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A SYSTEMATIC INVESTIGATION OF TWO PSYCHOLOGICAL TREATMENTS OF DEPRESSION

by

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

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ABSTRACT

The primary purpose of this study was to evaluate the therapeutic efficacy of a cognitive modification and a behaviour modification treatment approach to depression. A second purpose was to further evaluate and validate measures of self-esteem, social skill and nonverbal behaviour proposed as measures of the construct of depression.

A multiple criteria (self report, objective and subjective clinical ratings) approach was used in the selection of subjects for a cognitive modification group (n = 8), a behaviour modification group (n = 8), an attention/assessment (nondirective) group (n = 8), a no treatment group (n = 8), and a normal/assessment group (n = 8). At the post-assessment, a subset of the depressed group (a depressed/remitted group (n = 9)) defined as those subjects who met the normal/assessment criteria were also considered.

The cognitive modification treatment was designed to identify and modify subject's idiosyncratic, maladaptive thoughts and ideation. The behaviour modification treatment was designed to restore an adequate schedule of positive reinforcement by training subjects to emit behaviours which were likely to be positively reinforced by others and to engage in activities which were intrinsically rewarding.

Treatment was conducted over a four week period with two, two hour group sessions per week.

All groups were assessed on the criterion measures and measures of self-esteem, social skill and nonverbal behaviour at three points in time (pre-, mid- and post-assessment). The cognitive modification and behaviour modification groups were also assessed at a 1-month post treatment follow-up.

Results indicated that the cognitive modification group was the most effective in alleviating depression as measured by self report and an objective clinical rating. The cognitive procedures resulted in significantly less depression after treatment than the behaviour modification, the nondirective and the no treatment procedures. The behaviour modification and nondirective procedures were more effective than no treatment based on the self-report data. None of the treatments were found to produce unique changes on the self-esteem, social skill or nonverbal measures.

Comparison of the normal/assessment and depressed/remitted groups revealed differences on some measures of social skill and nonverbal behaviour at the pre-treatment assessment. These differences dissipated at the post-treatment assessment when both groups were basically equivalent on the depression criterion. The empirical

results are discussed and suggestions for future research are offered.

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CHAPTER I

INTRODUCTION

The primary purpose of this study was to evaluate the therapeutic efficacy of two psychological treatments of depression. The treatment programmes evolved from contemporary theory, research and clinical practice and were derived from divergent etiological conceptualizations. A secondary purpose was to further evaluate and validate measures recently proposed as measuring the construct of depression and in some cases, as supporting theoretical concepts of the etiology of depression.

In order to provide a context for this investigation, the concept of depression and a review of the recent psychological literature concerning the etiology and treatment of depression will be presented. This presentation will be followed by the hypotheses of the study and the methodology used to investigate the hypotheses. Then, the empirical results of the investigation will be reported to determine the efficacy, based on subjective and objective clinical ratings, of the treatment procedures. An evaluation of self-esteem, social skill and nonverbal measures previously reported as related to depression will be presented. The results will be

discussed within the framework of current knowledge of depression.

In the introduction, five sections will be presented under the following headings: 1) the concept of depression; 2) cognitive conceptions of depression; 3) behavioural conceptions of depression; 4) depression and measures of self-esteem, social skill and nonverbal behaviour and 5) rationale for the current study.

The Concept of Depression

The clinical manifestations of depression have been recognized since the time of the ancient Greeks. Later scientific writings, which include German nosological descriptions, twentieth century psychoanalytic accounts and current empirical-behavioural analyses, retain a striking similarity to the ancient descriptions (Seitz, 1969). Yet, despite the fact that depression is one of the most ubiquitous patterns of psychopathology, the empirical and theoretical knowledge of depression is remarkably limited.

A critical problem in both theoretical and empirical areas is that the term "depression" itself is often poorly defined. The term is used in the literature in a variety of ways, such as: (1) a particular type of subjective experience which includes marked feelings of hopelessness, unhappiness and dejection; or (2) a syndrome or symptom-complex

representing a pattern of feelings, cognitions and behaviours which transverse psychiatric categories; or (3) a well defined disease entity and distinct psychiatric category (Beck, 1967; Mendels, 1970).

Similarly, depression may be described along any number of specific attributes. For example, Beck (1967) noted that it may be described according to a specific alteration in mood, such as sadness, loneliness or apathy. Other cognitive descriptions including regressive and self-punitive wishes, as well as a negative self-concept associated with self-reproachment and self-blame, have been suggested (Freud, 1917; Bibring, 1953). Depression may also be described from the viewpoint of vegetative changes such as anorexia and insomnia or in terms of the changes in activity level such as apathy, agitation, or retardation.

The descriptive problem is further compounded by the graded intensities of the depressive symptomatology. The traditional psychological position maintains that each symptom of depression may be viewed on a continuum which ranges from "normal" to pathological with the more extreme intensities representing more pathological behaviour. This "continuum hypothesis" complicates the problem since the distinctions between "normal" and pathological behaviour

become blurred as one merges with the other.

The issue of "normal" depression or grief has been dealt with by a number of theorists, most notably Freud (1971). Freud (1917) drew a careful distinction between melancholia and grief, the latter lacking a decrease in self-esteem. While both may occur as a reaction to the loss of a loved one, he suggested that melancholia occurs in specially predisposed people in reaction to an imaginary or vaguely perceived loss that deprives the ego. In a contemporary formulation of the distinction Averill (1968) noted that while many of the symptoms of normal grief are found in depression, depression is a general phenomenon which may accompany many diverse situations. The critical difference is that the dysphoria in "normal" depression is regarded as transient, ending with spontaneous remission without significant change in the patient's life adjustment. Neurotic or reactive depression, on the other hand, is considered more marked and prolonged, with the patient unable to overcome it by his own efforts.

A similar difficulty is encountered in distinguishing between neurotic and psychotic depression. The *Diagnostic and Statistical Manual of Mental Disorders II* (1968) provides a distinction between "depressive neuroses" and "psychotic

depressive reaction" which depends on whether the "reaction impairs reality testing or functional adequacy enough to be considered a psychosis" (1968, p. 38). Thus, the difference between the neurotic and psychotic conditions is relative with respect to reality testing rather than absolute.

In recent years, there has been considerable research interest in the problem of the classification of depressed patients. Traditionally, two dichotomies, endogenous-reactive and psychotic-neurotic, have been loosely used as equivalent labels in describing the two classification types. Research has been presented which supports the dichotomous classification (Kiloh and Garside, 1963) and which disconfirms it (Kendell, 1969). Psychotic depression in some classification systems refers to very severe depression of any type. In other systems it refers to an "illness" characterized by the endogenous symptoms syndrome emphasizing vegetative signs, agitation or retardation, loss of responsitivity to the environment, anorexia and early morning awakening. Research on the classification problem using multivariate statistical techniques, continues to the present. Thus, the only solution possible at this time is to operationalize the definition to be used.

Depression in this study was defined as the manifestation of depressive behaviour (measured by a variety of instruments

outlined in the method section) which results from perceived, psychologically stressful life events. An additional requirement was that the presenting symptomatology does not include a severe break with reality (i.e. hallucinatory behaviour). It should be recognized, however, that regardless of the severity of the depression, disturbances of thinking may be present (i.e., exaggeration of negative environmental situations).

Many theories have been proposed to explain the etiology of depression. Theorists historically have attributed depression to either physiological (Aillon, 1972) or cognitive factors (Beck, 1967); within the past five years, however, behavioural formulations of depression have been proposed (Liberman, 1971). As a result, the current research on theoretical and treatment issues appears tri-directional with each school attempting to demonstrate the significance of its viewpoint.

Unfortunately, as noted by Loeb, Beck and Diggory (1971) there are very few controlled studies which systematically test the hypotheses and treatments generated by the various theoretical positions. Loeb et al (1971) suggested that many theories are not evaluated empirically because constructs are not easily observed. This explanation does not excuse the use of abstract formulations, without empirical basis, which have characterized much of

the depression literature to date. This study, therefore, is limited to the theoretical and treatment formulations that are "data-based" in the psychological literature.

The search for the causal factors or precursors of any abnormal human condition has as its primary goal the prevention of the condition or the development of an efficacious treatment for that condition. With the development of an etiological position, a concomitant prevention or treatment formulation should result and it is the efficacy of the prevention method or treatment which is a major test of the usefulness of the theory (Ferster, 1974). This study attempted to evaluate cognitive and behavioural conceptualizations of depression using the "success" of the respective treatments as the primary dependent variable. Treatment success was evaluated by affective, cognitive, somatic-vegetative and behavioural changes which occurred as a result of the treatment manipulations.

In order to evaluate their usefulness in the study of depression, changes in the measures of self-esteem, social skill and nonverbal behaviour were examined. This evaluation allowed statements on the validity of the theoretical underpinnings of the treatment programmes.

Cognitive Conceptions of Depression

Numerous theoretical papers assigning primary etiolo-

gical importance to cognitive factors have been presented in the literature. Many of the theories, however, such as Freud's formulation of an internalized struggle between superego and ego, use constructs which are impossible to reduce to operational terms. As noted previously, this study is concerned only with empirically validated, objectively testable theories and therefore, psychoanalytic models and treatments will not be discussed. Rather, the cognitive model of this study will be one which could be very broadly described as a self-concept formulation. Ellis (1962; 1974), Beck, (1967) and Seitz (1969) have developed cognitive models of psychopathology and specifically, of affective disorders.

Ellis (1974) referring to his theories and practice of a rational-emotive approach, maintained that an individual's fundamental assumptions, beliefs and values mediate his/her emotional response. Ellis (1962; 1974, 1975) distinguished between appropriate and inappropriate emotions. He assumed that all humans have the basic goals of wanting to survive, to be relatively happy, to get along with members of their social group and to relate intimately to a few selected members of this group. From this assumption he defined certain negative emotions - such as sorrow, regret, irritation, and annoyance - as appropriate when individuals

are faced with aversive stimuli, since such emotions motivate them to remove or change these stimuli. Conversely, certain other negative emotions - such as anxiety, depression, feelings of worthlessness and hostility - are defined as inappropriate since such emotions encourage people to become obsessed with but not do anything effective to change aversive stimuli.

One of the therapeutic goals of Ellis' approach is to use an educational methodology and instruct clients to utilize rational thinking. He proposed the A-B-C theory of emotional disturbance which states that when an individual has an inappropriate emotional reaction, such as depression at point C (the emotional Consequence), after some Activating event or experience has occurred at point A, A does not cause C. Instead, his/her Belief system (B) directly results in an emotional reaction Using this model Ellis, for the past twenty years, has attacked the self defeating beliefs, assumptions and values (i.e., those producing inappropriate emotions) of his clients. From a research standpoint, Ellis and his clinical colleagues (Ellis, 1962) have reported the effectiveness of the rational-emotive treatment approach for a wide range of emotional disorders, including depression.

Beck's (1967; 1974) model specifically focused on depression and the cognitive framework of depressed clients. Previous clinical papers on depression have repeatedly listed pessimism, low self-evaluation, and perceived poor performance on tasks among the common attributes of depressed patients. Beck (1967) assigned a primary etiological position to a cognitive triad which consists of negative conceptions of the self, of the external world, and of the future. In Beck's (1970) view, the depressed individual sees himself as deficient, inadequate and unworthy and tends to attribute his unpleasant experiences to a physical, mental, or moral defect in himself. He constantly construes his experiences in a negative way, interpreting his interaction with the environment as representing defeat, deprivation, or disparagement. A third cognition evident from the verbalizations of depressed individuals, consists of viewing the future in a negative way. The depressed patient anticipates that his current difficulties will continue indefinitely, resulting in a life of frustration and deprivation. This triad is seen as the key to the other symptoms of depression such as the lack of adaptive behaviour, the affective state, and other ideational and physiological manifestations.

According to Beck (1974), the dominant theme in the statements of depressed clients is that of loss; they regard themselves as lacking some element or attribute

considered essential for happiness. Although many nondepressed people experience similar losses, the depressed clients differ from them in the way they construe their experiences; they either misinterpret or exaggerate the loss, or they attach overgeneralized meanings to the loss. In a long-term study of depressed patients, Beck (1963) found that each of the patients presented distortion and illogical (irrational) thinking centering on the theme of loss.

Beck (1972; 1974) postulated that the depressed or depression-prone individual has certain idiosyncratic cognitive patterns which become activated either by specific stresses impinging on specific vulnerabilities, or by overwhelming nonspecific stresses. When the cognitive patterns are activated, they tend to dominate the individual's thinking and to produce the affective and behavioural phenomena associated with depression.

Beck and his colleagues (Beck, 1963; Loeb, Feshback, Beck and Wolf, 1964; Loeb, Beck and Diggory, 1971; Beck, 1974) have conducted a number of experimental studies to support his model of depression. Measures of pessimism and negative self-concept were found to correlate significantly with ratings of depression and the scores on these measures showed substantial decrements when the depression lifted. It was also observed that depressed patients were signifi-

cantly more pessimistic about their performance on a task than were a matched control group of nondepressed patients. Furthermore, the depressed patients responded to a concrete, immediate success experience with an increase in optimism, motivation, and self-esteem.

Another theoretical proposal, which, like Beck's (1974) model, assigns a primary etiological position to the cognitions of depressed persons, is the self-concept model of Seitz (1969). The self-concept and pathology of neurotic depressives can be seen from at least two perspectives according to Seitz (1969). First, the neurotic depressive's psychopathology might be described in terms of discrepancies between what he thinks of himself and what others report about him. Second, discrepancies between what a person thinks about himself (self-concept), what he would like to be (goal-self), and what he feels others think about him (social self) constitute a second description of neurotic depression. The evidence that depressed individuals view themselves negatively is extensive. The depressive's self-concept is characterized by attitudes of being hopeless, helpless and worthless (White, 1964) as well as self-blaming (Beck, 1967).

It is evident that Seitz' (1969) hypothesis with respect to self-concept is a more specific view of the negative

view of the self aspect of Beck's (1967) cognitive triad. An unpleasant event triggers socially acquired convictions, attitudes or beliefs which are related to loss, self-blame and negative expectancies. As they become activated, these cognitions produce corresponding feelings resulting in general feelings of depression. The negative, depressed feelings in turn reinforce the cognitions associated with them. Thus, the more negatively a person thinks, the worse he feels; the worse he feels, the more negatively he thinks.

The cognitive theory underlying the treatment strategy of this study was formulated is essentially based on Beck's (1967) model. In this model, the cognitive organization of depressed individuals is thought to be maladaptive. The theory postulates that the depressed or depression prone individual has certain idiosyncratic cognitive patterns which become activated in response to stresses in the environment. When the cognitive patterns are activated they tend to dominate the individual's thinking and to produce affective, physiological and behavioural phenomena associated with depression.

Within the cognitive conceptual framework definite treatment implications can be derived. The overall treatment objective is the modification of faulty patterns of thinking. Initially, treatment is concerned with breaking the self-defeating (depressive) cycle by identifying the client's automatic thoughts (or self-statements). This initial goal

is accomplished using an educational methodology which capitalizes on the experiences of clients viewed from a cognitive framework. As therapy continues, the basic assumptions, beliefs and values of the client are examined. It is assumed that by facilitating changes in the client's cognitive organization, their vulnerability to future depressions will be lessened. That is, if clients can identify distorted depression-generating cognitions and can acquire some objectivity toward them leading to correction, they can neutralize some of the <u>pathogenic</u> qualities of the cognitions. In cognitive psychotherapy, the client examines his distorted ideas and is trained to discriminate between rational and irrational ideas, between objective reality and internal thought.

According to this analysis, the crucial mechanism in the psychotherapeutic chain is the modification in the patient's ideational system. It is assumed that as the patient's irrational concepts become deactivated, the symptoms of depression will recede (Beck, 1970). The assumption that changes in cognitive responses will lead to changes in depressive symptoms has received support from a number of clinical reports in the literature. Johnson (1971) introduced the use of Homme's (1965) coverant control therapy in the treatment of a depressed male. Johnson found that by increasing the number of positive thoughts the client had, he was able

to realistically tact his own behaviour. Todd (1972) also reported the successful use of cognitive modification in the treatment of a depressed female.

A definite inadequacy of these clinical reports is the lack of objective measurement of the client's depressive behaviours. This study will test the efficacy of using a cognitive therapy for depression which is derived from the cognitive theory of beck (1967). In addition to the objective criteria to measure depression, specific dependent measures designed to provide estimates of the patient's view of self, world and future will be included in this study. The theoretical usefulness and past research on these self-esteem measures will be detailed later in the introduction. The dependent measures are outlined in detail in the method section.

Behavioural Conceptions of Depression

Only within the past decade have behaviourally-oriented theorists attended to the etiology and treatment of depression. Both operant and classical conditioning paradigms have been proposed to explain depressive behaviours and a wide variety of behaviour modification techniques have been cited as having some effect in alleviating depression.

Ferster (1965) assumed that the central feature of depression is a reduced frequency of adaptive behaviour and described several hypothetical mechanisms by which

clinical depression can occur. These mechanisms included extinction, punishment and changes in the environmental stimuli or schedules of reinforcement. Ferster (1974) expanded his theoretical position and indicated that a depressed person's complaints or requests for help are frequent and prominent almost to the exclusion of positively reinforced behaviour. Ferster (1974) viewed these behaviours as avoidance and escape behaviours which pre-empt the normal repertoire and result in negative reinforcement. Treatment, therefore, should involve increasing the depressed person's tendency to act positively on the environment rather than to react passively and emotionally. Ferster (1974) proposed that to accomplish this goal, the therapist must focus on adaptive behaviours which need to be created and strengthened (i.e. assertive behaviours).

Lazarus (1968) stated that depression may be regarded as a function of inadequate or insufficient reinforcers and that the depressed person is virtually on an extinction trial. Lazarus (1968) suggested that when a significant reinforcer is withdrawn the person enters into a state of grief which lifts when he recognizes and utilizes other reinforcers at his disposal. If, however, the individual lacks the ability, opportunity, or capacity to recognize and utilize other available reinforcers "a chronic and/or acute non-reinforcing state of affairs can result in a condition where the person

becomes relatively refractory to most stimuli and enters a state of 'depression'" (Lazarus, 1968, p. 88).

Costello (1972) proposed that depression may result from a loss of reinforcer effectiveness. This proposal differed from the theoretical emphasis that the removal of a discriminative stimulus or reinforcer precipitated depressive behaviour.

While Ferster's (1965; 1974) and Costello's (1972) papers were based on behavioural theory, Lazarus (1968; 1974) also addressed himself to specific treatment techniques designed to increase the amount of positive reinforcement experienced by the depressed client. Lazarus (1974) utilized a much broader treatment framework to achieve this goal. He referred to seven interactive modalities: overt behaviour, affective processes, sensory reactions, emotive imagery, cognitions, interpersonal relationships and drugs. This multimodal orientation was proposed to enable clients to recognize and utilize various reinforcers at their disposal.

Burgess (1969), Liberman (1970) and Jackson (1972) have offered further clinical evidence in support of the inadequate or insufficient reinforcement theory of depression. Two points regarding therapy are relevant at this point. First, Burgess (1969) and Jackson (1972) intervened with the objective of reinstating reinforcers which were present in the patient's premorbid life. Second, the specific tact

of not reinforcing depressive behaviour (overt or verbal), as suggested by Liberman (1970) and Liberman and Raskin (1971) is consistent with the behavioural conceptualization of depression.

Further supporting the use of a positive reinforcement approach to treatment, two studies have recently been reported using operant technology. Reisinger (1972) and Hersen, Eisler, Alford and Agras (1973) used tokens to increase behaviours incompatible with depression. These studies must be interpreted cautiously, however, as they demonstrated that smiling (Reisinger, 1972) and work (Hersen et al., 1973) could be controlled but they did not objectively assess changes in the symptoms of depression. A study by Shipley and Fazio (1973) attempted to evaluate a functional analysis approach to the treatment of depression. They concluded that their "directive" therapy resulted in significantly lower MMPI Depression scale scores after treatment than an interest support group. These authors, however, cautioned that their finding required more sophisticated dependent measures as well as actual performance measures.

