | :--- |
| Depression (D) | 156.80 | 1 | 156.80 | 2.73 | .10 |
| Treatment (T) | 174.40 | 3 | 58.13 | 1.01 | .39 |
| Expectancy (E) | 45.00 | 1 | 45.00 | 0.78 | .38 |
| D×T | 112.00 | 3 | 37.33 | 0.65 | .59 |
| D×E | 16.20 | 1 | 16.20 | 0.28 | .60 |
| T×E | 279.00 | 3 | 93.00 | 1.62 | .19 |
| D×T×E | 303.00 | 3 | 101.00 | 1.76 | .16 |
| Error | 3676.77 | 64 | 57.45 | - | - |

TABLE XV

## SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS

OF DEPRESSION, TREATMENT AND EXPECTANCY ON
RATIONAL AFFECT (SSASI) SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | F | Significance <br> of $F$ |
| :--- | ---: | ---: | :--- | ---: | :--- |
| Depression (D) | 31.25 | 1 | 31.25 | 0.55 | .46 |
| Treatment (T) | 235.35 | 3 | 78.45 | 1.37 | .26 |
| Expectancy (E) | 22.05 | 1 | 22.05 | 0.38 | .54 |
| D×T | 134.55 | 3 | 44.85 | 0.78 | .51 |
| D×E | 0.05 | 1 | 0.05 | 0.01 | .98 |
| T×E | 147.75 | 3 | 49.25 | 0.86 | .47 |
| D×T $\times$ E | 340.15 | 3 | 113.38 | 1.98 | .13 |
| Error | 3670.37 | 64 | 57.35 | - | - |

TABLE XVI
SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS
OF DEPRESSION, TREATMENT AND EXPECTANCY ON
ANGRY AFFECT (SSASI) SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | F | Significance <br> of $F$ |
| :--- | ---: | ---: | :--- | ---: | :--- |
| Depression (D) | 168.20 | 1 | 168.20 | 2.64 | .11 |
| Treatment (T) | 373.00 | 3 | 124.33 | 1.95 | .13 |
| Expectancy (E) | 168.20 | 1 | 168.20 | 2.64 | .11 |
| D×T | 408.20 | 3 | 136.07 | 2.13 | .11 |
| D×E | 88.20 | 1 | 88.20 | 1.38 | .24 |
| T×E | 181.00 | 3 | 60.33 | 0.95 | .42 |
| D×T×E | 5.00 | 3 | 1.67 | 0.03 | .99 |
| Error | 4079.96 | 64 | 63.75 | - | - |

## TABLE XVII

SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS
OF DEPRESSION, TREATMENT AND EXPECTANCY ON
SUSPICIOUS AFFECT (SSASI) SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | $F$ | Significance <br> of $F$ |
| :--- | ---: | :--- | :--- | :--- | :--- |
| Depression (D) | 186.05 | 1 | 186.05 | 2.47 | .12 |
| Treatment (T) | 528.95 | 3 | 176.32 | 2.34 | .08 |
| Expectancy (E) | 162.45 | 1 | 162.45 | 2.16 | .15 |
| D×T | 342.15 | 3 | 114.05 | 1.51 | .22 |
| D $\times$ E | 8.45 | 1 | 8.45 | 0.11 | .74 |
| T $\times$ E | 197.75 | 3 | 65.92 | 0.88 | .46 |
| D $\times$ T $\times$ E | 95.75 | 3 | 31.92 | 0.42 | .73 |
| Error | 4823.94 | 64 | 75.37 | - | - |

## TABLE XVIII

SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS OF DEPRESSION, TREATMENT AND EXPECTANCY ON ANAGRAM SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | $F$ | Significance <br> of $F$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Depression (D) | 0.31 | 1 | 0.31 | 0.28 | .59 |
| Treatment (T) | 1.64 | 3 | 0.55 | 0.49 | .69 |
| Expectancy (E) | 0.31 | 1 | 0.31 | 0.28 | .59 |
| D×T | 2.24 | 3 | 0.75 | 0.67 | .57 |
| D×E | 0.01 | 1 | 0.01 | 0.01 | .92 |
| T×E | 1.44 | 3 | 0.48 | 0.43 | .73 |
| D×T×E | 1.34 | 3 | 0.45 | 0.40 | .75 |
| Error | 79.20 | 64 | 1.11 | - | - |