Seligman (1968; 1974) proposed a theoretical model for the etiology of depression which was not completely in accord with the loss of reinforcement hypothesis. Seligman (1968) introduced the observed similarities in

behaviour between learned helplessness and depression. Seligman and Maier (1967) found that dogs who were first given unavoidable electric shocks, failed to initiate responses to escape shock when later tested in a shuttle box. Rather the experimental animals seemed to give up and passively accept the shock. Seligman (1974) examined the similarity between depression and learned helplessness and hypothesized that depression results when responding and reinforcement are independent. This view, according to Seligman (1974), subsumes the extinction and the loss of reinforcement hypotheses. In the traditional extinction procedure the probability of a reinforcer occurring is zero whether or not the subject responds. Thus, extinction is a special case of the independence between responding and reinforcement. In addition, however, Seligman's (1974) proposal of learned helplessness, accounts for cases in which reinforcement is presented but is independent of responding.

Seligman (1974) therefore, concluded that depression ensues when an individual believes he cannot control those elements of his/her life that relieve suffering and bring gratification. This viewpoint is certainly broader than the loss of reinforcement model and in fact, has also been proposed theoretically to subsume Beck's (1967) cognitive theory of depression (Seligman, 1974). From a treatment standpoint, Seligman (1974) concluded that his model suggests that

depression may be altered when clients see that their own responses are effective in alleviating their suffering and producing gratification. He referred to a variety of therapeutic techniques ranging from Beck's (1970) cognitive therapy to increasing the client's coping responses. At this point in time, Seligman (1974) has only selected evidence from other clinical sources to support his proposals about treatment. It is difficult therefore, to discuss specific techniques directly derived from Seligman's (1974) model. It is apparent that many treatments are compatible with Seligman's (1974) views including the behavioural methods previously mentioned and the systematic learning approach of Lewinsohn and his colleagues (Lewinsohn, Shaffer and Libet, 1971; MacPhillamy and Lewinsohn, 1971; Lewinsohn, 1974).

Lewinsohn (1974) studied both a theoretical model of depression and a treatment paradigm which evolved from the model. Lewinsohn (1974) explicitly outlined three major assumptions of his behavioural theory of depression. The first assumption is that a low rate of response-contingent positive reinforcement acts as an eliciting (unconditioned) stimulus for some depressive behaviours, such as feelings of dysphoria, fatigue and other somatic symptoms. A second assumption is that a low rate of response-contingent positive reinforcement constitutes a sufficient explanation for other

parts of the depressive syndrome such as the low rate of behaviour. For the latter the depressed person is considered to be on a prolonged extinction schedule. Finally, the third assumption is that the total amount of response-contingent positive reinforcement received by an individual is presumed to be a function of three sets of variables:

(1) the number of events (including activities) which are potentially reinforcing for the individual. The number of potentially reinforcing events are assumed to be a variable subject to individual differences, influenced by biological (sex and age) and experimental variables.

(2) the number of potentially reinforcing events which can be provided by the environment (i.e. the availability of reinforcement in the environment) and

(3) the instrumental behaviour of the individual (i.e. the extent to which he possesses the skills and emits those behaviours which will elicit reinforcement for him from his environment).

Lewinsohn and his colleagues have an extensive research programme designed to systematically test the assumptions of the behavioural theory. The theory requires that a) the total amount of response-contingent positive reinforcement received by depressed persons be less than that received by nondepressed persons; b) that the total amount of response-

contingent positive reinforcement will be less when the individual is depressed than when he is not depressed; c) that the onset of depression be accompanied by a reduction in response-contingent positive reinforcement; d) that the intensity of depression covary with the rate of response-contingent positive reinforcement; and e) that improvement be accompanied by an increase in response-contingent positive reinforcement. A critical point to note is that it is the degree to which the individual's behaviour is maintained by positive reinforcement, rather than the total amount of reinforcement that is the important antecedent condition. Lewinsohn (1974) indicated that non-contingent reinforcement does not decrease the depression of depressed patients.

As previously noted, Lewinsohn and his research group are concerned with validating their hypothesis empirically. Rather than review each study in detail, the main results will be presented with the relevant references. 'Consistent with the assumption that there is an association between the rate of positive reinforcement and intensity of depression it has been reported that: a) depressed individuals elicit fewer behaviours from others than do control subjects (Shaffer and Lewinsohn, 1971; Libet and Lewinsohn, 1973). Assuming that it is reinforcing to be the object of attention and interest this finding suggests that depressed persons receive

less social reinforcement; b) there is a significant association between mood and number of "pleasant" activities engaged in (Lewinsohn and Libet, 1972) and c) depressed individuals have a significantly larger number of events associated with their mood, suggesting a greater vulnerability of depressed individuals to the problems of everyday experiences.

Lewinsohn's (1974) main postulate about the instrumental behaviour of depressives is that they, as a group, are less socially skillful than nondepressed individuals. Social skill is defined as the ability to emit behaviours which are positively reinforced by others and to avoid behaviours which will have negative consequences. Two relevant laboratory investigations have been reported. Rosenberry, Weiss and Lewinsohn (1969) tested the hypothesis that the depressed person's timing of social response is deviant and found that the depressed subjects, as a group, responded less predictably and less homogenously than did the control group. Lewinsohn, Golding, Johannson and Stewart (1968) concluded that the verbal output of depressed persons in communication with others was significantly less than normals. More recently, Lewinsohn has made systematic comparisons between the interpersonal behaviour of depressed and nondepressed individuals in small group situations and in the home. Generally the

data (Libet and Lewinsohn, 1973; Shaffer and Lewinsohn, 1971; Stewart, 1968) supported that measures of social skill, such as the amount of behaviour emitted, interpersonal efficiency and the use of positive reactions, discriminate between depressed and nondepressed groups.

Etiologically, a lack of social skill interacting with stressful environmental events is presumed causally related to a state of low positive reinforcement. Consistent with this formulation, the main goals of treatment proposed by the Lewinsohn group are to restore an adequate schedule of positive reinforcement by training the individual to emit behaviours which are likely to be positively reinforced and to engage in activities which are intrinsically rewarding for him. Their treatment programme also includes training depressed individuals not to emit behaviours which are negatively reinforced by others and to discriminate the situations which require positive, neutral or negative actions and reactions. Lewinsohn (1974) indicated that his treatment programme concentrates on the specific manifestations of lack of social skill in terms of the individual case.

The therapeutic rationale which attends to the patient's interpersonal environment, such as Lewinsohn (1974) recommended, has been adopted, with reported success, by other investigators. Stuart (1967) described depression as

an adaptation to maladaptive personal encounters, characterized by an inability to communicate effectively. McLean, Ogston and Grauer (1973) viewed depression as a disorder in which attempts to control one's interpersonal environment have failed. Stuart (1967) and McLean et al. (1973) advocated the use of social learning principles in combination with other behavioural strategies (i.e. contracting) to train depressed clients in relationship and interaction skills.

Of all the behavioural theorists and clinicians, Lewinsohn's (1974) position appears to be the most comprehensive. Many of the theoretical issues and treatment strategies of others are subsumed under his research programme. For this reason, this study followed Lewinsohn's (1974) treatment model and focused on the instrumental behaviour, particularly in social situations, of depressed individuals. With the objective of increasing the amount of response-contingent positive reinforcement received by clients, treatment attended to modifying their behavioural interactions with the environment.

Using this strategy, dependent variables designed to measure the social skill (Lewinsohn, 1974) of clients were included. The rationale and previous research on these measures will be discussed in the next section.

Depression and Measures of Self-Esteem, Social Skill and Nonverbal Behaviour

As was indicated previously, the concept of self-esteem (or more specifically the view a person has of himself and his experiences) and the concept of social skill are important in the assumptions of cognitive and behavioural theorists. These concepts were measured in this study using the variables proposed by Loeb, Beck and Diggory (1971) and by Libet and Lewinsohn (1974). To provide a more specific background, for the theoretical aspects of this study, these investigations will be detailed. In addition, the nonverbal behavioural correlates of depression (Ekman and Friesen, 1974) and their usefulness will be introduced.

Beck (1967) postulated a cognitive triad, consisting of a negative conception of the self, of the external world and of the future, as central to depression. In support of this position, Loeb et al. (1971) offered the results of an experiment which compared depressed patients with nondepressed patients on measures of pessimism, self-evaluation and performance.

The actual experiment involved a card sorting task which was attempted by a group of depressed patients and a matched group of nondepressed control patients. The task involved sorting a deck of cards onto a board within a

certain time limit. In reality the experimenter controlled the performance of all subjects thus equating the "achieved" scores of subjects across groups. Four dependent measures were used: probability of success estimate, level of aspiration, actual performance (based on the average time taken to sort each card) and an evaluation of performance. As predicted, the depressed patients were more pessimistic about the likelihood of reaching the goal and subsequently rated the quality of their performance significantly lower than did the nondepressed group. Despite these negative expectancies and negative self-evaluations, the actual performance and the level of aspiration was the same for the depressed and the nondepressed groups.

The results of the latter study were interpreted as providing empirical support for two factors (negative view of future and negative view of self) of Beck's cognitive triad. The third factor in the triad (negative view of the world) was not tested in their study. Their study while offering support was not conclusive for two major reasons.

First, subject selection was determined by the level of depression currently experienced by the subjects. The authors emphasized that depression, for the purposes of their study, was defined as a psychopathological dimension rather than a discrete nosological entity. Viewed in this manner,

some subjects in the study were from diagnostic categories other than depression (i.e., "anxiety reaction", "schizophrenic reaction"). By making this decision, the authors extended the theoretical proposals of Beck (1967) to a wider sample than depressed patients. No reference was made in the study to possible differences in the diagnosis of subjects in the experimental groups. Thus, an alternative hypothesis that the results were a function of group differences in presenting symptomatology other than depression, cannot be disconfirmed. It can, of course, be argued that randomization of subjects would serve as an appropriate control.

The second reason their study was not conclusive from a theoretical position is that the investigators examined the critical variables at only one point in time (during the admission procedure prior to treatment). It is argued that in order to further specify phenomena which are attributable to depression, an evaluation designed to examine changes in the same individual in different states (i.e., depressed and nondepressed) is also necessary.

The current study sought to extend the work of Loeb et <u>al</u>. (1971) by using subjects who were from a more homogeneous group in presenting symptomatology (i.e. one associated with a diagnosis of depression). In addition, the current study was designed to re-evaluate clients

whose depression had remitted at post-treatment in order to assess whether changes in the variables were a function of the clients' depression or their trait characteristics.

Libet and Lewinsohn (1973) similarly attempted to provide empirical support for their theoretical position that depressed and nondepressed persons differ in social skill (the ability to emit behaviours which maximize the rate of elicited positive and negative social reinforcement). Libet and Lewinsohn (1973) coded the interpersonal behaviour of depressed, nondepressed psychiatric and nondepressed normal controls in two settings (in their own homes and in small group situations). The study was essentially a correlational one and examined the temporal stability and convergent validity of a large number of rationally-derived measures as well as their construct validity.

After examining the convergent validity of the measures of social skill, the authors concluded that individuals who a) are active, b) are quick to respond, c) are relatively insensitive to aversive consequences, d) do not miss a chance to react, and e) emit functionally positive reinforcing responses appear to maximize the rate of positive reinforcement elicited. In general their results were also proposed as supporting the hypothesis that depressed individuals, as a group, are less socially skillful than nondepressed

persons.

More specifically, depressed males emitted and initiated fewer actions, emitted positive reactions at a lower rate, and had a delayed latency of response to the action or reactions of another person. Results for depressed females were in the same direction but less conclusive although Libet and Lewinsohn (1973) reported that none of the differences between male and female participants attained statistical significance. At least part of the difficulty in making more definitive statements was attributable to the small magnitude of depressed-nondepressed differences (with the exception of activity level).

Libet and Lewinsohn (1973) made a clear statement to the effect that while they viewed their research as fruitful generally, as well as supportive of their theoretical position, the study was by no means exhaustive. One definite obstacle preventing conclusive results was the complexity of the study particularly involving the group variables. The results were discussed after combining groups on such variables as number in the group, setting and severity of symptomatology. In addition, a similar criticism to that made of Loeb et al.'s (1971) study, as to the comparison of depressed versus nondepressed subjects at one point in time can be extended to the Libet and Lewinsohn (1973) study.

The current study attempted to control the situation in which measures of social skill were taken. In doing this, greater control of variables such as the size of the group

and, more importantly, the nature of the interaction in which social skill was measured, could be obtained. The study also included an evaluation of the social skill of depressed subjects at a time when they were not depressed.

Libet and Lewinsohn (1973) reported that their measurement of social skill did not include nonverbal behaviour nor the content of verbal behaviour because of limited observational powers. A similar strategy was adopted in the present study for the measures of social skill. The area of nonverbal behaviour, however, has recently been proposed as valuable for the study of depression (Ekman and Friesen, 1974). The rationale offered for the inclusion of nonverbal correlates of depression is not on any theoretical grounds of etiology but rather to evaluate the proposal that:

> "Non-verbal encoding and decoding measures can also be used in a pre-post design to assess change which occurs with some intervening treatment. The utility of such measures will depend on the extent to which they capture the kind of changes that occur when patients move from an acute to a remitted state." (Ekman and Friesen, 1974, p. 204)

Kiritz (Kiritz, 1971; Kiritz, Ekman and Friesen, in preparation) analyzed the hand activity on admission and discharge of 16 patients diagnosed as depressed. Hand movements were classified as either illustrators (movements tied to speech and illustrating what is being said) or self-

adaptors (movements learned in the management or mastering of a variety of problems or needs). On the basis of their theory, it was predicted that illustrators would vary with mood, increasing with enthusiasm and involvement, and thus, an increase in illustrators from admission to discharge was predicted. The prediction was confirmed for "psychotic depressives" and the trend was in the same direction though not statistically significant, for "neurotic depressives". Measurement of the frequency of self-adaptors were not reported as significantly different between admission and discharge.

The present study utilized the nonverbal measures used in the Kiritz (1971) study as well as measures of facial behaviour (frequency and duration of eye contact, frequency of smiles) as proposed by Ekman and Friesen (1974). As previously noted, one objective was to evaluate the utility of the measures. An attempt was made to extend the Kiritz (1971) findings and compare depressives before and after "successful" treatment and to compare the depressed group with a nondepressed control group.

Rationale for the Current Study

A review of the psychological literature on depression leads to a number of conclusions:

a) There is a paucity of empirically-oriented

studies testing the hypotheses generated by the various theories.

b) Clinicians of all theoretical orientations, while emphatically reporting the efficacy of their treatment strategies, provide few controlled research studies to support their claims.

c) Two treatment programmes based on divergent conceptualizations but with some empirical support at the theoretical as well as the treatment level have emerged. These theories and resulting treatments suggest either cognitive or behaviour modifications in order to alleviate depression.

Bergin and Strupp (1972, p. 15) noted that "comparative studies across theoretical boundaries are still rare...and beset with great methdological difficulties; however, they hold significant promise for the future." While it was hoped this study would provide some data for the more general issue of theory comparison, it was primary concerned with the area of depression, and the theories within the area.

The strategy in this study follows the trend in psychotherapy research toward specificity of treatments and toward comparisons of the relative merits of specific treatments (Bergin & Strupp, 1972). This strategy in turn endorses the

more general hypothesis that "different kinds of responses may be governed by different principles and may require different procedures for their modification" (Ford & Urban, 1967, p. 345). The question of whether different orientations produce unique changes, especially those stressed by the particular theory, in depressive symptomatology or whether the supposedly unique changes are outweighed by general changes produced by all forms of therapy was also evaluated.

This study addressed the following questions:

1. Do the treatment procedures based on cognitive techniques and/or behavioural techniques result in changes in depression (measured by self-report, objective and subjective clinical ratings) which are significantly different from a treatment which controls for nonspecific treatment ~~factors and/or~~ a no treatment group?
2. Do the treatment procedures produce unique changes, as stressed by their theoretical underpinnings, or are these changes outweighed by more general changes?
3. Do the measures of self-esteem and social skill reported as differentiating depressed and nondepressed groups in cross-sectional studies, differentiate between individuals who are in "acute" vs "remitted" states of depression?
4. Are the nonverbal behavioural correlates of depression

potentially useful to distinguish "acute" versus "remitted" states of depression?

Based on the relevant literature in the area of depression the following hypotheses were adopted:

a) that directive treatment (cognitive modification, behaviour modification) would produce greater improvement (on the depression criterion measures) than nondirective treatment and no treatment.

b) that cognitive modification would produce more specific increases in the relevant measures of self-esteem (probability of success, subjective estimate of performance) than behaviour modification, nondirective treatment and no treatment.

c) that behaviour modification would produce more specific increases in the measures of social skill than cognitive modification, nondirective treatment and no treatment.

d) that on the measures of self-esteem, social skill and nonverbal behaviour differences between a "nondepressed/assessment" and a "depressed/remitted" group will be found at the pre-treatment assessment on the following variables: probability of success, subjective evaluation of performance, frequency of actions emitted, rate of positive reactions, action latency, frequency of eye contact, duration of eye

contact, frequency of smiles and frequency of illustrators. At pre-treatment, no differences were predicted on the variables, level of aspiration, actual performance and the frequency of self adaptors.

e) that at the post-treatment assessment, differences would not be found for the probability of success, subjective estimate of performance, frequency of actions emitted, frequency of positive reactions and action latency variables.

METHOD

Subjects: A multiple criteria approach was used in the selection of depressed and nondepressed subjects from a population of male and female undergraduate students at the University of Western Ontario. Subjects were recruited for the study by announcements made in undergraduate psychology classes and placed on student information boards and by referral from the Student Health Service. Subjects were between 18 and 26 years of age.

Individuals were classified as depressed on the basis of the following criteria (in order of administration):

a) self reported current depression of at least three weeks duration;

b) an interest in a project which might help them overcome their depression;

c) a Beck Depression Inventory (Beck, Ward, Mendelson, Mock and Erbaugh, 1961) score of greater than 18;

d) an individual interview and judgement by the interviewer that the subject's depressive symptoms were not severe enough to warrant hospitalization and/or entail a definite risk of suicide. Subjects with psychotic symptoms, drug addiction, sociopathy, organicity and major medical problems were excluded from the study.

e) combined ratings of two raters, based on a videotape of the individual interview, on a revised Hamilton Rating Scale for Depression (Hamilton, 1961) of greater than 40 and on the Visual Analogue Scale (Aitken, 1969) of greater than 40.

Individuals were classified as nondepressed on the basis of the following criteria (in order of administration):

a) self report of no feelings of depression for 6 weeks prior to contact;

b) interest in a project on depression;

c) a Beck Depression Inventory (Beck, et al., 1961) score of less than 10;

d) an individual interview and judgement by the interviewer that any self-reported symptomatology on the Beck Depression Inventory was not specific to a state of depression. The interview was videotaped and reviewed for ratings on the revised Hamilton Rating Scale for Depression and the Visual Analogue Scale. The ratings were not taken as the clients did not present symptoms of depression.

<u>Dependent Measures</u>: The hypotheses of the study were tested using the following dependent measures:

1) <u>criterion variables</u>: the Beck Depression Inventory (Beck et al., 1961), the Hamilton Rating Scale for Depression (Hamilton, 1961) and the Visual Analogue Scale (Aitken, 1969);

2) self esteem variables: probability of success, level of aspiration, subjective estimate of performance and actual performance on a card sorting task;

3) social skill variables: total rate of behaviour, rate of positive reactions and action latency obtained from a test of social behaviour;

4) non-verbal variables: frequency of eye contact, duration of eye contact, frequency of smiles, frequency of illustrators and frequency of self-adaptors obtained from a videotape of individual interviews.

Criterion Measures: The Beck Depression Inventory (Beck, et al., 1961) is a 21 item self-report test designed to measure the degree of depression. Beck has conducted a number of validity and reliability studies involving this instrument (Beck, 1967, pp. 189-207). His research generally supports the hypothesis that the Depression Inventory scores increase with increases in observed depressive symptomatology. He reports correlations (Pearson biserial r) between the scores on the Depression Inventory and the clinical judgments of degree of depression ranging from .65 to .67 (Beck, 1967, p. 197). Although Beck considers reliability measures such as the test-retest method and the inter-rater reliability method as inappropriate, he reports split-half reliability Pearson r values ranging from .86 to .93. The Depression

Inventory was selected for the present study to measure the self-reported depressed symptoms of the subjects. This study also used the Depression Inventory as one of the three criterion measures to define the depressive samples. The Beck Depression Inventory has been questioned as a single criterion dependent measure for moderately depressed subjects (Mendels and Hawkins, 1972) and thus, was used with clinical rating scales.

The revised Hamilton Rating Scale for Depression (Hamilton, 1961) used in this study was a 14 item scale. Items were defined in terms of a series of either categories of increasing intensity (not present to severe) or a series of categories indicating the presence or absence of the symptom. The scale was identical to that proposed by Hamilton (1961) with the exclusion of three items (genital symptoms, hypochondriasis and loss of insight). As recommended by Hamilton (1961), two raters independently scored subjects on the same interview which had been videotaped and their scores were combined to produce a single dependent measure.

The third variable used to measure change in depression over time was the Visual Analogue Scale (Aitken, 1969). Little and McPhail (1973) reported that the VAS provides a simple yet reliable method of recording levels of depression. They reported a Spearman Rank correlation of .76 between psychiatrists' VAS ratings and scores on the Beck Depression

Inventory. In addition, Little and McPhail (1973) indicated that the VAS was more sensitive to change than the BDI. A straight line, 100 mm. in length, represents the range of mood between "depression absent" and "extreme depression". The degree of depression is simply indicated by marking the line at the appropriate point, the score being the distance in millimetres between this point and zero. Two clinicians independently rated subjects and these scores were combined to obtain a single dependent measure.

Self-Esteem Measures: The self esteem measures referred to as probability of success, level of aspiration, subjective evaluation of performance and actual performance level were adapted from Loeb, et al.'s (1971) research. These variables were included to provide estimates of the patients' view of self, world and future, thereby testing some of Beck's (1967) postulations of a depressive constellation.

The subjects were required to attempt a card sorting test (outlined in the procedures section). Probability of success estimates (P(s)) reflected the subjects' predictions of achieving success on the task. Subjects were asked to estimate, using a percentage measure, their chances of achieving the goal on each trial of the task. The level of aspiration measure (LA) was designed to provide data on how much effort subjects put into the task. For each

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trial subjects were required to estimate the number of cards they were going to try to sort. The <u>subjective estimate of performance</u> measure was taken after the fifth trial. This measure was used to estimate subjects' estimation of success or performance compared to the average individual. Subjects rated their performance on a 100 point scale. Finally, the <u>actual performance</u> of subjects was recorded for each trial. This measure consisted of the time taken by the subject to sort a predetermined number of cards.

<u>Social Skill Measures</u>: The measures referred to as the total rate of behaviour, the rate of positive reactions and action latency are the same as those used by Libet and Lewinsohn (1973) to describe the social skills of subjects. Each measure of social skill is assumed to be theoretically and empirically related to the amount of positive reinforcement an individual elicits from the environment.

Behavioural interactions were seen as having a "source" (one who emitted an "action"), an "object" (one who elicited an action), and a "reactor" (one who emitted a "reaction" to the source). A number of categories were used to distinguish among different types of actions. Categories included psychological complaints, somatic complaints, criticism, praise, information request, information giving and talking about abstract, impersonal or general topics. Reactions were

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coded as being either "positive" (i.e. expression of approval, agreement, interest, etc.) or "negative" (i.e. expression of criticism, disapproval, disagreement, or ignoring, etc.).

The total rate of behaviour (actions) emitted by an individual represents an extremely simple, but very important aspect of social skill. The measure is defined as the total number of actions emitted by a person (expressed as rate per hour). The second measure of social skill is operationalized as the rate of positive reactions emitted per session relative to activity level (total number of reactions). This measure follows the assumption that the extent to which an individual's behaviour toward another is positively reinforcing, is a function of the quality, as well as the quantity, of emitted behaviour. The measure was obtained by subtracting the number of negative reactions from the number of positive reactions. The final measure of social skill, action latency, is defined as the amount of elapsed time (in seconds) between a reaction by another person to an individual's verbal behaviour and a subsequent action by that individual. This measure follows from the view that behaviours which an individual emits are not positively reinforcing to another unless the behaviours are emitted at the "appropriate" time (i.e. in close temporal proximity to the other person's behaviours). The reinforce-

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ment value of a delayed response is smaller. Furthermore an individual who delays sufficiently increases the likelihood of "losing the floor". These social skill measures were recorded during the assessment periods described in the procedure section.

Nonverbal Measures: Subjects' nonverbal behaviour was measured by the following five variables: frequency of eye contact, duration (in seconds) of eye contact, frequency of smiles, frequency of illustrators and frequency of self-adaptors. Eye contact was operationally defined as the movement of head and eyes such that the subject looked into the eyes of the interviewer. The frequency of eye contacts, as well as the duration which the subject maintained eye contact, was recorded. A smile was operationally defined as a change in facial features in which the subject's mouth turned upwards at the corners, the lips opened slightly and there was an increase in the protrusion of the skin covering the cheek bones. The frequency of smiles exhibited by the subject were recorded by the rater. An illustrator based on the research of Ekman and Friesen (1974), is a movement directly tied to speech; it seems to illustrate what is being said verbally. Eight subclasses are distinguished: batons, movements which accent or emphasize a particular word or phrase, idiographs, movements which sketch the path or

direction of thought; deitic movements, point to an object; spatial movements, depicting a spatial relationship, rhythmic movements, depicting the rhythm or pacing of an event; kinetographs, depicting a bodily action; pictographs, drawing a picture of the referant; and the use of emblems to illustrate verbal statements, either repeating or substituting for a word or phrase. In this study as in the Kiritz (1971) study, the subclasses of illustrators were collapsed, thus obtaining one measure, the frequency of illustrators. An adaptor is a movement thought to be first learned as part of one's adaptive efforts to satisfy self or bodily needs, or to perform bodily actions, or to manage and cope with emotions, or to develop or maintain prototypic interpersonal contacts or to learn instrumental activities (Ekman and Friesen, 1974). A self-adaptor in learned in connection with the meaning of a variety of problems or needs. Both the action and location of the self-adaptor was considered. Action referred to the activity of the hand when it contacted some part of the face or body. Actions were classified as a scratch-pick, rub-massage, squeeze-pinch, hold-support, or cover. The locations coded were eyes, ears, nose, mouth, hair, cheek area, forehead area, temple area, shoulder, arm, leg and hands. In this study, the frequency of self-adaptors were recorded, regardless of action or location.

<u>Treatments</u>: Specific treatment outlines are detailed in Appendix A. The study included three experimental groups and three control groups. The <u>cognitive modification</u> group (n = 8) was treated by methods suggested by Beck (1967) and others (Ellis, 1962; Meichenbaum, 1971; Efran, 1973). The goal of the cognitive modification treatment package was to identify and modify subject's idiosyncratic, maladaptive thoughts and ideation. The <u>behaviour modification</u> group (n = 8) received a treatment package adapted from the research of Lewinsohn and his colleagues (Lewinsohn, Shaffer and Libet, 1971; Lewinsohn, 1974). The objective of the behaviour modification treatment was to restore an adequate schedule of positive reinforcement for the individual by training him to emit behaviours which are likely to be positively reinforced by others and to engage in activities which are intrinsically rewarding for him.

In addition to the treatment groups three control groups were included in the study. An <u>assessment/attention (nondirective)</u> control group (n = 8) was included to control for any therapeutic effects resulting from the assessment procedure in combination with the nonspecific "treatment" variables (i.e. coming to therapy, having a vehicle to discuss difficulties etc.) The <u>assessment/control (no-treatment)</u> group (n = 8) controlled for any therapeutic effects resulting from the assessment procedures alone.

The third control group was an nondepressed/assessment group (n = 8). This group underwent all assessment procedures and was used to evaluate the major theoretical assumptions and predictions of Libet and Lewinsohn (1973), Loeb et al. (1971), and Ekman and Friesen (1974).

A sixth group (depressed/remitted) was used to evaluate the theoretical aspects of the study. Basically, this group was created after the treatments and consisted of those subjects from any of the depressed groups whose depression had remitted (i.e. at post-assessment, they could satisfy the criteria for the nondepressed/assessment group).

Therapy sessions were held in a group setting with eight subjects and the therapist. The treatment groups met over a four week period with two 2-hour sessions per week (a total of 16 therapy hours). A session by session outline is provided in Table 1. This time-limited therapy is

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Insert Table 1 about here

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consistent with many other studies of this nature (Bergin & Strupp, 1972). In addition to the practical reasons involved, the time-limit is reported to have a facilitative effect on the behaviour of the client and the therapist (Lewinsohn et al., 1971).

It is well recognized that therapist variables (i.e. personality, style, experience, theoretical orientation)

Table 1: A Session by Session Outline of the Treatment Procedures

Week - 1 Session - 1

	OBJECTIVE	METHOD (TECHNIQUE)
COGNITIVE MODIFICATION	A. Introduction - GENERAL AND TREATMENT SPECIFIC B. Delineate major maladaptive patterns and sequences in patient's current life. C. Emphasis that depression should not be viewed in terms of specific problems and not in terms of symptoms.	A. goals and rationale B. -review events leading to depressive episode -review history of past depressions -if possible, therapist should attempt to ascertain the features of patient's responding (i.e., selective responding to specific types of experiences)
BEHAVIOUR MODIFICATION	A. Introduction - GENERAL AND TREATMENT SPECIFIC B. Diagnostic phase - intended to find ways and means of increasing the level of positive reinforcement. C. Introduce psychometric measures.	A. goals and rationale B. -review events leading to depressive episode -discussion of current behaviours Homework: Complete Reinforcement Survey Schedule and Lubin's Depression Adjective Check List
ATTENTION/ ASSESSMENT CONTROL	A. Introduction - GENERAL AND TREATMENT SPECIFIC B. Discussion of depression and specific manifestations.	A. goals and rationale B. Discussion will center on current life events -therapist will be non-directive; he will not offer suggestions, coping strategies, etc. but will be an interested, empathic individual.
ASSESSMENT CONTROL	ASSESSMENT ONLY	
NORMAL/ ASSESSMENT CONTROL	ASSESSMENT ONLY	

Table 1: continued

Week - 1, Session - 2

	OBJECTIVE	METHOD (TECHNIQUE)
COGNITIVE MODIFICATION	A. Delineate maladaptive cognitions occurring in response to environmental stimuli - patients should be aware of self-verbalizations.	A. discuss specific events which occur and which are followed by feelings of sadness or other depressive symptoms - investigate the cognitive component in the chain, stimuli→cognition→affect B. introduce homework → patients should be instructed to write depressogenic thoughts down
BEHAVIOUR MODIFICATION	A. Diagnostic stage continued.	A. discuss items on Reinforcement Survey Schedule and other stimuli which were reinforcing -(during this period data on the quality and quantity of social interactions will be obtained) -therapist develops hypotheses about what is maintaining depression and the changes in patient's Behaviour which may reduce depression
ATTENTION/ ASSESSMENT CONTROL	A. continue discussion and include current situation	-non-directive
ASSESSMENT CONTROL	ASSESSMENT ONLY	
NORMAL/ ASSESSMENT CONTROL	ASSESSMENT ONLY	

Table 1: continued

Week - 2 Session - 3

	OBJECTIVE	METHOD (TECHNIQUE)
COGNITIVE MODIFICATION	A. Awareness that thoughts (negative) do occur and result in feelings of sadness, etc. B. Introduce methods of dealing with thoughts - challenging their validity.	A. discussion of homework - point out what is invalid about thinking (e.g. "I never succeed") This statement is an overreaction. Allow patient to challenge thought if he/she is capable. B. -correct misconceptions, provide alternatives. Homework: continue to record thoughts and try to record realistic replies to these cognitions.
BEHAVIOUR MODIFICATION	A. Treatment goals+ultimate goal is the attainment of a higher rate of positive (social) reinforcement. B. -individual behavioural goals agreed on.	A. Provide patients feedback about their behaviours in the group and outside along with the consequences of the behaviours. B. Commitment of therapist and patient to work on behavioural goals is important.
ATTENTION/ ASSESSMENT CONTROL	A. Continue discussion and include current situation.	-non-directive
ASSESSMENT CONTROL	ASSESSMENT ONLY	
NORMAL/ ASSESSMENT CONTROL	ASSESSMENT ONLY	

Table 1: continued

Week - 2 Session - 4

	OBJECTIVE	METHOD (TECHNIQUE)
COGNITIVE MODIFICATION	A. Continue to focus on maladaptive cognitions and methods of dealing with them. -establish invalidity of thoughts. B. Increase patient awareness of non-depressive situations and responses which occur in their lives - neutralize pessimism.	A. Promote objective discussion of cognitions - provide feedback about attempts to correct thoughts. B. In addition to recording maladaptive thoughts patients should record (situations/activities) in which they were successful or which they enjoyed. -also list their positive features- CONTINUE THROUGHOUT TRT.
BEHAVIOUR MODIFICATION	A. Increase activity level of patient outside group. B. Apply reinforcement schedule in group.	A. Make contract that increased activity will be reinforced by therapist listening to depressive symptoms in next session. -graded task assignment. B. reinforce "positive" (non-depressive) behaviours in groups ignore depressive behaviours and verbalizations. Homework: record activities on Activity Schedule. -continue for rest of treatment.
ATTENTION/ ASSESSMENT CONTROL	A. Continue discussion and include current situation.	-non-directive
ASSESSMENT CONTROL	ASSESSMENT ONLY	
NORMAL/ ASSESSMENT CONTROL	ASSESSMENT ONLY	

Table 1: continued

Week - 3 Session - 5

	OBJECTIVE	METHOD (TECHNIQUE)
COGNITIVE MODIFICATION	A. Ascertain patient's response to homework assignment - discuss problems related to homework. B. Continue to train patients to evaluate validity and accuracy of cognitions. C. Once cognitions established as invalid train patient to neutralize them by verbalizing why. D. Check on homework - problems, difficulties.	A. These assignments should be continued as they provide a method for looking objectively at experiences and self. B. Provide alternative ways of looking at situations, solving them, etc. C. Therapist guides patient through logical steps of reasoning. e.g. THOUGHT "I won't be able to do it". RESPONSE "This isn't true. I've done it many times before. I may be a little slower when I'm depressed but I know what to do and if I do things step-by-step there's no reason why I can't do it."
BEHAVIOUR MODIFICATION	A. To facilitate and expedite interpersonal communications. B. Continue training of patients to increase social skill behaviours.	A. Utilize the series of structured exercises introduced by Lewinsohn, Weinstein & Alper (1970) and Wallen (1967). B. Utilize behaviour rehearsal and feedback with subjects.
ATTENTION/ ASSESSMENT CONTROL	A. Continue discussion and include current situation.	-non-directive
ASSESSMENT CONTROL	ASSESSMENT ONLY	
NORMAL/ ASSESSMENT CONTROL	ASSESSMENT ONLY	

Table 1: continued

	OBJECTIVE	METHOD (TECHNIQUE)
COGNITIVE MODIFICATION	A. Begin to clarify assumptions and attitudes which underlie individual's cognitions. (Notice difference in orientation between dealing with specific cognitions versus dealing with patients' assumptions).	A. Chronic attitudes may be inferred from the patient's responses to particular situations - information should also be obtained by questioning patient on his reasoning, values, beliefs, etc. e.g. "In order to be happy I have to be successful" "My value as a person depends on what others think of me" B. Provide atmosphere of "safety" by not responding in a condemnatory or superior manner. This is particularly important if patient is dealing with self-criticism. * Core assumptions may be accompanied by emotional behaviour etc. -this behaviour should not be interfered with.
BEHAVIOUR MODIFICATION	A. Re-evaluate behavioural goals with patients. B. Continue reinforcement programme. C. Continue social skill training.	A. Provide data on changes in patients' behaviour focusing on consequences of newly acquired behaviours. B. The patient's re-evaluated goals should be attended to - reinforcement from therapist for successful approximations. -discuss usefulness of responding to others in a positive and not a negative (depressive) manner.
ATTENTION/ ASSESSMENT CONTROL	Continue discussion and include current life situation.	-non-directive
ASSESSMENT CONTROL	ASSESSMENT ONLY	
NORMAL/ ASSESSMENT CONTROL	ASSESSMENT ONLY	

Table 1: continued

Week - 4 Session - 7

	OBJECTIVE	METHOD (TECHNIQUE)
COGNITIVE MODIFICATION	A. Examine the assumptions of patients in objective manner.	A. Using similar methods as with the specific cognitions investigate invalid logic - explore alternative assumptions - discuss effects major changes in attitude may have. B. Homework: Patients should record changes which have taken place in their attitudes etc.
BEHAVIOUR MODIFICATION	A. Continue with social skill training.	A. Utilize exercises of Wallen (1967).
ATTENTION/ ASSESSMENT CONTROL	Continue discussion and include current life situation.	non-directive
ASSESSMENT CONTROL	ASSESSMENT ONLY	
NORMAL/ ASSESSMENT CONTROL	ASSESSMENT ONLY	

Table 1: continued

Week - 4 Session - 8

	OBJECTIVE	METHOD (TECHNIQUE)
COGNITIVE MODIFICATION	A. Final session integrating assumptions and effects. B. Discuss future plans of patients -feedback re: treatment effectiveness. C. Give patients the Therapist Rating Form.	C. Stress anonymity - to be returned at post-test.
BEHAVIOUR MODIFICATION	A. Introduce principles of self-reinforcement and control techniques. B. Provide final feedback re: behaviour change that has occurred with TRT. C. Give patients the Therapist Rating Form.	A. Utilize reinforcers from Reinforcement Survey Schedule and discuss strategies which could be used to increase behaviour in patient's environment. C. Stress anonymity - to be returned at post-test.
ATTENTION/ ASSESSMENT CONTROL	A. Discuss future plans of patients. -Feedback re: treatment effectiveness. B. Give patients the Therapist Rating Form.	B. Stress anonymity - to be returned at post-test.
ASSESSMENT CONTROL	ASSESSMENT ONLY	
NORMAL/ ASSESSMENT CONTROL	ASSESSMENT ONLY	

contribute to the outcome of psychotherapy (Bergin & Strupp, 1972). For this reason only one therapist was used to conduct all treatment sessions for the cognitive modification group, the behaviour modification group and the assessment/attention control group. The experimenter (therapist) led all treatment sessions. The therapist was a doctoral level clinical psychology graduate student who had completed his residency and internship requirements. During the phases of the investigation the therapist was employed in a clinical setting of a specialized general hospital associated with the University of Western Ontario. All subjects exposed to the therapist were asked to rate their therapist on such dimensions as competence, sincerity, interest, likeability, etc.

Procedure: Assignment of the depressed subjects to the experimental and control groups was done randomly, subject to two constraints of (a) matching the groups on sex and age composition and (b) matching the groups on their severity of depression prior to treatment (as measured by the Beck Depression Inventory).

All subjects were assessed at three points in the study (pre-treatment, mid-treatment, and post-treatment). In addition, the two experimental groups were assessed one month following treatment.

Assessment: During the assessment stages, similar procedures

were followed with all subjects. After receiving a referral (self or from an area professional and/or agency), subjects were initially screened in a group session. During this session the experimenter or his assistant outlined the purpose of the study, the time involved and the research aspects of the study. Subjects were asked to complete the Beck Depression Inventory and a screening questionnaire designed to elicit information about the nature, duration and development of the subject's complaints and possible involvement with other professional health workers.

If the subject met the initial criteria he/she was requested to come to an individual interview which was videotaped and followed the general outline provided in Appendix C.

Subjects who met the inclusion criteria for the study were required to read and complete a consent form, thereby agreeing to participate in the assessment and treatment sections of the study. Once the subject signed the consent form he/she was taken to a small waiting room by a research assistant. Subjects were told that the research assistant would administer a card sorting task as part of the assessment procedure. Subjects were taken to the waiting room, introduced to another "client" and were asked to wait for "a few minutes" until the equipment is set up. In reality,

the other "client" was an experimental confederate who provided a structured social situation for the subject. The confederate followed strict instructions on the nature of the interaction. Basically, she responded to actions by the subject with an appropriate reaction and continued with any discussion initiated by the subject. If the subject did not initiate any actions within the first minute, the confederate "broke the ice" with a general statement ("It certainly is cold (pleasant, unpleasant) outside today".). Another statement was made after three minutes ("They're taking their time setting up the equipment.") but otherwise, the confederate made no further comments except in reaction to actions of the subject.

The interchange between the confederate and the subject was recorded on audiotapes for scoring of the three social skill dependent measures (the rate of behaviour emitted, the rate of positive reaction and the action latency). A unit of verbal behaviour was operationally defined as the occurrence of a codable pattern of verbalization within a 20-second interval. A codable pattern consisted of Person A (primary) emitting an action to Person B (object) with Person B (secondary) emitting a reaction to A. The interaction lasted approximately 7 to 10 minutes but only the first five minutes (and thus 15 intervals) were used in the calculations of variables. The audiotapes were rated by the experimenter

who was paced by an automatic timer which delivered an auditory signal every 20 seconds.