TABLE XIX
SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS
OF DEPRESSION, TREATMENT AND EXPECTANCY ON
NUMERICAL REASONING TEST SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | $F$ | Significance <br> of $F$ |
| :--- | ---: | ---: | :--- | ---: | :--- |
| Depression (D) | 40.61 | 1 | 40.61 | 2.98 | .09 |
| Treatment (T) | 9.34 | 3 | 3.11 | 0.23 | .88 |
| Expectancy (E) | 7.81 | 1 | 7.81 | 0.57 | .45 |
| D×T | 22.64 | 3 | 7.55 | 0.55 | .65 |
| D×E | 25.31 | 1 | 25.31 | 1.86 | .18 |
| T×E | 4.04 | 3 | 1.35 | 0.10 | .96 |
| D×T×E | 3.94 | 3 | 1.31 | 0.10 | .96 |
| Error | 871.19 | 64 | 13.61 | - | - |

## APPENDIX F

Duncan's Multiple Range Test Tables

TABLE XIX
SUMMARY OF ANALYSIS OF VARIANCE FOR MAIN EFFECTS
OF DEPRESSION, TREATMENT AND EXPECTANCY ON
NUMERICAL REASONING TEST SCORES

| Source of <br> Variance | Sum of <br> Squares | DF | Mean <br> Square | $F$ | Significance <br> of $F$ |
| :--- | ---: | ---: | :--- | ---: | :--- |
| Depression (D) | 40.61 | 1 | 40.61 | 2.98 | .09 |
| Treatment (T) | 9.34 | 3 | 3.11 | 0.23 | .88 |
| Expectancy (E) | 7.81 | 1 | 7.81 | 0.57 | .45 |
| D×T | 22.64 | 3 | 7.55 | 0.55 | .65 |
| D×E | 25.31 | 1 | 25.31 | 1.86 | .18 |
| T×E | 4.04 | 3 | 1.35 | 0.10 | .96 |
| D×T×E | 3.94 | 3 | 1.31 | 0.10 | .96 |
| Error | 871.19 | 64 | 13.61 | - | - |

APPENDIX F
Duncan's Multiple Range Test Tables

TABLE I
SUMMARY OF DUNCAN'S MULTIPLE RANGE TEST FOR MAIN EFFECT
OF TREATMENT ON DEPRESSION ADJECTIVE
CHECK LIST SCORES

Difference Between Mean Scores on the Depression Adjective Check List for Each Treatment Group

|  | Positive $(M=3.65)$ | SelfAcceptance ( $M=5.20$ ) | $\begin{aligned} & \text { Control } \\ & (M=8.70) \end{aligned}$ | Negative $(M=9.70)$ |
| :---: | :---: | :---: | :---: | :---: |
| Positive $(M=3.65)$ | - | 1.55 | 5.05* | 6.05* |
| SelfAcceptance $(M=5.20)$ |  | - | 3.50* | 4.50* |
| Control $(M=8.70)$ |  |  | - | 1.00 |
| Negative $(M=9.70)$ |  |  |  | - |
| Difference required for significance as a function of separation$\begin{aligned} 2 & =3.42 \\ 3 & =3.61 \\ 4 & =3.75 \\ *_{\mathrm{p}} & <.05 \end{aligned}$ |  |  |  |  |

## TABLE II

## SUMMARY OF DUNCAN'S MULTIPLE RANGE TEST FOR MAIN EFFECT <br> OF TREATMENT ON AVERAGE OF THE MEAN SCORES OF <br> BELIEFS 1 AND 2 ON IRRATIONAL VALUES SCALE

Difference Between Mean Scores on Beliefs 1 and 2 on the Irrational Values Scale for Each Treatment Group

Self-

| Acceptance | Control | Negative | Positive |
| :--- | :--- | :--- | :--- |
| $(M=3.1)$ | $(M=3.8)$ | $(M=4.7)$ | $(M=5.3)$ |

Self-

| $\substack{\text { Acceptance } \\ M=3.1)}$ | . 71 | 2.20* |
| :---: | :--- | :--- | :--- | :--- |


| Control |  |  |  |
| :--- | :--- | :--- | :--- |
| $(M=3.8)$ | - | 89 | 1.49 * |


| Negative |  |  |
| :--- | :--- | :--- |
| $(M=4.7)$ | - | .60 |

Positive
( $M=5.3$ )
Difference required for significance as a function of separation $2=1.37$
$3=1.45$
$4=1.49$
*p < . 05 OF TREATMENT ON DEPRESSIVE BELIEFS (SSASI) SCORES