At the end of this period, the subject was taken to another small room by the research assistant who explained the "card sorting test". The test was designed to provide measures of the subject's subjective estimations and actual performance on a simple task. The task was outlined by Loeb, et al., (1971) and has been used in Diggory's (1966) research on self-esteem for the past 10 years.

Subjects were required to sort a set of cards from the deck to a board with a goal of sorting 20 or more cards in 20 seconds. A graph board was in front of the subjects to indicate their progress over the five trials. After the introductory instructions the experimenter continued with these directions:

> In a minute or so you are going to take this card-sorting test. First I thought you might like to know a little more about it. We've found from past experiences that it can be useful in helping us to help you.
>
> It consists of sorting cards correctly and quickly from a deck onto this board. This is not as simple as it may seem. It involves several abilities--the ability to recognize forms as they appear, the ability to remember where they go and the ability to handle the cards. Most of all, it means coordinating all these abilities in order to do a good job.
>
> Now let me explain exactly what you are goind to do. You're to sort these cards so that they match the ones here. You will have 20 seconds and I want to see whether you can sort 20 or more cards

correctly this time. This is not as easy as it may seem.

So you will have five tries, or trials, with 20 seconds on each try. I want to see if in one of those five trials, any one of them, you can make the goal of sorting 20 or more cards.

You see here (pointing to graph board) is the number of cards and here the number of tries or trials. And this (pointing to white string) is the goal. After each trial, I'll put in one of these white pegs in the board and that way you'll be able to follow just how you are doing as far as the goal goes (Loeb et al., 1971, p. 108).

Probability of success estimates: (P(s)) estimates were obtained before each trial as follows: "I would like you to tell me what you feel your chances are of making the goal of sorting twenty cards in any one of the five trials - not necessarily the first, or second, but on any one of the five trials. You can think of these numbers as percentages. In other words, what percent chance do you have of making the goal in one of the five trials?". Level of aspiration (LA): These statements were obtained from the subject before each trial by asking: "How many cards are you going to try to sort on this trial?" Subjective estimate of performance: This measure was obtained after five trials had been completed by asking: "I would like to know how well you think you did on this task compared to others who have taken it. On a scale of zero to one hundred, where zero represents the

poorest performance of anyone, one hundred represents the best performance of anyone and fifty represents the average performance, where would you place your performance?"

Actual performance measure: (AP) This consisted of the time that it took the subject to sort a predetermined number of cards.

Although the subject was led to believe that each trial would last for 20 seconds, the experimenter stopped him after a predetermined number of cards were sorted. This deception was necessary in order to control performance feedback and to make the task identical for all subjects.

Two packs of cards, one for each alternate trial, were available to each subject. The order of the cards differed for every trial. After each trial a white golf tee was inserted in the graph board to indicate the number of cards sorted. Both tasks required the subject to sort cards with symbols (e.g. a star, a cross, etc.) onto a board on which a card from each suit was pasted.

Two conditions (a success condition and a failure condition) were used in the card sorting task. Subjects were assigned to the initial condition (success or failure) randomly with the constraint that within a group, four subjects initially succeeded and four failed. At post test the conditions were reversed so that across groups the effects of order and conditions were counterbalanced.

In the success condition, the number of cards that subjects were allowed to sort were 12, 15, 18, 19, 21 while in the failure condition subjects sorted 14, 15, 15, 16 and 18 cards, respectively. After the five trials if the subject succeeded, the experimenter said, "Good. You made the goal. See how you did?" (pointing to the performance curve). If the subject failed he said, "You didn't make the goal. See how you did?" (pointing to the performance curve).

When the subject finished the card sorting task the assessment phase was completed, the subject was thanked and informed that he/she would be contacted by telephone as to the assessment results. The initial assessment was completed within a maximum of seven days from the subject's first contact with the experimenter and most subjects were assessed within 72 hours.

Videotapes of the assessment interviews were rated by two clinicians with Ph.D.'s in psychology. One rater had 7 years of clinical experience and the other had 2 years of experience. Raters were blind to any group assignment of subjects and the videotapes were edited of any comments subjects made as to their involvement in treatment. The research assistant, who administered the card sorting task, and the social skills confederate were similarly blind as

to subject group assignments and to the hypotheses of the study.

The nonverbal measures were taken from the initial 5 minutes of the pre- and post-assessment interviews. The experimenter rated the videotapes and all ratings were completed at the conclusion of the study. Using the classification suggested by Ekman and Friesen (1974), the measures in this study were encoding types (measuring some aspect of the subject's own nonverbal behaviour) using the components methodology (directly measuring the components of the subject's behaviour). The five minute observation period was further divided into 15 second intervals by an automatic timer which delivered an audible signal to the rater. Within the 15-second interval only one illustrator and/or self adaptor was coded by the rater.

Subjects were informed of their group assignment and were given specific details concerning treatment procedure (i.e. meeting times, composition of group). They met with their group and therapist within seven days of the initial assessment. Sessions were held in a small room in the clinical psychology area of the University of Western Ontario. All therapy sessions were audiotaped for later reference. The assessment procedure was repeated at mid-treatment (interview only) immediately following treatment and one month following treatment (interview only). A

schematic representation of the assessment aspects of the study is shown in Table 2. Prior to treatment all subjects

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Insert Table 2 about here

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were given the same general instructions in order to control for expectancy. The general instructions for the treatment procedures is shown in Appendix A.

Table 2: Schematic representation of the assessment procedure

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RESULTS

An attempt was made to match the experimental and control groups on the demographic variables (age, sex) and to match the depressed groups on the severity of depression (as measured by the Beck Depression Inventory). The characteristics of the groups are outlined in Table 3.

The mean ages for groups are not significantly different.

Insert Table 3 about here

The groups, however, were not successfully matched on the sex variables. The nondepressed, cognitive modification and nondirective groups consisted of five females and three males whereas the no treatment and behaviour modification groups consisted of six females and two males. The nature of the assessment procedures resulted in a greater number of females than males being assessed. While the common finding (Beck, 1967) of more females than males presenting with symptoms of depression was expected, the experimenter was faced with an unreasonable delay in the study, if the strict matching criteria on sex was to be upheld.

The difficulty in obtaining suitable subjects of the "required" sex may have resulted from the subject population used. Eight times as many females were assessed than males, a proportion considerably higher than the incidence

Table 3: Characteristics of groups based on means and ranges of the demographic and severity of depression variables.

	Sex M	Sex F	Age Mean	Age Range	BDI-pre[a] mean	BDI-pre[a] range
Cognitive Modification	3	5	19.8	17-26	30.1	18-45
Nondirective	3	5	20.5	19-26	26.4	18-42
No Treatment	2	6	19.9	18-25	26.6	19-43
Behaviour Modification	2	6	20.1	19-24	25.6	18-38
Nondepressed	3	5	20.9	18-23	6.9	1-10

[a] BDI = Beck Depression Inventory

by sex reported in the general population (four to five females for every male) in Canada (Porter, 1970).

A univariate analysis of variance on the Beck Depression Inventory confirmed that, at the pre-assessment, the four depressed groups were not significantly different ($F < 1.0$, $p < .76$). Similar univariate analyses of variance were performed on all of the other dependent variables at pre-treatment. No significant differences were found on any of the other fourteen variables. A summary of the pre-treatment analyses results is presented in Table 4.

Insert Table 4 about here

The main effect of treatments on the three criteria ~~for depression~~ (Beck Depression Inventory, Hamilton Rating Scale for Depression, Visual Analogue Scale) was evaluated by univariate analyses of covariance for the mid-treatment assessment and the post-treatment assessment. The pre-treatment score was used as the covariate.

At the mid-treatment assessment, significant treatment effects were found on the Beck Depression Inventory (BDI) ($F = 3.11$, $df = 3,27$, $p < .05$) and the Hamilton Rating Scale for Depression (HRSD) ($F = 3.17$, $df = 3,27$, $p < .05$).

The treatment effect on the Visual Analogue Scale (VAS) at mid-assessment was not statistically significant

Table 4: Summary of the univariate analyses of variance for treatment effects on all dependent measures at pre-treatment assessment from the depressed groups.

Variable	Hypothesis Mean Square	F-Value	Probability Less Than
Criterion Measures			
1. Beck Depression Inventory	32.13	.40	.76
2. Hamilton Rating Scale	32.75	.42	.74
3. Visual Analogue Scale	1679.88	1.20	.33
Self-Esteem Measures			
1. Probability of success	68.54	.16	.93
2. Level of Aspiration	2.01	.62	.61
3. Subjective Estimate	37.04	.24	.87
4. Actual Performance	.06	1.80	.17
Social Skill Measures			
1. Actions	1756.50	1.57	.22
2. Positive Reactions	1.36	.74	.54
3. Action Latency	581.97	1.94	.15
Non-Verbal Measures			
1. Frequency of Eye Contact	7.61	.39	.76
2. Duration of Eye Contact	4387.89	.83	.49
3. Frequency of Smiles	7.03	.52	.67
4. Frequency of Illustrators	18.28	1.03	.40
5. Frequency of Self-Adaptors	16.70	.60	.62

Degrees of freedom = 3,28

($F = 1.25$, $df = 3.27$). Summary tables of the mid-treatment analyses are presented in Table 5.

Insert Table 5 about here

As the analyses of covariance on the BDI and the HRSD data revealed significant treatment effects, the adjusted means for the treatment groups were compared using a t-test. It should be noted that consistent with the hypotheses of the study one-tailed tests were used to compare the cognitive modification and behaviour modification groups with the non-directive and no treatment groups. Two-tailed tests were required in comparing the cognitive modification group with the behaviour modification group and also, in comparing the nondirective group with the no treatment group.

On the BDI, the cognitive modification group had a significantly lower (consistent with fewer symptoms of depression) mean score than the nondirective group ($t = 2.51$, $p < .01$) and the no treatment group ($t = 2.76$, $p < .01$). All other comparisons were nonsignificant.

On the HRSD, results consistent with the BDI data were found. The cognitive modification group was significantly lower than both the nondirective group ($t = 2.86$, $p < .01$) and the no treatment group ($t = 2.42$, $p < .05$). All other comparisons were nonsignificant. The adjusted group means for the BDI, HRSD, and VAS at the mid-assessment are

Table 5: Analysis of covariance on the criterion variables at the mid-treatment assessment. The pre-treatment score was used as the covariate for each dependent variable.

Beck Depression Inventory

Source	D.F.	Adjusted SS	Mean Square	F-value
Treatments	3	333.7	111.2	3.11*
Error	27	966.5	35.8	

Hamilton Rating Scale for Depression

Source	D.F.	Adjusted SS	Mean Square	F-value
Treatments	3	696.8	232.3	3.17*
Error	27	1978.4	73.3	

Visual Analogue Scale

Source	D.F.	Adjusted SS	Mean Square	F-value
Treatments	3	6026.1	2008.7	1.25 n.s.
Error	27	43533.3	1612.3	

* $p < .05$

reported in Table 6.

Insert Table 6 about here

As with the mid-assessment data, the post-assessment data was subjected to a univariate analysis of covariance with the pre-assessment scores as the covariate. Significant main effects of treatment were found on the Beck Depression Inventory ($F = 6.76$, $df = 3,27$, $p < .001$) and the Hamilton Rating Scale for Depression ($F = 4.07$, $df = 3,27$, $p < .02$). The effect of treatments on the Visual Analogue Scale was nonsignificant ($F = 1.89$, $df = 3,27$). Summary tables of the post-assessment data on the depression criterion measures are presented in Table 7.

Insert Table 7 about here

As the analyses of covariance on the BDI and HRSD data revealed significant treatment effects, the adjusted means for the treatment groups were compared using a t-test. It should be noted that the use of the t-test for multiple apriori mean comparisons is thought to be a liberal procedure by some statisticians (Hays, 1963; Kirk, 1968). Others including Winer (1962) and Keppel (1973) have supported its usefulness. Using the more statistically conservative Dunn's procedure mean comparisons with a reported $p < .05$ were equivocal.

Table 6: Adjusted means for the cognitive modification, the behaviour modification, the nondirective and the no treatment groups, at mid-assessment, on the criterion measures.

	Adjusted Means		
	Beck Depression Inventory	Hamilton Rating Scale	Visual Analogue Scale
Cognitive Modification	14.2	40.3	52.5
Behaviour Modification	19.1	47.6	81.3
Nondirective	21.8	52.5	90.4
No Treatment	22.6	50.7	74.4

Table 7: Analysis of covariance on the criterion measures at the post-treatment assessment. The pre-treatment score was used as the covariate for each dependent variable.

Beck Depression Inventory

Source	D.F.	Adjusted SS	Mean Square	F-value
Treatments	3	904.7	301.6	6.76****
Error	27	1204.4	44.6	

Hamilton Rating Scale for Depression

Source	D.F.	Adjusted SS	Mean Square	F-value
Treatments	3	1280.2	426.7	4.07**
Error	27	2833.8	105.9	

Visual Analogue Scale

Source	D.F.	Adjusted SS	Mean Square	F-value
Treatments	3	10261.0	3420.3	1.89 n.s.
Error	27	48941.2	1812.6	

** $p < .02$

**** $p < .001$

On the BDI, the cognitive modification group mean was significantly lower from the behaviour modification group mean ($t = 2.39$, $p < .05$), the nondirective group mean ($t = 1.90$, $p < .05$) and the no treatment group mean ($t = 4.47$, $p < .01$). The behaviour modification group mean was significantly lower ($t = 2.09$, $p < .05$) than the no treatment group mean. The nondirective group mean was significantly lower than the no treatment group ($t = 2.59$, $p < .05$).

The nondirective and behaviour modification group means on the BDI were not significantly different.

On the HRSD, the cognitive modification group mean was significantly lower than the nondirective group mean ($t = 3.22$, $p < .01$) and the no treatment group mean ($t = 2.79$, $p < .01$). The difference between the cognitive modification group and the behaviour modification group while exceeding conventional statistical significance ($t = 1.99$, $p < .06$), was in the same direction as was the difference based on the BDI data. All other group mean comparisons were nonsignificant. The adjusted group means for the BDI, HRSD and VAS at the post-assessment are reported in Table 8.

Insert Table 8 about here

Data at a one month follow-up assessment was obtained on the cognitive modification and the behaviour modification

Table 8: Adjusted means for the cognitive modification, the behaviour modification, the nondirective and the no treatment groups, at post-assessment, on the criterion measures.

	Adjusted Means		
	Beck Depression Inventory	Hamilton Rating Scale	Visual Analogue Scale
Cognitive Modification	9.9	37.5	37.7
Behaviour Modification	18.0	47.8	77.4
Nondirective	16.3	54.0	84.9
No Treatment	25.0	51.8	75.1

groups. Univariate analyses of covariance with the pre-measure as the covariate were performed on the Beck Depression Inventory, the Hamilton Rating Scale for Depression and the Visual Analogue Scale. The analysis on each on the dependent measures produced non-significant results indicating that there was no difference between the group means. The results are summarized in Table 9.

Insert Table 9 about here

Figures 1, 2 and 3 illustrate the changes for each treatment group over the assessment times. The adjusted means are used for the BDI, HRSD and VAS data at the mid-post-and follow-up assessments.

Insert Figures 1, 2 and 3 about here

Pearson correlation coefficients on the ratings of the clinicians, from which the HRSD and VAS scores were obtained, and the BDI, were computed. On the HRSD, the correlation between raters was .76, which is statistically significant ($df = 111$, $p < .001$). On the VAS, a significant ($df = 111$, $p < .001$) correlation (.70) was also obtained. The correlations between the BDI, HRSD and the VAS are presented in Table 10.

Insert Table 10 about here

Univariate analyses of covariance were performed on the post-assessment data for the remaining dependent variables.

Table 9: Summary of the univariate analyses of covariance (with the pre-score used as the covariate) and of the adjusted means on the criterion measures at the follow-up assessment on the cognitive modification and behaviour modification groups.

Beck Depression Inventory

Source	D.F.	Adjusted SS	Mean Square	F-value
Treatments	1	156.4	156.4	1.87 n.s.
Error	14	1088.2	83.7	

Adjusted means: cognitive modification 11.6
behaviour modification 18.0

Hamilton Rating Scale for Depression

Source	D.F.	Adjusted SS	Mean Square	F-value
Treatments	1	177.2	177.2	1.44 n.s.
Error	14	1600.1	123.1	

Adjusted means: cognitive modification 41.6
behaviour modification 48.4

Visual Analogue Scale

Source	D.F.	Adjusted SS	Mean Square	F-value
Treatments	1	3987.0	3987.0	1.96 n.s.
Error	14	26466.2	2035.9	

Adjusted means: cognitive modification 49.3
behaviour modification 80.9

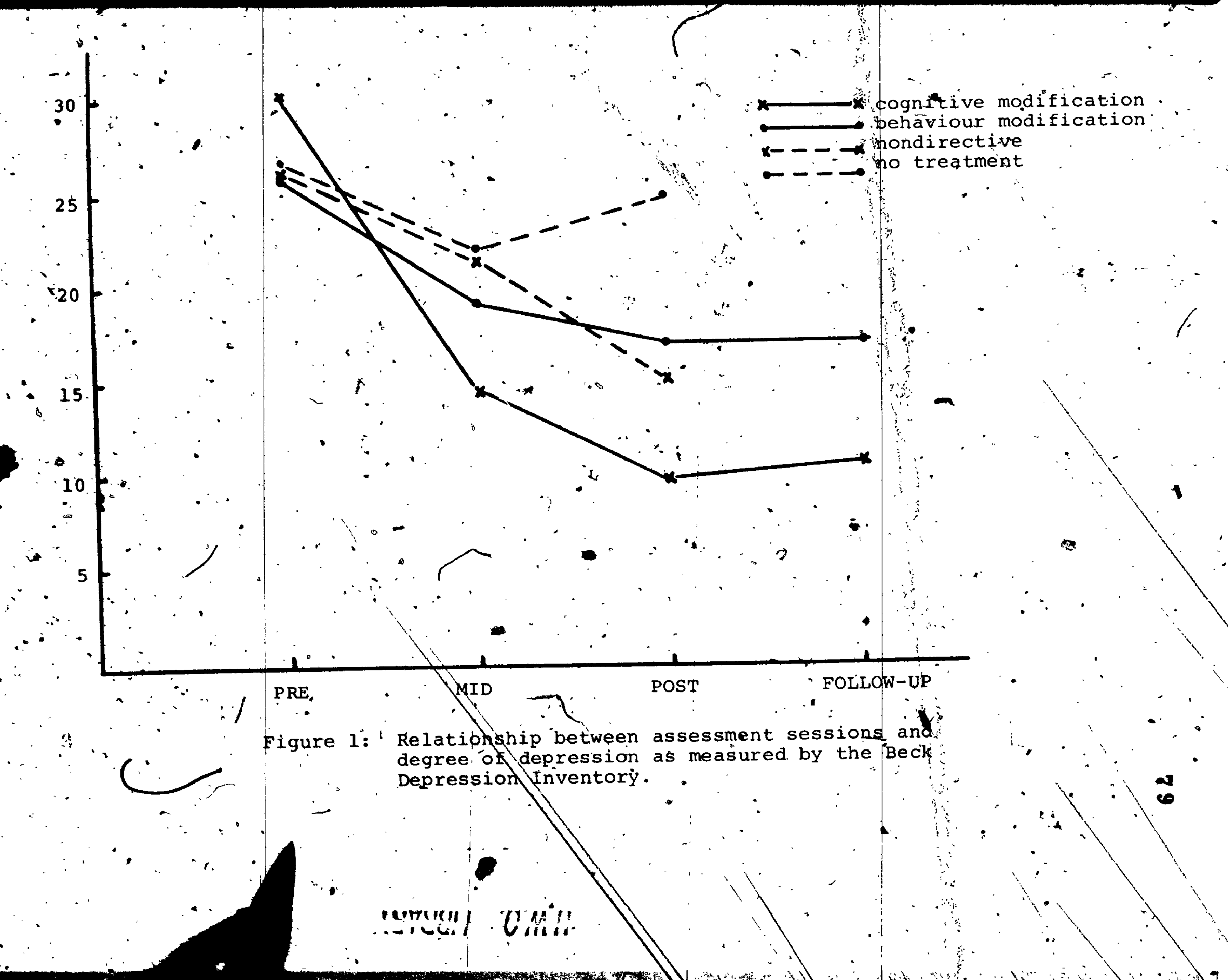

Figure 1: Relationship between assessment sessions and degree of depression as measured by the Beck Depression Inventory.

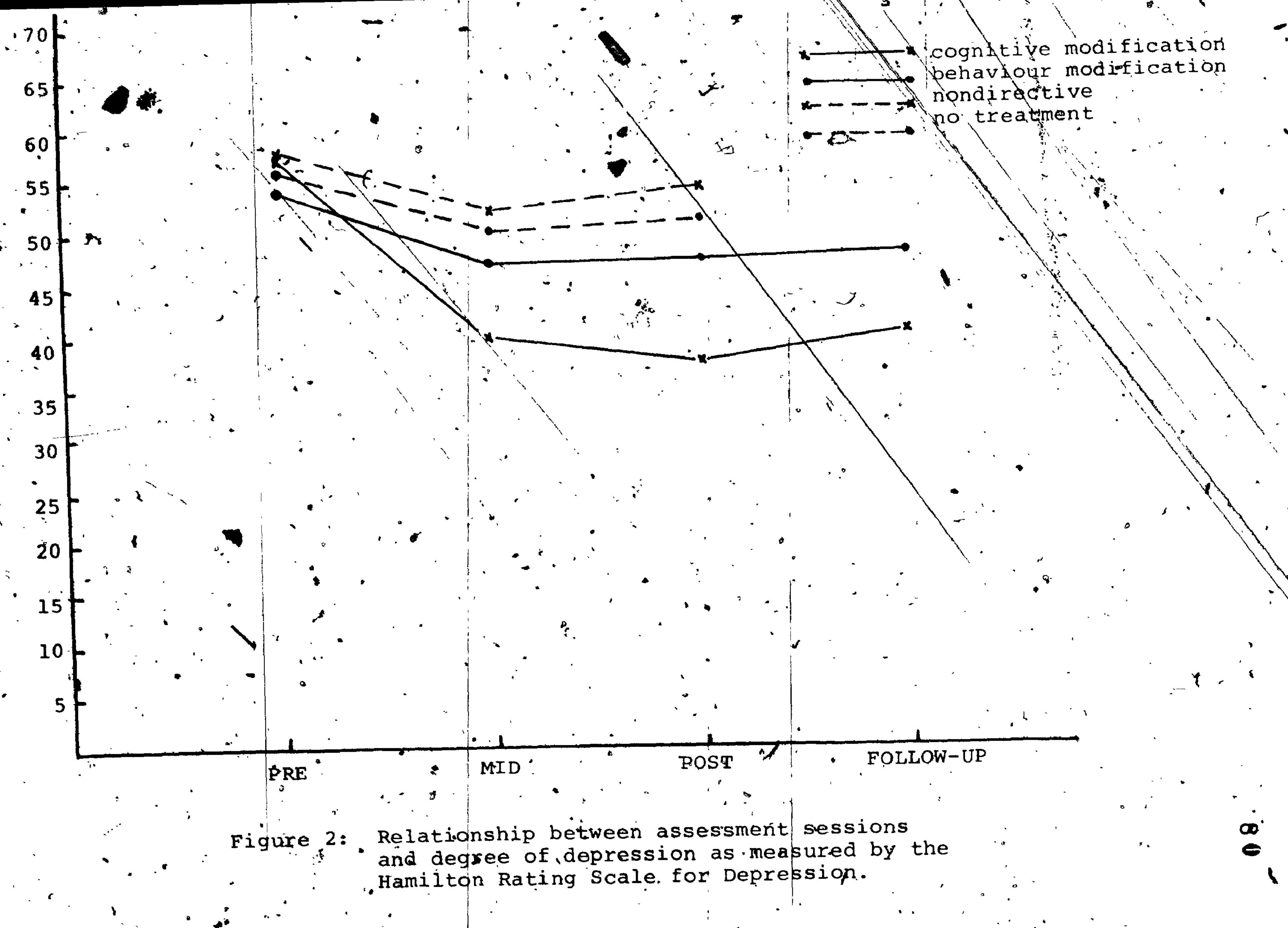

Figure 2: Relationship between assessment sessions and degree of depression as measured by the Hamilton Rating Scale for Depression.

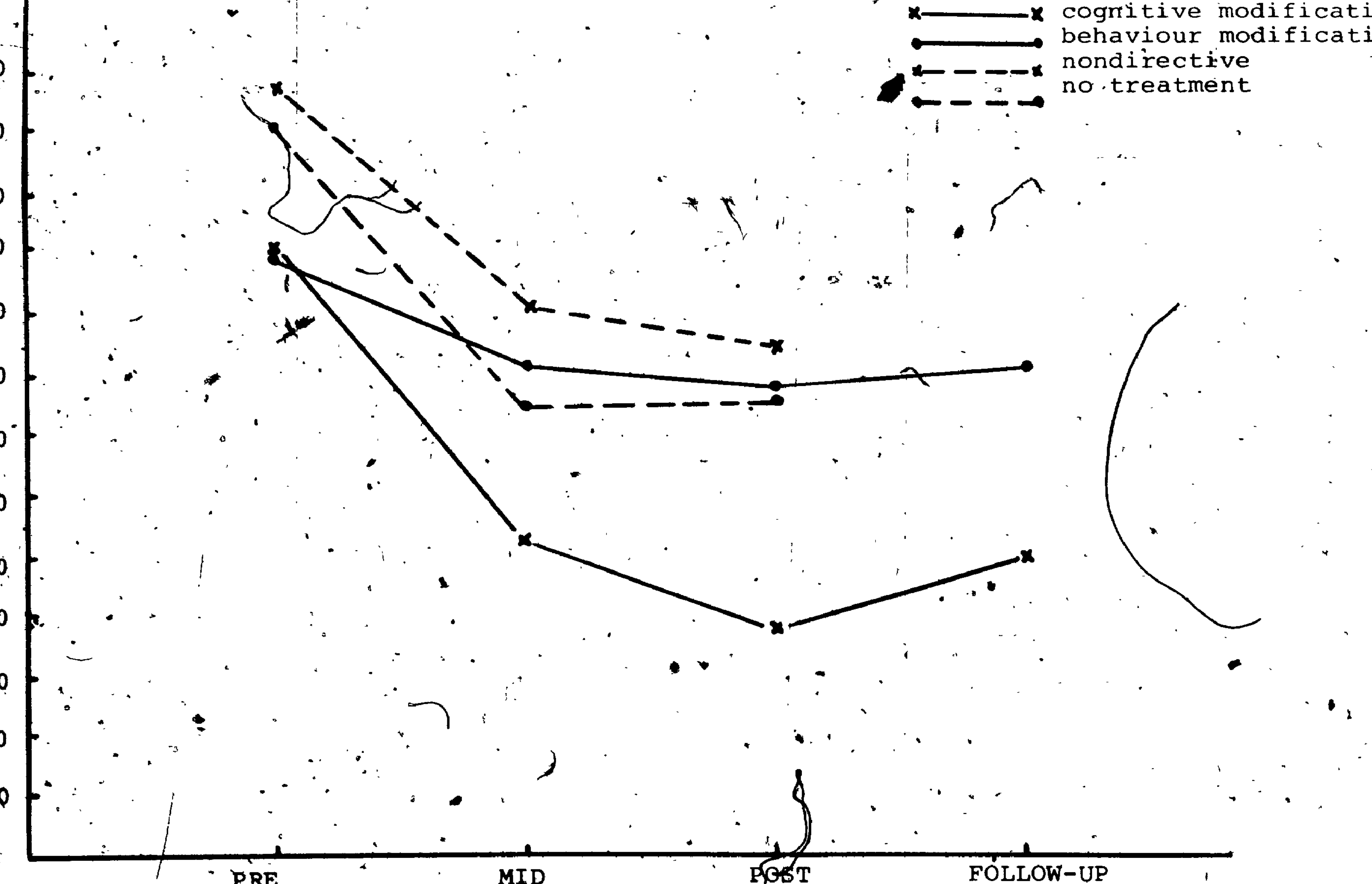

Figure 3: Relationship between assessment sessions and degree of depression as measured by the Visual Analogue Scale.

Table 10: Pearson r correlation coefficients between the Beck Depression Inventory, the Hamilton Rating Scale for Depression and the Visual Analogue Scale.

	Beck D.I.	Hamilton R.S.D.	Visual A.S.
Beck D.I.	-	.62	.63
Hamilton R.S.D.		-	.90
Visual A.S.			-

degrees of freedom = 111

The pre-assessment score was used as the covariate. The results of the analyses of treatment effects on the self-esteem measures, the social skill measures and the non-verbal measures were all non-significant. The analyses are summarized in Table 11. As none of the F-values were

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Insert Table 11 about here

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significant no further analyses on the adjusted treatment means were conducted.

In order to evaluate whether the treatment procedures could be discriminated and whether the protocols were adhered to, ten, three-minute segments from the sessions of each group were randomly selected and rated. The rating of the therapy sessions was analyzed using a χ^2 procedure. A significantly greater number of sessions were correctly identified than could be expected by chance ($\chi^2 = 26.8$, $df = 2$, $p < .001$). This suggests the sessions were distinguishable by an observer who was blind as to the hypotheses of the study but who was familiar with the written treatment manuals followed by the therapist.

The patient therapy reports were examined on four items ("How did you feel about coming to therapy", "How much progress do you feel you made in dealing with your problems", "How well do you feel that you are getting alone emotionally and psychologically at this time" and "How helpful do you feel your therapist was to you"). These items were subjected to a Kruskal-Wallis one way analysis of variance by ranks

Table 11: Summary of the univariate analyses of covariance for treatment effects at post-assessment of the self-esteem, social skill and nonverbal dependent measures. Pre-assessment score used as covariate.

Variable	Hypothesis Mean Square	F-Value	Probability Less Than
Self-Esteem Measures			
1. Probability of Success	235.89	1.02	.40
2. Level of Aspiration	1.16	.42	.74
3. Subjective Estimate	169.77	1.47	.24
4. Actual Performance	.02	2.09	.12
Social Skill Measures			
1. Actions	401.45	.37	.80
2. Positive Reactions	.90	.27	.85
3. Action Latency	46.18	.34	.80
Non-Verbal Measures			
1. Frequency of Eye Contact	33.05	1.73	.18
2. Duration of Eye Contact	1409.38	.66	.58
3. Frequency of Smiles	8.72	1.19	.33
4. Frequency of Illustrators	19.49	1.36	.28
5. Frequency of self-Adaptors	4.36	.36	.78

Degrees of freedom = 3,27

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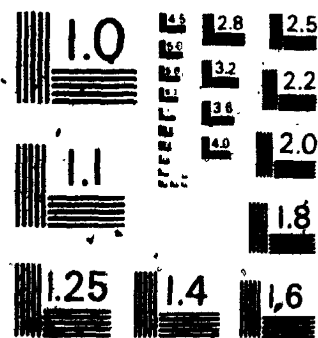

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(Siegel, 1956). The analyses revealed no significant group differences between the cognitive modification group, the nondirective group and the behavioural group. The analyses are summarized in Table 12.

Insert Table 12 about here

In addition to the more specific statistical analyses on the effects of the different treatments, a simple investigation was undertaken on the number of subjects from each group, who at post-assessment had scores on the Beck Depression Inventory in the "nondepressed" range. The same criteria as used at the pre-assessment were employed. A total of nine clients were found to meet the "nondepressed" criteria at the post-assessment. Of these, five (5) were in the cognitive modification group, two (2) were in the behaviour modification group and two (2) were in the nondirective group; no subjects from the no treatment group met the criteria.

Univariate analyses of variance at pre-assessment followed by univariate analyses of covariance with the pre-score as the covariate, at post-assessment, were conducted on thirteen (all excluding the Hamilton Rating Scale for Depression and the Visual Analogue Scale) dependent measures, in order to compare the "nondepressed/assessment" control

Table 12: Patient therapy report. Ratings analysed by the Kruskal-Wallis one way analysis of variance by ranks.

Item	Corrected H-value
How did you feel about coming to therapy?	1.38 n.s.
How much progress do you feel you made in dealing with your problems?	2.35 n.s.
How well do you feel that you are getting along emotionally and psychologically at this time?	0.02 n.s.
How helpful do you feel your therapist was to you?	3.06 n.s.

n.s. = nonsignificant value

group with the "depressed/remitted" group.

A Beck Depression Inventory score of less than 10 at the post-assessment was used as the criterion for inclusion in the "depressed/remitted" group. Nine subjects met the required criterion.

As a result of the selection criteria for the groups the significantly higher pre-assessment BDI score for the "depressed/remitted" group ($F = 39.07$, $df = 1,15$, $p < .001$) disappeared at the post-assessment ($F = 1.55$, $df = 1,14$).

At the pre-assessment, the differences between treatment groups (i.e. nondepressed/assessment vs depressed/remitted) were evaluated. The only variables which reached significant levels were the rate of positive reactions ($F = 9.14$, $df = 1,15$, $p < .01$); the frequency of illustrators ($F = 7.68$, $df = 1,15$, $p < .01$) and the duration of eye contact ($F = 9.63$, $df = 1,15$, $p < .01$). The frequency of emitted actions approached a significant level ($F = 3.82$; $df = 1,15$, $p < .07$). Examining the group means revealed that the depressed/remitted group emitted significantly fewer positive reactions and significantly more illustrators. The depressed/remitted group made eye contact with the interviewer for a significantly shorter duration. They also tended to emit fewer actions in the test of social skills. The results of the pre-assessment analyses of variance and the observed means for the two groups are presented in Table 13.

Insert Table 13 about here

At the post-assessment, the treatment group differences were re-evaluated using an analysis of covariance procedure. The "depressed/remitted" group had a significantly lower action latency than the "nondepressed/assessment" group ($F = 6.08$, $df = 1,14$, $p < .05$). All other analyses were nonsignificant. The results of the post-treatment assessment analyses of covariance and the observed means for the two groups are shown on Table 14.

Insert Table 14 about here

Summary

The main results are best summarized by referring to the hypotheses of the study.

a) The treatment effects on the Beck Depression Inventory, the Hamilton Rating Scale for Depression and the Visual Analogue Scales were assessed three times (pre-treatment, mid-treatment, post-treatment). At the pre-assessment, univariate analyses of variance revealed no differences between groups.

At the mid-assessment, the cognitive modification group had a significantly lower BDI and HRSD means than the nondirective group and the no treatment group. All other comparisons, including all of the VAS comparisons,

Table 13: Summary table of the pre-assessment analyses of variance and observed group means for the Beck Depression Inventory, Self-Esteem Measures, Social Skill Measures and Nonverbal Behaviour Measures.

Variable	Hypothesis Mean Square	F-Value	Means d = depressed nd = nondepressed
Beck Depression Inventory	1242.1	39.07****	d = 24.0 nd = 6.9
Self Esteem Measures:			
Probability of Success	2.0	.01	d = 66.9 nd = 67.7
Level of Aspiration	1.1	.65	d = 17.0 nd = 16.5
Subjective Estimate	45.5	.44	d = 62.2 nd = 65.0
Actual Performance	.003	.13	d = 1.2 nd = 1.2
Social Skill Measures:			
Actions	5287.5	3.82	d = 78.7 nd = 114.0
Positive Reactions	29.5	9.14***	d = 3.1 nd = 5.8
Action Latency	38.6	1.86	d = 6.4 nd = 3.4
Non-Verbal Measures:			
Frequency of Eye Contact	3.4	.27	d = 8.8 nd = 7.9
Duration of Eye Contact	35197.8	9.63***	d = 143.3 nd = 234.5
Frequency of Smiles	33.0	3.11	d = 3.9 nd = 6.1
Frequency of Illustrators	80.0	7.68***	d = 9.2 nd = 4.9
Frequency of Self-Adaptors	7.2	2.73	d = 4.6 nd = 3.3

df = 1,15
****p < .001
***p < .01

Table 14: Summary table of the post-assessment analyses of covariance and observed group means for the Beck Depression Inventory, Self-Esteem Measures, Social Skill Measures and Nonverbal Behaviour Measures.

Variable	Hypothesis Mean Square	F-Value	Means d = depressed nd = nondepressed
Beck Depression Inventory	10.3	1.55	d = 5.3 nd = 5.1
Self Esteem Measures:			
Probability of Success	301.3	1.21	d = 72.6 nd = 64.5
Level of Aspiration	0.7	.25	d = 16.4 nd = 16.8
Subjective Estimate	190.0	1.01	d = 58.3 nd = 66.0
Actual Performance	0.003	.17	d = 1.2 nd = 1.2
Social Skill Measures:			
Actions	35.2	.04	d = 86.7 nd = 108.0
Positive Reactions	[illegible]6.9	1.86	d = 4.2 nd = 4.3
Action Latency	37.7	6.08*	d = 4.3 nd = 4.7
Non-Verbal Measures:			
Frequency of Eye Contact	11.2	.51	d = 10.[illegible] nd = 8.6
Duration of Eye Contact	2803.5	1.05	d = 135.0 nd = 231.0
Frequency of Smiles	10.7	1.47	d = 7.0 nd = 7.8
Frequency of Illustrators	4.3	.39	d = 5.4 nd = 4.9
Frequency of Self-Adaptors	2.5	.26	d = 4.8 nd = 3.6

were nonsignificant.

At the post-assessment, the cognitive modification group had a significantly lower BDI mean than the behaviour modification, the nondirective and the no treatment groups. The means for the behaviour modification and nondirective groups were also significantly lower than the no treatment group. On the HRSD, the cognitive modification group mean was significantly lower than the nondirective and no treatment groups. The other group means were not significantly different.

The cognitive modification and the behaviour modification groups were evaluated at a one-month follow-up assessment. No differences between groups on the BDI, the HRSD or the VAS were found.

b) The cognitive modification group did not produce more significant changes on the measures of self esteem than did the behaviour modification, the nondirective or the no treatment groups.

c) The behaviour modification group did not produce more significant changes on the measures of social skill than did the cognitive modification, the nondirective or the no treatment groups.

d) A "depressed/remitted" group was compared with a "nondepressed/assessment" group on the BDI, measures of self esteem, social skill and nonverbal behaviour. At

the pre-treatment assessment, the depressed/remitted group emitted significantly fewer positive reactions and significantly more illustrators. They also maintained eye contact with the interviewer for a significantly shorter duration.

e) At the post-treatment assessment, the "depressed/ remitted" group had a significantly lower action latency than the "nondepressed/assessment" group. None of the group differences from the pre-assessment, were evident at the post-assessment.

DISCUSSION

The results of this study are relevant to the current theoretical and treatment knowledge of depression. The empirical results will be discussed with reference to the hypotheses of the study and the psychological literature on the cognitive and behavioural approaches to depression. Using this plan, the effects of the treatment procedures on the criterion, self-esteem, social skill and non-verbal measures will be discussed, followed by a section on the comparison between the depressed and nondepressed groups. Suggestions for future research will also be offered.

Efficacy of treatments:

Examining the differential effects of the treatment procedures, the cognitive treatment programme clearly resulted in the most significant changes in the symptomatology of depression, as assessed by self-report and an objective clinical rating. At the mid-assessment, the cognitive procedures produced lower depression scores than the nondirective treatment and no treatment. At the post-assessment the cognitive modification treatment again resulted in lower depression scores than the nondirective treatment and no treatment. In addition, the cognitive modification procedures were more effective in producing

change by the post-assessment than were the behaviour modification procedures. It is notable, however that by the follow-up assessment no statistically significant differences, on the depression criteria, between the cognitive and the behavioural treatments were evident.

These results appear to provide strong support for the contention which cognitive theorists (Ellis, 1962; Beck, 1967) have been making concerning the efficacy of cognitive procedures for the reduction of depression. The effects of the treatment procedures did not seem to have a dramatic effect at any particular point in therapy. Rather, the cognitive treatment resulted in consistently decreasing symptoms of depression between the pre- and mid-assessments and between the mid- and post-assessments.

The behaviour modification procedures must be discussed with less confidence, in referring to treatment efficacy. By the post-assessment, the behavioural treatment resulted in a significantly lower self-report of depression than no treatment. This effect was not evident on the clinical ratings. Moreover, the nondirective treatment had a similar effect on the self-reports of subjects. Thus, it would be difficult to argue that specific behavioural procedures added to the effects of providing a vehicle for subjects to discuss their problems with other subjects and a therapist.

The follow-up data, which was only obtained on the

cognitive modification and the behaviour modification groups, blurred the differences found at the post-assessment. Close examination of the follow-up data on the criteria measures revealed that the cognitive modification group mean had increased slightly while the behaviour modification group mean generally remained stable from the post test. No clear explanation was evident for this finding.