Difference Between Mean Scores on Depressive Beliefs (SSASI) for Each Treatment Group

|  |  | Self- |  |
| :--- | :--- | :--- | :--- |
| Positive | Control | Acceptance | Negative |
| $(M=2.0)$ | $(M=2.1)$ | $(M=2.1)$ | $(M=2.7)$ |

Positive
( $M=2.0$ )
Control
$(M=2.1)$
Self-
$\begin{array}{lll}\substack{\text { Acceptance } \\(M=2.1)} & \text { - } & 0.625^{*}\end{array}$
Negative
( $M=2.7$ )
Difference required for significance as a function of separation $2=.541$
$3=.569$
$4=.588$
*p < . 05

TABLE IV
SUMMARY OF DUNCAN'S MULTIPLE RANGE TEST FOR MAIN EFFECT OF TREATMENT ON IRRATIONAL AFFECT (SSASI) SCORES

Difference Between Mean Scores on Irrational Affect (SSASI) for
Each Treatment Group

| Self- |  |  |  |
| :--- | :--- | :--- | :--- |
| Acceptance | Positive | Control | Negative |
| $(M=2.4)$ | $(M=2.4)$ | $(M=2.5)$ | $(M=3.1)$ |


| SelfAcceptance $(M=2.4)$ | 0.045 | 0.11 | 0.665* |
| :---: | :---: | :---: | :---: |
| Positive $(M=2.4)$ | - | 0.065 | 0.62* |
| $\begin{aligned} & \text { Control } \\ & (M=2.5) \end{aligned}$ |  | - | 0.555* |
| Negative $(M=3.1)$ |  |  | - |
| Difference required for significance as a function of separation$\begin{aligned} 2 & =.405 \\ 3 & =.426 \\ 4 & =.440 \\ *_{\mathrm{p}} & <.05 \end{aligned}$ |  |  |  |

TABLE V

## SUMMARY OF DUNCAN'S MULTIPLE RANGE TEST FOR MAIN EFFECT OF TREATMENT ON ANXIOUS AFFECT (SSASI) SCORES

Difference Between Mean Scores on Anxious Affect (SSASI) for Each Treatment Group

## Self-

| Acceptance | Positive | Control | Negative |
| :--- | :--- | :--- | :--- |
| $(M=2.6)$ | $(M=2.8)$ | $(M=2.9)$ | $(M=3.3)$ |


| Self- <br> Acceptance <br> $(M=2.6)$ | 0. | 0.17 | 0.33 |
| :--- | :--- | :--- | :--- |


| Positive | - | 0.16 | $0.535 *$ |
| :--- | :--- | :--- | :--- |
| $(M=2.8)$ |  |  |  |
| Control |  |  |  |
| $(M=2.9)$ |  |  |  |

Negative
( $M=3.3$ )

Difference required for significance as a function of separation
$2=.470$
$3=.495$
$4=.511$
*p < . 05

## TABLE VI

## SUMMARY OF DUNCAN'S MULTIPLE RANGE TEST FOR MAIN EFFECT

OF TREATMENT ON DEPRESSIVE AFFECT (SSASI) SCORES

Difference Between Mean Scores on Depressive Affect (SSASI) for Each Treatment Group

|  | Positive $(M=2.2)$ | SelfAcceptance $(M=2.2)$ | Control $(M=2.3)$ | Negative $(M=3.1)$ |
| :---: | :---: | :---: | :---: | :---: |
| Positive $(M=2.2)$ | - | 0.00 | 0.18 | 0.94* |
| SelfAcceptance $(M=2.2)$ |  | - | 0.18 | 0.94* |
| $\begin{aligned} & \text { Control } \\ & (M=2.3) \end{aligned}$ |  |  | - | 0.76* |
| Negative $(M=3.1)$ |  |  |  | - |
| Difference required for significance as a function of separation$\begin{aligned} 2 & =.507 \\ 3 & =.533 \\ 4 & =.551 \\ * \mathrm{p} & <.05 \end{aligned}$ |  |  |  |  |

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[^0]:    *p < . 05
    ** $\mathrm{p}<.01$
    *** $\mathrm{D}<.001$