The results of this study may have important consequences for the behavioural intervention strategies previously found useful for the treatment of depressed individuals (Lewinsohn, Shaffer, and Libet, 1969; Lewinsohn, Weinstein and Shaw, 1969; Lewinsohn and Atwood, 1969; Lewinsohn and Shaw, 1969; Lewinsohn, Weinstein, and Alper, 1970; Lewinsohn and Shaffer, 1971). Basically, the Lewinsohn group has intervened with depressed college students of similar demographic characteristics to those studied in this study. Promising results have been reported as a result of increasing the depressed individuals social skills and positive reinforcement density.

The behaviour modification procedures used in the present study were carefully selected to be as similar as possible to the Lewinsohn procedures. The results on the change in depression in the group are disappointing. The successful effects reported previously, of course, are not completely negated. In fact, the behavioural procedure

did produce better results than no treatment. The important components of the behavioural programme, however, need to be evaluated in greater detail. Based on this study, discussing one's difficulties to interested persons seems to have a powerful treatment effect. Lewinsohn (1969) made the valid point that depressed individuals required and profited from an intense therapeutic time. Perhaps the subjects' involvement in therapy was one of the most useful factors shared by the behaviour modification and the nondirective treatments.

This study was not designed to allow careful comparison of the effects of specific treatment components. Hypotheses that the behavioural treatment programme and the nondirective programme offered distinct but essentially equivalent effects could not be refuted at this time. The nondirective group was included as an attempt to control for nonspecific treatment factors and was not necessarily an accurate representation of Rogerian procedures (Rogers, 1951). While nondirective procedures have not been reported as having particular success with a depressed population, Rogers (1951) has written extensively on the therapeutic usefulness of his nondirective approach.

The major problem was of course an attempt to include a group which would control for the therapeutic attention received by subjects. Buttrum (1974) criticized the extensive use of the "attention placebo" control group in psychological research and indicated that the use of such

groups make replication difficult. In the present study an attempt to utilize a procedure which had no systematic effect on the changes under investigation (a "placebo" group) was thought to be impossible. Moreover, should such a procedure be developed it would be dangerous to use, unless it was highly believable, on a population of depressed out-patients.

The use of the nondirective approach, therefore, was appropriate because it was believable to subjects but did not involve specific procedures thought to be useful with depressed clients. Empirical support for the contention that the groups were basically indistinguishable in the way in which they were received by subjects, came from the therapy report data. No difference between the treatment groups was found on items which asked how the subjects felt about coming to therapy, how well they were doing after therapy, how much progress they felt they made in dealing with their problems and how helpful their therapist was.

It is evident from the data that by the post-assessment, the three treatment procedures were more successful in alleviating the depressive symptoms of subjects than any effects of time and the assessment procedures, as controlled by the no treatment group. Concern about the "spontaneous remission" (Eysenck, 1965) effect in psychotherapy research is emphasized in research on the treatment for depression,

for depression is known to be a time-limited disorder (Beck, 1967). That is, given time with no therapeutic intervention, the symptoms of depression will subside. The estimate of six months is often used in the literature but for ethical reasons, precise data is not available on this estimate. In this study, the "spontaneous remission" factor was not significant, probably because of the relatively short (four weeks) treatment period. Examining the mean data of the no treatment group, however, did reveal a small decrement in the observed and reported symptoms of depression. This change seemed to occur between the pre- and mid-assessment and may have been precipitated by subjects deciding to involve themselves in treatment programme on depression. This is, of course, only one of many explanations. Only a controlled study would allow a definitive statement.

It should be noted that in discussing the study's major hypothesis on treatment efficacy, treatment effects were discussed only with reference to the subjects' self-report data and the objective clinical ratings (based on the Hamilton Rating Scale for Depression). All of the analyses for treatment effects using a subjective clinical rating (the Visual Analogue Scale) were nonsignificant.

As mentioned in the introduction, the definition and

and measurement of depression is a traditional area of conflict. Previous outcome studies have used measures such as an observable behaviour (Reisinger, 1972), self-report (Jackson, 1972), subjective clinical ratings of improvement (Mintz, 1972), objective clinical rating scales (Klerman, DiMascio, Weissman, Prusoff and Paykel, 1974), and psychometrics (Shipley and Fazio, 1974). The present study attempted to utilize three of the most commonly used measures in the current literature to provide for comparisons with other investigations. Also, on a rational basis, it seemed most appropriate to collect data from the subjects, from clinicians using a scale which focuses on observable behaviour and from clinicians using their experience to make subjective ratings.

The failure of the subjective clinical ratings to statistically mirror the results found on the self-report inventory and the subjective ratings leads to a number of hypotheses. First, it may be that global clinical ratings are not valid assessment tools for depression research. This criticism has been made in a number of review articles and general discussions on psychotherapy research (Beck, 1974; Luborsky, Chandler, Auerbach, Cohen and Bachrach, 1971). Second, the videotape medium may have confounded the judgements of clinicians. Third, the interviews were structured and did

not provide the extensive questioning which may be critical in making subjective decisions. The fourth possibility that the subjective ratings reflected the "true" results of the study is less likely given the knowledge we have on studies examining subjective versus objective ratings (Mintz, 1972).

The between rater reliabilities on the clinical ratings were judged to be excellent. The correlations between the raters were highly significant with the best overall agreement, as might be expected considering the previous discussion, on the objective ratings. The clinical ratings also correlated significantly with the self-reports of subjects. Consistent with previous findings (Mendels and Hawkins, 1972) the self-report of subjects on the Beck Depression Inventory tended to be more liberal (i.e. reporting more severe depression initially and greater improvement after treatment) than the clinical ratings. Interestingly, at post-assessment when subjects used a specific inventory (the Beck Depression Inventory) their self-reports were more consistent with the clinical data than when they used a global rating (the item on the therapy report).

It is notable that the self-report data and the objective clinical rating data provided consistent results throughout the study. These variables reflected the same or similar differences in the treatment groups at all assessments.

As with any research effort, certain constraints and

cautions must be provided with the interpretation of the empirical data. Generally, the subjects in this study could be described as young (ages ranged between 17 and 26 years), relatively intelligent (as reflected by their acceptance to college) individuals from middle-class families. Many (19 of 32) were judged to have experienced clinically significant episodes of depression in the past and a number of subjects (5 of 19) had previously received treatment from psychiatrists or other mental health professionals. Three had previously made suicide attempts, although subjects were excluded from the study if they were judged to be even moderate suicidal risks. At the pre-assessment, most subjects could be described as being mildly to moderately depressed. Four subjects (as a result of the matching procedure, one per group) were judged to be moderately to severely depressed.

While arguments that subjects, because of their characteristics may have responded to one treatment, namely cognitive modification, more favourably, are conceivable, their validity is questionable. The subjects for any treatment approach were prognostically excellent (young, well-educated, motivated, with moderate symptoms) and based on the therapy reports, did not indicate preferences for any one approach.

The question of the generalizability of the results is one of importance. Adopting a rigid standard considering the current state of psychotherapy research and specifically depression research, the results perhaps should not be extended to persons other than those having similar characteristics of the subjects in the present study. Certain variables, however, subjectively seemed more critical to observe than others. The age range of subjects could be said to be representative of a young adult group. Sex, while not formally analyzed did not seem to be a critical variable. Educational level, while in the population's upper range, varied with respect to past achievement (from 'A' to 'D' grades) and was not an outstanding variable in treatment success.

Presenting symptomatology should be seriously considered prior to making generalized statements. It should be recalled that the study's criteria required that no evidence of psychotic symptoms, drug addiction, sociopathy, organicity and/or major medical problems was elicited in any subjects. This criteria resulted in the referral of many individuals who were assessed for inclusion in the study. As stated previously, with few exceptions, the sample studied did not present symptomatology, either qualitatively or quantitatively, which was considered to warrant a diagnosis of severe depression. The findings, therefore, can not be generalized

with confidence to the group of severely depressed patients. Finally, it should be noted that the treatment programmes were conducted in groups and on an outpatient basis. Meichenbaum (1974) stated that cognitive modification procedures could be effective in groups while most of Lewinsohn's (1974) treatment studies on behaviour modification are also conducted in groups. The subjects while on an outpatient basis were probably seen more intensively (two, two-hour sessions per week) than in other studies of this type (for example, Shipley and Fazio, 1974). Any effects of the above variables could specifically be understood only with further research.

Effects of treatments on self-esteem, social skill and nonverbal behaviour:

An attempt was made to assess whether the treatment programmes produced unique changes as emphasized by their theoretical underpinnings. Specifically, it was hypothesized that the cognitive modification treatment would result in greater increases on the relevant self-esteem measures while the behaviour modification treatment would result in greater increases in the measures of social skill. Neither hypothesis was supported by the data.

At the pre-assessment as would be expected no group differences were found. Similarly at the post-assessment,

no significant treatment effects were found on the self-esteem, social skill and nonverbal measures. These negative results were surprising but a number of explanations must be considered. Ford and Urban (1967) questioned whether different treatment procedures produce unique changes or whether these are outweighed by general changes produced by all forms of therapy. It is possible that for depression general changes occur which are prepotent over specific unique changes.

Another possible explanation is that the treatments did not last long enough to result in unique changes. The treatment sessions occurred over a four-week period and even during the last week subjects continued to learn "new" cognitions or behaviours. It may be argued that any new cognitive or behavioural patterns which were learned, would require many "tests" in the environment before they were assimilated by the individual.

The possibility that the dependent variables were not sensitive enough to measure unique changes must also be considered. The constructs of self-esteem and social skill are particularly difficult to measure experimentally. It is difficult to differentiate between the state and trait aspects of the two constructs. It would therefore be difficult to assess whether the treatment programmes had

an effect on the constructs of social skill and self-esteem without specifying dependent measures which purport to measure an individual's self esteem and social skill. Nevertheless, in the present study, the data were convincingly nonsupportive of a hypothesis that the different treatment programmes produced unique changes in the self-esteem, social skill and non-verbal behaviour of subjects.

<u>Depression and the measures of self-esteem and social skill:</u>

A comparison of the "nondepressed/assessment" and the "depressed/remitted" groups was undertaken for two reasons. First, it seemed necessary to replicate the initial work on self-esteem and depression (Loeb, et *al*., 1971) and on social skill and depression (Libet and Lewinsohn, 1973). Second, it appeared theoretically useful to extend the previous findings to a comparison of individuals when depressed versus the same individuals when their depression had remitted.

After the pre-assessment, there was no difference between the two groups on the self-esteem measures. This finding is unlike that found by Loeb et *al*. (1971) who demonstrated differences on the probability of success and the subjective estimate of performance variables. The present results obviously must be accounted for when considering Beck's (1967) theoretical position. Prior to this critical re-evaluation, however, it should be noted that the subjects

samples used in the Loeb et al. (1971) study and the present study were different in many characteristics. The most outstanding difference was that Loeb et al. (1971) used a heterogeneous clinical sample of outpatients in a state of depression while this study used a college undergraduate sample who were a more homogeneous subset of depressed individuals.

Beck (1974) maintained that the depressed person's negative view of himself, his world and his future was central to the etiology of depression. In essence, the depressed individual sees himself as a "loser". He also clearly outlined the importance of viewing individuals from an idiosyncratic viewpoint when considering the experiences which can precipitate depression. Beck's (1967) theory stemmed from observations that depressed clients did see their world from a negative perspective and the Loeb et al. (1971) study was cited as experimental support for the clinical observations.

The present finding of no significant difference, while certainly not concurring with the experimental support previously cited, is not offered as a critical disconfirmation of Beck's theory. At this point in time, an argument that the task used to evaluate self-esteem was not sensitive to the subset of college students given their past academic history of examinations in general, could not be refuted.

In fact systematic observations on the videotaped assessment interviews would likely have supported Beck's (1965) observation that depressed clients see themselves, their experiences and their future in a negative light. Nevertheless, given the above constraints, the present findings which failed to replicate the Loeb, et al. (1971) results must be interpreted as disconfirming evidence of the experimental support for Beck's (1967) theory.

The results of Libet and Lewinsohn's (1973) study on the relationship between social skill and depression were also reexamined with reference to the present study. From the Libet and Lewinsohn (1973) investigation it was predicted that at the pre-assessment, depressed subjects would emit fewer actions, emit positive reactions at a lower rate and have a delayed latency of responses to another's action. The present study confirmed the first two findings of the Libet and Lewinsohn (1973) study but failed to demonstrate that depressed individuals have a delayed latency of response. Unlike the Loeb, et al (1971), the Libet and Lewinsohn (1973) study used depressed college students as subjects and thus, was more similar to the current study. The replication of the social skill differences between depressed and nondepressed subjects was encouragingly supportive of this theoretical area of investigation.

The same measures were analyzed at the post-assessment.

It was predicted that as the two groups were basically equivalent in their report of depressive symptoms, any differences found at the pre-assessment would disappear. Examination of the results revealed this to be the case.

The self-esteem measures are difficult to discuss at this point as no differences were found at either the pre- or the post-assessment. It may be that the measures are not sensitive to changes in depressive symptomatology, that the sample used confounds the results or that the experimental predictions are invalid. Only future research would clarify the understanding of the relationship between self-esteem and depression.

The finding that as the symptoms of depression decreased, the differences between the groups on the rate of positive reactions and the frequency of actions emitted decreased, supports the contention of the close relationship between depression and social skill. It would seem appropriate to conclude that individuals do not emit socially skillful behaviours when they are depressed. Examination of the group means at the post-assessment suggested that when the depression lifts, the same individuals increase their rate of positive reactions and the frequency of actions.

Interestingly, at the post-assessment a significant group difference on the latency of response emerged.

Depressed individuals when the depression lifted, responded with a lower latency period than did the nondepressed group. The reason for this is unclear at present but may be related to the particular subject sample. One possible explanation is that by chance the depressed group "naturally" would respond with a lower latency but when depressed this difference dissipated. Thus, when the depression remitted the hypothesized difference reappeared. This highly tentative speculation rests on the assumption that there was a "natural" difference between groups prior to any experimental contact and also that the action latency varies with the experience of depression. The latter assumption has some empirical support from the Libet and Lewinsohn (1973) study. This explanation, if it is valid, would lend further support to the theoretical views of the Lewinsohn group for the failure at the pre-assessment to find significant group differences on the action latency measured could be explained.

Depression and nonverbal behaviour:

The nonverbal behaviour of subjects in the present study was measured to evaluate the proposals of Ekman and Friesen (1974). They indicated that nonverbal behavioural correlates of depression may provide useful information about the emotional states of subjects to researchers in psychopathology.

At the pre-assessment, depressed subjects were found to emit a significantly greater number of illustrators. This finding opposes the results of the Kiritz (1971) study which found that psychotic depressives emitted significantly fewer illustrators and that the data for the neurotic depressives were in the same direction. Again, the main difference in the two studies may be in the subjects selected (i.e. hospitalized vs college outpatients). Psychomotor retardation is of course a significantly related symptom to the frequency of illustrators and it may have been that the depressed subjects of the present study were more "agitated". It is unlikely, however, that subject differences could account for the total contradiction of the Kiritz data. The validity of the data of this study is supported by the finding at the post-assessment that the difference between groups dissipated when the depression lifted in the "depressed/remitted" group. Based on the current status of this nonverbal measure, future investigations will have to attend to the defining characteristics of the sample to be studied.

The duration of eye contact was the only other nonverbal measure which differentiated the two groups at the pre-assessment. Depressed subjects made eye contact at about the same frequency as non-depressed subjects but they maintained the

contact for a significantly shorter duration. This finding is a novel one for the nonverbal area of research and can be understood from a rational viewpoint. That is, it is understandable that when depressed individuals spend most of the interaction time with others looking away, usually downwards. This finding was not evident at the post-assessment which suggests that the duration of eye contact is a useful nonverbal correlate of depression.

Recommendations for future research:

The present study revealed a number of specific questions which could be explicitly researched.

As with most research efforts which focus on the specific outcomes of treatment procedures, it would be of great value to assess the reasons for a successful outcome. In this study on the treatment of depression, a cognitive modification programme was found to be effective in alleviating symptoms of depression. The question of why the treatment programme was effective remains unanswered. Meichenbaum (1974) wisely cautioned against grouping the "semantic therapies" together when discussing the effectiveness of cognitive procedures. At this point in time, cognitive procedures have not been extensively developed as little research has been conducted on their value.

The present study argues strongly for an increased research effort in this area.

The long term effects of the treatments were not evaluated. It would be informative to study the effects of a longer therapeutic time commitment to the subjects. Lewinsohn (1973) suggested a three month treatment period. A study which provided more exposure to the treatment procedures and a longer follow-up period may answer the questions as to the specific treatment effects as well as reevaluating the findings on treatment efficacy. The severity of depression and its possible interaction with the treatment effects is another fruitful yet unexamined area of research. The research on the physiological theories of depression and particularly, the pharmacological treatments of depression are relatively extensive compared to research on the psychology of depression. Given the results of the present study, this discrepancy of research time and effort should be lessened.

The theoretical aspects of the cognitive and behavioural approaches will also require further clarification. The status of the empirical support for some of Beck's (1967) theoretical views is such that future, perhaps more sophisticated research is needed. Lewinsohn's (1973) proposals of social skill and depression are definitely worthy of

future investigation. Given the relatively poor results of his treatment programme it will be critical to assess whether the social skills of individuals have a functional relationship to the etiology of depression or whether they are simply, empirically validated correlates of depression.

Katz (1974) concluded a conference on the psychology of depression by stating:

> "Against a background, then, of what appeared to be an area of serious neglect in the field of clinical research, we now find a more diverse set of theories developing and a new style of experimental attack in unraveling the nature of this enigmatic human state (depression)."
>
> (Katz, 1974, p. 301)

This study provided at least a preliminary test of the experimental foundation and the treatment programmes evolving from two of these psychological theories of depression. The encouraging findings of this study will hopefully, potentiate future research in this area.

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APPENDICES

APPENDIX A

GENERAL INSTRUCTIONS, COGNITIVE MODIFICATION AND BEHAVIOUR MODIFICATION MANUALS

GENERAL INSTRUCTIONS FOR COGNITIVE, BEHAVIOURAL AND NON-DIRECTIVE GROUPS

Everyone in this group has agreed to a treatment contract which requires them to participate actively in treatment for a period of four weeks. In doing this, you have actually made a contract with the members of this group as well as with me. As you all know, the effects of this treatment are going to be evaluated three times in the future; two weeks after treatment begins, at the conclusion of treatment and one month after treatment has ended. I want to emphasize that the purpose of treatment is to help each individual in the group overcome his or her own depression as well as, to learn more about ourselves.

This type of group has been used many times to help other depressed persons. The treatment itself is not experimental! It is based on scientific findings and I feel that each one of you could benefit from the treatment. I say could because the success of the treatment will depend on your active participation (by following suggestions made in the group). I realize that you are all eager to begin, but first I would like to answer any questions about anything except the actual treatment procedures (for example, when the meeting times are, questions about the assessment procedures, etc.).

COGNITIVE TREATMENT MANUAL FOR DEPRESSION

PROTOCOL FOR COGNITIVE THERAPY OF DEPRESSION

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OBJECTIVE AND RATIONALE

The major objective for this therapy will be to alter the idiosyncratic, maladaptive ideation of depressed patients. According to the cognitive paradigm of depression, a depressed person systematically misconstrues his experiences so that he views himself and his future in a negative way. It is important to distinguish between normal and abnormal reactions. A depressed individual's reactions to environmental events is based on a faulty interpretation of the stimuli and therefore, neutral or even favourable events result in a negative conclusion. The patient's faulty assumptive system results in his negative conceptualizations of experiences and these negative concepts are thought to contribute to the other symptoms of depression such as the lack of adaptive behaviour, the affective state and the physiological manifestations. As a result, a depressive cycle is established in which the negative thinking, the unpleasant affect, the physical symptoms and the self-defeating, maladaptive behaviour reinforce each other.

The ultimate goal of this cognitive therapy is to modify the patient's faulty assumptive system thereby reducing the probability that the individual will respond to stressful stimuli in a depressive manner in the future. A more immediate aim of therapy, to alter the individual's current depression, is also attainable using cognitive therapy. By concentrating on specific depressive symptoms, the cognitive therapist attempts to help patients recognize faulty or irrational thinking and to make the appropriate corrections. In doing so he may concentrate on cognitive, behavioural or affective phenomena. This doesn't imply, in the case of a behavioural focus, that the therapist's interventions are based on conditioning theory. Rather, the cognitive components are examined and if needed, modifications in those components are attempted. Examples of this strategy will be presented later. The general strategy used to counteract the depression, then, is to use techniques that will enable the patient to interpret his experiences in a positive and rational way.

TREATMENT

While flexibility is normally the rule with this and most treatments, the goals of research require that the outlined procedures are followed as closely as possible. It is most important that the therapist remain with this specific treatment for only then can the effects of treatment be systematically studied. The therapist should be as warm, interested and helpful as he would be in any helping relationship. The main difference between this approach and the more traditional methods is that with cognitive therapy the therapist guides and directs the course and content of treatment. Also, like behaviour therapy, cognitive therapy does not require that the patient obtain insight into the origin of the symptoms and thus, a minimum of therapy time is spent on introspection and little or none is spent searching for etiological factors. Since the diagnosis of depression will have been determined prior to the therapist's contact with the patient, focus on the treatment will begin with the first session.

As noted previously, cognitive therapy utilizes a number of techniques whose major mode of action is the modification of faulty patterns of thinking. A basic session by session outline was provided in Table 2 of the main text.

There are six major procedures involved in the use of cognitive therapy:
(1) presentation of general and specific rationale of treatment.
(2) exploration of history and current status of symptoms.
(3) exploration of depressive cognitions.
(4) examination, evaluation and modification of these cognitions.
(5) identification of underlying assumptions.
(6) examination, evaluation and modification of basic premises and assumptions.

SPECIFIC PROCEDURES

I. Presentation of general and specific treatment rationale.

It is important that each patient understand and accept the treatment process. A brief explanation of the theory

and course of treatment should be presented and clarified if questions arise. It should be made clear that in depression the thoughts of individuals are very important. If any patient has trouble understanding, explanations should be rephrased in language that he can understand. Questions from more sophisticated subjects should be dealt with openly to allay any doubts they might have; e.g., "We have found that patients receiving this treatment do not require drugs". The patients should also be informed of a telephone contact that will be available 24 hours a day to handle emergency problems.

The general instructions (on a separate page) should be presented initially. These instructions are designed to control for the initial expectancies of patients in all groups as well as giving patients a general outline of the treatment.

The following specific rationale for the cognitive therapy should be a sufficient introduction.

"The symptoms that you are experiencing (a review of symptoms may be included here) are all related to the way that you interpret and think about situations in your life. Because we are all individuals, the way that we react to events in our life may be quite different. On the other hand, individuals who feel depressed often react in a similar way to many of their problems. As a result of your past experiences with people and situations you have learned to react in a particular manner. For example, say I asked you to outline in detail everything that I have said to you in the last five minutes; some people might react by thinking "I can't do it", others might think "Why does he want me to do that?" and still others might think "He's got to be kidding!". Each person reacts in his or her own particular way.

"Initially in our sessions we are going to look at some of the difficulties or problems that you are having and hopefully, how to resolve those difficulties. It will be important for us to find out how you reacted to specific situations in your life and what effect these reactions have on your feelings. By looking carefully at your reactions we will have a better idea of how to best help you. We will then be able to examine alternative ways of coping with stresses, specifically those which could be used to prevent future depressions.

"We've used this treatment with many depressed individuals with excellent results. Most of the procedures will become clearer after we get into them. Do you have any questions before we continue?"

2. Exploration of history and current status of symptoms.

This phase is an extremely important one. In exploring the patient's relevant life history the therapist attempts to identify major sequences in the patient's life. The therapist should develop hypotheses about the patient's style and idiosyncratic response patterns to important life experiences. The therapist should also attempt to reconstruct with the patient the stages in the development of his depression. The information concerning the patient's specific concepts and attitudes which should become evident will be utilized throughout the treatment. Recall that the cognitive paradigm of depression assumes that depression is precipitated when a stressful situation (or stressful situations) interacts with a particular cognitive structure (i.e. negative self image, negative view of world and/or negative view of future). Following the reasoning that many individuals would not have become depressed if they had been in the same situations as the depressed person, the therapist should attempt to delineate the salient features of the stressors and of the patient's response. The stressors are not under the patient's control but the response pattern is. It is the cognitive structure, therefore, that requires modification. On reviewing the development of the depression, the therapist should begin to ascertain what cognitive structure changes would be of the most benefit to the patient. This strategy also requires that the patient concentrate on specific problems rather than symptoms, thereby increasing his/her objectivity and understanding of the depression.

When the stages of development of the depression are better understood the therapist should have some idea of the assumptions, attitudes, beliefs, values etc. that the patient has. While the major objective of the therapy is to make some alteration in the patient's cognitive structure it is difficult at this stage for most patients to examine these cognitive components productively. For this reason, the therapist at this point should concentrate on specific events in the client's current life and his/her response

to these events. The goal here is to intervene in the depressive cycle and alter the patient's depressive cognitions. These cognitions are obviously reflections of the patients more elaborate assumptions, attitudes, etc.

3. Exploration of depressive cognitions.

These depressive cognitions have been referred to as "self-statements" and "things that the patient tells himself" (Ellis, 1962) as well as "automatic thoughts" (Beck, 1967). These thoughts reflect the distortions that occur in the depressed state and may range from a mild distortion to a complete misinterpretation. The thoughts may be triggered by environmental stimuli or may occur spontaneously but in depression they lead to an unpleasant affect. For example, Beck (1967) reported that one patient felt sad every time he made a mistake. After exploring the thoughts which occurred after he made a mistake he reported thinking "I'm a dope" or "I never do anything right". This procedure, therefore, serves to make patients aware that self-verbalizations do occur and more importantly effect the affective state of the patient. Patients should be instructed to record the thoughts which lead to unpleasant affect, thereby completing the chain; environmental stimuli→cognition→affect.

4. Examination, evaluation and modification of the depressive cognitions.

The depressed cognitions are closely related to affective and behavioural phenomena of depression. A decrease in adaptive behaviour often results in thoughts such as, "I won't be able to do it", or "If I do this I will only feel worse" invade the patient's phenomenological field. To this point, therapy has been structured to facilitate the patient's awareness that depressive cognitions occur and effect his depression. As the patient becomes more adept at recognizing the wording of his depressive cognitions he can view them more objectively. Beck (1970) referred to "distancing" as the process of gaining objectivity towards the cognitions. The therapist should assist the patient in categorizing his cognitions, generally by defining the major themes such as self-blame, inferiority or deprivation. It is important to emphasize that of the inumerable ways in which he can interpret his life experiences he tends to perseverate in a few stereotyped interpretations or explanations. Also,

the defining characteristic of these interpretations is that they are negative, self-defeating and irrational.

After the patient learns to recognize the idiosyncratic content and other characteristics of the cognitions, the therapist should begin to train him to evaluate the validity and accuracy of the cognitions. A number of techniques may be useful in the evaluation and modification of these cognitions.

(1) distinguishing "ideas" from "facts". It is important to indicate to patients that thoughts are not equivalent to external reality, and no matter how convincing they seem, they should not be accepted unless validated by some objective procedure. The goal here is to help the patient shift from a deductive analysis of experiences (by far the most common in depression) to more inductive procedures. The basic therapeutic doctrine is as follows: simply because the patient thinks something does not necessarily mean that it's true.

(2) checking observations. The validation of the patient's interpretations and judgements depends on checking the accuracy and completeness of the initial environmental observations. In many instances, fallacious thinking is involved in the cognitive responses of depressed persons. The following are three common categories of cognitive distortion:

a) <u>Arbitrary inference</u> refers to the process of drawing a conclusion when evidence is lacking or is actually contrary to the conclusion. For example, a depressed woman, who was kept waiting for a few minutes by the therapist thought, "He has deliberately left in order to avoid seeing me.".

b) <u>Overgeneralization</u> refers to the process of making an unjustified generalization on the basis of a single incident. An example is the patient who thinks, "I never succeed at anything" when he has a single isolated failure.

c) <u>Magnification</u> refers to the propensity to exaggerate the meaning or significance of a particular event. Ellis (1962) used the term "catastrophizing" to refer to this kind of response. Many examples of this type of distortion involve persons exaggerating the intensity or significance of stressful events.

The therapist should utilize these categories of distorted responding in the examination and evaluation of the patient's cognitions. By following this strategy the patient will become more aware of the distortions and with training, will be able to respond to the thoughts in a more appropriate manner. As homework, patients should be

introduced to the "double column technique" (Beck, 1973). The patient should continue to write down his/her depressogenic thoughts on the left hand side of a piece of paper. On the right side he/she should write down the realistic answers to these cognitions. For example:

Unreasonable	Reasonable
I never succeed	This isn't true, my past record doesn't support such a claim. (overgeneralization)
I am weak, for any criticism seems to trip these irrational thoughts.	This is an opportunity to fight these thoughts and get them under control once and for all.

The patient's record of thoughts and responses should be closely monitored by the therapist. It should provide data for discussions and feedback from the therapist. Once the particular cognition is established as invalid it should be neutralized by the patient (or initially, the therapist) by stating precisely why it is inaccurate, inappropriate or invalid. By verbalizing the reasons that the thought was erroneous every time it occurs, the patient will be able to reduce the intensity and frequency of the thought as well as the accompanying affect.

(3) examining alternative explanations. A third strategy that can be used to break up the patient's negative cognitive set, is to show him the alternative ways of conceptualizing and solving problems. That is, the patient is trained to consider the alternatives to the depressive cognitions and then to evaluate these alternatives. For example, the thought "Robert has not called. He doesn't love me," should be weighed against "He loves me. He is just very busy and thinks that I am improving and therefore isn't worrying and calling all the time".

(4) building on positives. The phenomenological field of the depressed patient is constantly flooded with negative depressogenic cognitions. The three procedures just discussed are utilized by the therapist to alter these depressive cognitions. In addition, it is often useful to replace these negative thoughts with positive ones for, as shown by Velton (1968) positive thoughts may lead to pleasurable affect. Two techniques may be used with respect to this strategy, with the goals of increasing the patient's awareness of situations in which they are successful and of increasing positive self-verbalizations.

The first technique requires that the patient agree that activity is better than inactivity (i.e. he feels

better when active). The main argument here is that the patient has more depressing thoughts when he/she is inactive. The patient is asked to keep a record of the activities which result in pleasurable affect. These activities will vary with the individual. By keeping this record the patient will have more objective data to counter negative thoughts (i.e. "I do succeed in some tasks; yesterday I fixed the toaster".). The second technique involves having the patient record positive statements about himself. This process may be a difficult one for the patient at first and the therapist may have to reflect honestly good points he sees in the patient. As therapy progresses, however, the patient should be encouraged to add to the list. The patient is then asked to repeat the positive thoughts immediately after he/she invalidates and neutralizes any negative, depressive thoughts. In summary, the patient is informed that "people who are depressed have trouble seeing themselves and their environment as they really are", but this can be corrected with accurate record keeping and objective interpretations.

5. Identification of underlying assumptions.

The procedures to be described here are directed towards the patient's assumptions of his world, himself and his future. An individual's concepts are drawn from his experiences, from the attitudes and opinions communicated to him by others, and from his identifications. Related to these concepts is the way the individual sets goals, assesses and modifies his behaviour and explains the occurrences in his life. These assumptions or concepts also underlie the criticisms, punitiveness and blame that the patient directs towards himself.

The objective of this section of treatment is to identify the chronic attitudes and assumptions. The content of the chronic attitudes may be inferred from the examination of the recurrent themes in the patient's cognitive responses to specific situations. The therapist should have been developing hypotheses about these attitudes from the initial session. Further information about the patient's basic premises and assumptions may be obtained by asking him either what he bases a particular conclusion on, or his reasons for a specific judgement. An inquiry into his values and beliefs will yield additional data.

Beck, (1973) suggested a number of attitudes that predispose people to excessive sadness or depression. Examples are:

a) In order to be happy, I have to be successful in whatever I undertake.

b) To be happy, I must be accepted by all people at all times.
c) If I make a mistake, it means that I'm inept.
d) I can't live without love.
e) If somebody disagrees with me, it means that he doesn't like me.
f) My value as a person depends on what others think of me.

6. Examination, evaluation and modification of basic premises and assumptions.

Following the identification of the patient's maladaptive assumptions, the therapist's objective is to modify or attenuate them on the basis that they partly determine the content of the individual's cognitions. It follows that a modification or attenuation of these assumptions will alter the way he organizes and interprets specific experiences, as well as how he sets his goals and goes about achieving them. Also, since the predominance of deductive (as opposed to inductive) thinking is an important determinant of the cognitive distortions in depression, any correction of the invalid major premises will tend to reduce the erroneous conclusions.

The strategies involved in modifying basic assumptions are similar to those used in the modification of the depressive cognitions. Once the assumptions are identified they can be examined and evaluated as to their validity. Changing these assumptions and attitudes is a more difficult task. Sometimes the patient can see the fallacy of his basic assumptions and may acknowledge their irrationality in the office. Nevertheless, change requires more than acknowledgement. The patient should be encouraged to challenge the assumptions by stating the reasons that they are invalid.

It should be stressed that the changes should not be expected to happen quickly. The maladaptive attitudes, like all of a person's attitudes, most often have developed over a long period of time. The patient will have to examine and utilize alternatives, as well as experience the consequences of such attitude changes, many times in and out of the therapist's office before changes are structuralized, i.e. before they become permanent formations in the cognitive structure.

Efran (1973) made some important comments regarding a specific set of assumptions that are particularly relevant to depression, namely, self-criticisms. He suggested that basically the patient would like to be able to say comfortably, with full attention, and without evasion, in what way he is displeased with himself. It is the therapist's

job to help him do this by making it "safe" for the patient. To do this the therapist must guard against emitting cues that he intends to be condemnatory or act superior with regard to what the patient has to say. Efran (1973) noted that an emphasis on "problem solving" is usually detrimental, as is any feeling by the therapist that he should be responsible for telling the client how he can better run his life. The cognitive therapist, when dealing with assumptive systems, doesn't actively tell the patient what to do. Rather, the therapist is active in setting the situation so that the patient can objectively examine his assumptions. Thus any evaluative or modification procedures should not be initiated until the assumptions have been clearly identified and examined. This is extremely important, for the therapist who challenges the patient's initial attempts at defining his beliefs, attitudes, etc. will probably give the patient an "unsafe" message. Also, recall that the overall objective is for the patient to feel (have) mastery of his world, and therefore, the patient, not the therapist should be responsible for how *he* runs his life.

BEHAVIOURAL TREATMENT MANUAL FOR DEPRESSION

PROTOCOL FOR BEHAVIOURAL THERAPY OF DEPRESSION

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OBJECTIVE AND RATIONALE

The main objective of this therapy will be to restore an adequate schedule of positive reinforcement for the individual by training him to emit behaviours which are likely to be positively reinforced by others and to engage in reinforcing activities in the environment. According to the behavioural paradigm of depression (a) a low rate of positive reinforcement acts as an eliciting stimulus for some depressive behaviours such as verbal statements of dysphoria, fatigue and other somatic symptoms; (b) the social environment provides reinforcement in the form of sympathy, interest and concern which strengthens and maintains depressive behaviours; (c) a number of different environmental events (e.g. loss through death, separation, poverty, misfortune) and organistic states and traits (e.g. lack of social skill, ignorance) are presumed to be causally related to a state of low positive reinforcement. Social skill, defined as the emission of behaviours which are positively reinforced by others, is seen as an area of deficit especially important in the development of depressive behaviours. The individual's social skills are seen as part of a vicious circle in which the depressive behaviours serve to maintain the individual's impoverished social relations and the latter serve to prolong his depression.

The ultimate goal of this behavioural therapy is to modify the patient's interaction with the environment by increasing his social skills in order that he can successfully counter any loss of reinforcers in the future. A more immediate treatment goal is to provide immediate positive reinforcement by intensive therapist involvement and encouragement that the patient engage in intrinsically rewarding activities. In order to achieve these goals, specific techniques and strategies may be utilized.

TREATMENT

While flexibility is normally the rule with this and most treatments, the goals of research require that the outlined

procedures are followed as closely as possible. It is most important that the therapist remain with this specific treatment for only than can the effects of treatment by systematically studied. The therapist should be as warm, interested and helpful as he would be in any helping relationship. The main difference between this approach and the more traditional methods is that with behaviour therapy the theapist guides and directs the course and content of treatment. Also, like cognitive therapy, behaviour therapy does not require that the patient obtain insight into the origin of the symptoms and thus, a minimum of therapy time is spent on introspection and little or none is spent searching for etiological factors. Since the diagnosis of depression will have been determined prior to the therapist's contact with the patient, focus on the treatment will begin with the first session.

As noted previously, behaviour therapy utilizes a number of techniques whose major mode of action is the modification of the individual's interaction with the environment by social skill training. A basic session by session outline was provided in Table 2 of the main text.

There are five main procedures involved in the use of the behavioural therapy of depression:
(1) presentation of general and specific rationale of treatment
(2) exploration of history and current status of symptoms
(3) diagnostic stage-behavioural analysis of social skills and environmental participation
(4) environmental participation and social skill training
(5) training in self-reinforcement and control of behaviour

SPECIFIC PROCEDURES

1. Presentation of general and specific treatment rationale.

It is very important that each patient understand and accept the treatment process. A brief explanation of the theory and course of treatment should be presented and clarified if questions arise. It should be made clear that in depression the social behaviours of individuals are very important. If any patient has trouble understanding, explanations should be rephrased in language that he can understand. Questions from more sophisticated subjects should be dealt with openly to allay any doubts they might have; e.g., "We have found that patients receiving this treatment do not require drugs". The patients should also be informed of a telephone contact that will be available 24 hours a day to handle emergency problems.

The general instructions (on a separate page) should be presented initially. These instructions are designed to control for the initial expectancies of patients in all groups as well as giving patients a general outline of the treatment.

It is important to do a great deal of "structuring" in the treatment of depressed individuals so that there is a clear mutual understanding of expectations, goals, time commitments and other conditions.

The following specific rationale for the behavioural therapy should be a sufficient introduction.

"The symptoms that you are experiencing (a review of symptoms may be included here) are all related to the interaction between you and your environment (i.e. family, friends, job, hobbies). Because we are all individuals our daily activities are probably quite different. On the other hand, individuals who feel depressed often do not engage in behaviours which might decrease their depression.

"Initially in our sessions we are going to look at some of the difficulties or problems that you are having and hopefully how to resolve these difficulties. We hope to find out as much information as we can about you and your behaviour so that in a couple of weeks we can sit down and arrive at some mutually acceptable treatment goals. Treatment will then focus on achieving our goals.

"We've used this treatment with many depressed individuals with excellent results. Most of the procedures will become clearer after we get into them. Do you have any questions before we continue?"

2. Exploration of history and current status of symptoms.

This phase is an extremely important one. The therapist should review with the patient the environmental events which lead to the depressive episode as well as discuss the patient's current situation. During the initial diagnostic phase, the therapist forms his hypotheses about what is maintaining the depression and about the kinds of changes in the patient's behaviour and in his life situation that are likely to result in a reduction of the depression. Throughout the initial sessions, the therapist's focus should be on obtaining ways and means of increasing the level of positive reinforcement for the patient. In some cases it may be evident that much

of the patient's behaviour is under aversive rather than positive control (i.e. prompts, commands of other persons). In such cases the therapist should attempt to develop a strategy to change the aversive environment. This strategy also requires that the patient concentrate on specific problems rather than symptoms, thereby increasing his/her objectivity and understanding of the depression.

3. Diagnostic stage-behavioural analysis of social skills and environmental participation.

This phase of therapy involves clearly defining the behavioural deficiencies of the patient and presenting the "behavioural diagnosis" and treatment goals to him. At this point, data will be available regarding the reinforcement attainment of the patient for 10 days. Data concerning the social skills of the individual in the group will also be available. The therapist should utilize behavioural terms, graphs and other visual aids in the presentation of the data to the patient. The therapist should gradually introduce his hypotheses concerning the depression, insuring that he is closely in tune to the patient's level of functioning. There is nothing more useless than to try to present the patient with hypotheses or data about himself which he is not ready to absorb. This process requires a great deal of skill and sensitivity on the part of the therapist and cannot be rushed. The end product is a <u>mutually acceptable</u> "contract" (understanding) of the nature of the client's difficulties and desirable treatment goals and procedures.

4. Environmental participation and social skill training.

This phase is, by far, the most intensive from the viewpoint of therapy time. To this point the therapist is primarily concerned with diagnosis and the development of a treatment "contract". Following the establishment of the "contract", "treatment" begins and tries to accomplish the goals that have been agreed upon.

Training in environmental participation simply refers to encouraging the patient to recognize and utilize some of the reinforcers available in the environment. It has been well documented that depressed individuals engage in fewer pleasant activities than normals and also, that the total number of pleasant activities engaged in is related to mood. At some point initially in treatment, the patient will have completed the Reinforcement Survey Schedule, an instrument designed to indicate reinforcers. The therapist should encourage patients to sample the reinforcing activities. A number of tactics

may be employed here. The therapist may encourage and support (social reinforcement) attempts to engage in pleasant activities that have been mutually agreed on. A more systematic alternative is to have the patient keep a daily activity schedule (i.e. a daily record of behaviours) (see Appendix A for an example). Again, therapist attention is used to reinforce an increase in the number of activities engaged in. This may also be systematized by making verbalizations about psychological complaints contingent upon increasing activity level.

The social skill training is designed to train the patient in those skills which are necessary for him to deal effectively with his environment, i.e. to be reinforced by other persons. As was indicated previously, one of the major problems of depressed patients is their relationship with other people. Training in social skill behaviours will allow the patient to acquire new and more efficient patterns of interpersonal behaviour.

The focus of social skill training is on the quantitative and qualitative aspects of the interactions between members of the group. Data will be available on these aspects of interaction and this will be provided to the patient with the aim of trying to focus sharply his problems for him. In this feedback, heavy reliance will be placed upon the concepts of reciprocity (the more behaviours emitted by the patient, the more behaviours will be directed towards him), positive and negative reinforcement and range of interactions (number of different individuals a person interacts with). Subsequent change in behaviour should be reinforced with approval and attention by the therapist as well as the patient's peers. A series of structured exercises (adapted from those used by the Lewinsohn group) should be used to facilitate and expedite interpersonal communication.

Thus, the social skill training centres on the process of the group. Behaviours are modified by increasing attention to specific components, allowing the patient to practise (behaviour rehearsal) and reinforcing desirable (i.e. socially skillful) behaviours. The therapist should be aware that changes in the focus of the social skill behaviour will be required as patient progresses. In this way, the skills may be taught in successive steps.

5. Training in self-reinforcement and control of behaviour.

This phase of treatment is included to provide the patient with some understanding of the methods that he/she could use to control his/her own behaviour. This understanding may

prove useful in addition to the social skill training. Certainly many people with adequate social skills often are in environments in which social reinforcement isn't available much of the day (i.e. housewives). At these times the use of positive reinforcement to maintain non-depressive behaviours may have to come from the person himself. Patients will already be familiar with monitoring their behaviour. They should be briefly instructed in the use of positive reinforcement to maintain behaviours. For example, housewives sometimes find it difficult to maintain household chores, behaviours which are only reinforced intermittently.

Thus, self-reinforcement could be utilized to maintain the behaviour. Household duties in the past may have been maintained to avoid negative self-reinforcement. Patients should be encouraged to select a reinforcer and a final target behaviour, set goals defined in performance terms and arrange for the administration of the reinforcer contingent upon a favourable performance assessment. Goals and standards should be established such that the probability of attaining reinforcers is high.

APPENDIX B

TABLES OF THE RELATIONSHIP BETWEEN ASSESSMENT SESSIONS AND ALL DEPENDENT MEASURES

Table 15: Observed means for the treatment and control groups at each assessment period on all dependent measures.

Beck Depression Inventory

	Pre-Assessment	Mid-Assessment	Post-Assessment	Follow-up Assessment
Cognitive Modification	30.1	17.1	12.5	14.1
Behaviour Modification	25.6	17.5	16.6	15.5
Nondirective	26.4	21.0	15.6	-
No Treatment	26.6	22.0	24.5	-

Hamilton Rating Scale for Depression

	Pre-Assessment	Mid-Assessment	Post-Assessment	Follow-up Assessment
Cognitive Modification	58.1	40.6	37.9	41.6
Behaviour Modification	54.1	46.6	46.6	48.4
Nondirective	58.5	53.0	54.5	-
No Treatment	57.8	50.9	52.0	-

Visual Analogue Scale

	Pre-Assessment	Mid-Assessment	Post-Assessment	Follow-up Assessment
Cognitive Modification	100.0	48.1	33.1	49.4
Behaviour Modification	98.8	76.5	72.4	80.8
Nondirective	127.4	96.3	91.0	
No Treatment	120.6	77.8	78.6	

Probability of Success

	Pre-Assessment	Post-Assessment
Cognitive Modification	57.6	61.6
Behaviour Modification	59.2	61.4
Nondirective	54.9	48.1
No Treatment	52.6	50.0

Level of Aspiration

	Pre-Assessment	Post-Assessment
Cognitive Modification	15.8	15.6
Behaviour Modification	15.9	16.1
Nondirective	16.6	16.5
No Treatment	15.4	15.3

Subjective Estimate of Performance

	Pre-Assessment	Post-Assessment
Cognitive Modification	59.4	50.0
Behaviour Modification	58.0	58.0
Nondirective	62.5	62.3
No Treatment	57.9	57.5

Actual Performance

	Pre-Assessment	Post-Assessment
Cognitive Modification	1.28	1.22
Behaviour Modification	1.20	1.10
Nondirective	1.11	1.17
No Treatment	1.31	1.27

Actions

	Pre-Assessment	Post-Assessment
Cognitive Modification	96.0	93.0
Behaviour Modification	90.0	85.5
Nondirective	64.5	87.0
No Treatment	72.0	73.5

Positive Reactions

	Pre-Assessment	Post-Assessment
Cognitive Modification	4.00	4.25
Behaviour Modification	3.50	4.00
Nondirective	3.00	3.13
No Treatment	3.38	3.38

Action Latency

	Pre-Assessment	Post-Assessment
Cognitive Modification	5.4	6.9
Behaviour Modification	4.6	4.5
Nondirective	22.7	15.3
No Treatment	7.2	4.1

Frequency of Eye Contact

	Pre-Assessment	Post-Assessment
Cognitive Modification	11.6	15.1
Behaviour Modification	10.4	9.5
Nondirective	9.6	11.3
No Treatment	9.5	10.8

Duration of Eye Contact

	Pre-Assessment	Post-Assessment
Cognitive Modification	138.8	134.8
Behaviour Modification	132.3	118.9
Nondirective	126.2	184.7
No Treatment	178.1	139.3

Frequency of Smiles

	Pre-Assessment	Post-Assessment
Cognitive Modification	5.0	8.4
Behaviour Modification	3.4	[illegible].1
Nondirective	4.5	5.6
No Treatment	3.0	5.4

Frequency of Illustrators

	Pre-Assessment	Post-Assessment
Cognitive Modification	9.6	8.6
Behaviour Modification	6.6	4.6
Nondirective	6.8	7.5
No Treatment	8.9	7.8

Frequency of Self-Adaptors

	Pre-Assessment	Post-Assessment
Cognitive Modification	5.5	6.4
Behaviour Modification	8.0	7.1
Nondirective	6.6	6.5
No Treatment	8.8	8.3

Table 16: Observed means for the nondepressed and the depressed/remitted group at pre- and post-assessment on all variables.

Beck Depression Inventory

	Pre-Assessment	Post-Assessment
Depressed/remitted	24.0	5.1
Nondepressed	6.9	5.3

Probability of Success

	Pre-Assessment	Post-Assessment
Depressed/remitted	66.8	72.6
Nondepressed	67.6	64.5

Level of Aspiration

	Pre-Assessment	Post-Assessment
Depressed/remitted	17.0	16.4
Nondepressed	16.5	16.8

Subjective Estimate of Performance

	Pre-Assessment	Post-Assessment
Depressed/remitted	62.2	58.3
Nondepressed	65.5	66.0

Actual Performance

	Pre-Assessment	Post-Assessment
Depressed/remitted	1.22	1.16
Nondepressed	1.19	1.17

Actions

	Pre-Assessment	Post-Assessment
Depressed/remitted	78.7	86.7
Nondepressed	114.0	108.0

Positive Reactions

	Pre-Assessment	Post-Assessment
Depressed/remitted	3.11	4.22
Nondepressed	5.75	4.25

Action Latency

	Pre-Assessment	Post-Assessment
Depressed/remitted	6.4	4.3
Nondepressed	3.4	4.7

Frequency of Eye Contact

	Pre-Assessment	Post-Assessment
Depressed/remitted	8.8	10.4
Nondepressed	7.9	8.6

Duration of Eye Contact

	Pre-Assessment	Post-Assessment
Depressed/remitted	143.3	135.0
Nondepressed	234.5	231.0

Frequency of Smiles

	Pre-Assessment	Post-Assessment
Depressed/remitted	3.3	7.0
Nondepressed	6.1	7.8

Frequency of Illustrators

	Pre-Assessment	Post-Assessment
Depressed/remitted	9.2	5.4
Nondepressed	4.9	4.9

Frequency of Self-Adaptors

	Pre-Assessment	Post-Assessment
Depressed/remitted	4.6	3.6
Nondepressed	3.3	4.8

APPENDIX C

MATERIALS FOR RATERS

DEPRESSION - DEFINITION

1. A specific alteration in mood: sadness, apathy, loneliness.

2. A negative self-concept associated with self-reproaches and/or self blame.

3. Change in activity level; retardation or activation.

4. Physiological changes; insomnia, anorexia, headaches.

5. Regressive wishes; desires to escape current situation.

The changes should occur in relation to perceived psychologically stressful life events. Patients with psychotic symptoms, drug addiction, sociopathy, organicity, major medical problems and depression severe enough to warrant hospitalization and/or entail a definite risk of suicide are excluded from the study.

Subjects were obtained from the university community and likely will present, symptomatically, between clinical patients and non-depressed subjects.

Raters are asked to complete two types of rating scales: a) an objective scale, the Hamilton Rating Scale for Depression and b) a subjective scale, the Visual Analogue Scale.

PRE-INTERVIEW

Duration: 20-30 minutes (approximately)

Pre-Interviews generally followed five major areas of inquiry:

A. General View of Depression

In asking questions in this area raters will have some idea about the client's understanding of depression generally. It was assumed that clients who have experienced depressive episodes in the past or who are currently depressed, will present a clear understanding of the symptoms.

B. Nature and Scope of Problems

1. As defined by client.

"As I understand it you came here because ..." (discuss complaints given on the Subject Screening Questionnaire)

"Would you tell me more about this. What is the problem as you see it?" (Probe as needed to determine client's view of his own problem behaviour, i.e. what is he doing or failing to do, which he or someone else defines as his problems.)

N.B. College students may be particularly defensive about providing information in this area. Also it is not uncommon for depressed clients to have difficulty making link between "depressed feelings" and specific problems.

2. Affective symptoms:

"How are you feeling (how is your mood) at this point in time?"

This is a relative question which depends on the subject's referents and the interviewer should inquire whether the subject's mood is variable. Subjects may attempt to give socially acceptable responses ("Fine", "OK", etc.) and these should be pursued by the interviewer.

3. Behavioural symptoms.

a) "How is this problem affecting your life (social, family, job, etc.)?" (probe to determine perceived severity, effects on work, interests)

b) "Do you ever feel like escaping or getting out of situation?"

4. Physiological symptoms

a) problems with headache, backache, nausea

b) "Have you been sleeping normally?" (probe sleep disturbances: early awakening and unable to get back to sleep, hard to fall asleep, restless sleep)

c) "How is your appetite?"

"Have you gained or lost weight in past month?"

C. Past History with Depression

Clients in this study may have experienced past episodes of depression. The interviewer should review past episodes, central problems (as perceived by the client) at the time.

D. Response During Most Serious Depression

"Did the depression result in you getting help from a professional (psychiatrist, psychologist, social worker, etc.)?" Probe symptomatology during depression. Clients should describe more than simple mood swings.

E. Description of Self as a Person

By asking the client questions about themselves as people self-concept variables should be elicited (i.e. does the person describe himself with positive adjectives or negative, and does he/she see mainly positive attributes or mainly negative).

MID, POST AND FOLLOW-UP INTERVIEWS

Duration: 10-15 minutes (approximately)

These interviews were distinct from the pre-interviews as the examiner had previous contacts with the subjects for various lengths of time. Rateable sections contained no reference to participation in groups, etc. to avoid a biasing of the ratings.

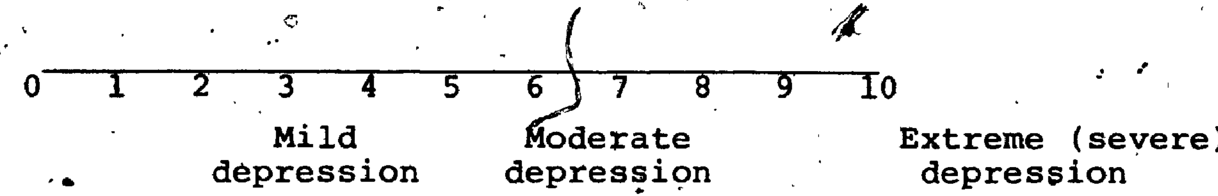
In general, these interviews pursued two major areas of inquiry; the nature and scope of problems and a description of the subject as a person. These areas were pursued following the guidelines of the pre-interviews.

PRE-INTERVIEW -	1. Definition/general view of depression	
	2. Nature and scope of problems	
	3. Response	- feelings - behaviour - physiological
	4. History	
	5. Description of self as a person - cognitive	
MID - POST - FOLLOW-UP -	Affective	- How are things going for you at present? - estimate of mood
	Behavioural	- activities - friends - course work
	Physiological	- sleeping - appetite - headaches - other
	Cognitive	- self as a person - view of experiences - view of future

SAMPLE CLIENT DESCRIPTIONS AND CORRESPONDING

VISUAL ANALOGUE SCALE SCORE

The Visual Analogue Scale relies heavily on the subjective judgement of the rater. Four client descriptions are given to provide some objectivity (and hopefully, reliability).



Depression absent — Mild depression — Moderate depression — Extreme (severe) depression

Client A.

Ms. A is a young female who sat in the interview chair in a slightly slouching position making relatively infrequent eye contact with the interviewer.

1. Affective symptoms - Ms. A responded by saying that she had been feeling "down" for past few days. During the interview she spoke in a relatively monotoned voice and appeared to be holding back from crying. When questioned, Ms. A indicated little variability in her unhappy mood.

2. Behavioural symptoms - Ms. A has been going to some classes but has not really been concentrating on what is going on in classes (Note: it is important for raters not to expect subjects to have totally isolated themselves from work or school activities as in some clinical, hospitalized cases). Ms. A talked about the possibility of leaving her current environmental situation to relieve some of the pressure, She had been socializing with friends on a very infrequent basis preferring to "try" and get some work done.

3. Physiological symptoms - Ms. A reported a disturbed sleeping pattern, finding it particularly difficult to get to sleep. When she wakes up in the morning she is fatigued and feels like she needs more sleep. She reports little interest in food and a weight loss although adds that she needed to lose the weight anyway. Headaches are reported but do not seem to be of central importance to Ms. A.

4. Cognitive symptoms - When asked to describe herself as a person Ms. A initially reacts by laughing and saying that the question isn't very relevant to her. She then proceeds to list some of her weaknesses ("unable to get along with people, irritable, useless"). She has difficulty discussing any strengths without proceeding to negate them.

Impression:

Data in all 4 symptom areas were consistent with the definition of depression. The feeling in the interview was one of hopelessness.

VAS - Severe depression - 95 -

Client B.

Mr. B is a young male who sat in the interview situation fairly comfortably and presented no unusual motor retardation.

1. Affective symptoms - Mr. B responded by saying that his mood has been "up and down" in the past week. He did not seem particularly stressed at this point even smiling to some questions. The smiles, however, seemed to stem from an anxiety about answering the questions and/or the need to "not appear depressed". His speech pattern was not noticeably retarded.

2. Behavioural symptoms - Mr. B noted that he had been attending classes but continued to feel great pressure and he really wondered whether he belonged at university or whether it was a mistake in coming (Note: specificity of complaint, he did not report that he was questioning his existence etc but rather a part of his life). He complained of the excessive amounts of work and importantly whether he could meet any of the expectations made on him. Questioning revealed that, according to Mr. B., his parents would be very disappointed if he didn't succeed. Socially, Mr. B was not active, describing himself as shy, a "loner", "besides there's too much work to do anyway".

3. Physiological symptoms - As this area was not as psychologically threatening, Mr. B reported that he had not been sleeping well with difficulty getting to sleep as well as waking early in the morning. He had suffered tension headaches for most days in the past week and seemed to have little appetite but he could not answer whether he had lost weight.

4. Cognitive symptoms - When questioned as to the strengths and weaknesses he had as a person, Mr. B laughed self-consciously and starting with his weaknesses, listed that he was difficult to get along with, irritable, a 'lone wolf'. He also listed some strengths however as being interested in people (note the paradox), hard-working and intelligent.

Impression:

Data was obtained in 3 areas but did not seem to be of great intensity. One had the feeling in the area of affect that Mr. B was experiencing discomfort but that he had difficulty expressing it particularly in front of the camera. In two areas however (behavioural and physiological) there was clear evidence of depressive symptomatology of some importance.

VAS - Moderate depression - 65 -

Client C.

Ms. C is a young female who seemed to be comfortable in front of the camera and answered questions directly. She seemed to make normal eye contact with the interviewer with no evidence of crying, etc. during the interview.

1. Affective symptoms - Ms. C reported feeling "OK" and indicated that her general mood had not fluctuated too much in the past week. When asked specifically to rate her mood she stated that she felt "around 50-60" on a 100 pt. scale with 0 being very unhappy. Ms. C laughed or smiled on occasion.

2. Behavioural symptoms - Ms. C was attending her classes and not having any great difficulty completing her work. She reported feeling under some pressure about exams (which was probably within normal limits). She said that her social relationships were getting "better" and that she was more comfortable with her roommates and friends. She still chose, however, to isolate herself from them even when she had completed her schoolwork. She reported thinking of "taking off" at times but doubted very much that she would do so. She reported doing some enjoyable activities after "forcing" herself to get going.

3. Physiological symptoms - This area was still one of some difficulty. She indicated having continued difficulty sleeping (getting to sleep) but noted that her sleep pattern was improving. She reported normal appetite and was even gaining a little weight. Tension headaches were reported as still frequently occurring.

4. Cognitive symptoms - Ms. C thought for a moment and then listed what she saw as her strengths and weaknesses. She listed some positive strengths ("considerate of others") but negated them somewhat by saying that some of her strengths could also be weaknesses.

Impression:

Generally functioning under normal academic pressure. Some depressive symptomatology but not presented in severe proportions. A feeling that she is coping and "hoping for the best" without being too confident.

VAS - Mild depression - 35 -

Client D.

Mr. D is a young male who sat comfortably in the interview session making good eye contact with the interviewer.

1. Affective symptoms - Mr. D stated that he felt "really good" and on questioning indicated that he was generally pleased with himself.

2. Behavioural symptoms - Mr. D stated that he had not been "running all over the place" but rather that he had established a program of study and exercise. He was socializing when the opportunity came up as long as it did not interfere with his schoolwork. Although feeling some anxiety about his courses he clearly was enjoying life at the university. He had not entertained any thoughts of leaving or restricting his activities.

3. Physiological symptoms - Mr. D reported that he was sleeping well, falling asleep within a ½ hour of going to bed and sleeping until his alarm. His appetite had not changed and he had not experienced any headaches. He reported feeling anxious as exams approached but this was specific to appropriate situations.

4. Cognitive symptoms - Mr. D clearly outlined strengths and weaknesses he saw in himself. He stated that he was fairly intelligent, and easy going but also, thought that he was going to have to work harder if he was going to succeed.

Impression:

Depressive symptoms absent.

VAS - No depression - 5 -

RATINGS OF THERAPY SESSION

Instructions:

1. Read and familiarize yourself with the procedures and foci of the cognitive, behavioural and non-directive forms of treatment.
2. Based on this understanding, assign each of the 5-minute sections to the most probable treatment approach.

1.	16.
2.	17.
3.	18.
4.	19.
5.	20.
6.	21.
7.	22.
8.	23.
9.	24.
10.	25.
11.	26.
12.	27.
13.	28.
14.	29.
15.	30.

ANSWER SHEET

NAME: ______________________ DATE: ______________

GROUP	STATEMENT NUMBER	GROUP	STATEMENT NUMBER
e.g. Z	2a	K	
A		L	
B		M	
C		N	
D		O	
E		P	
F		Q	
G		R	
H		S	
I		T	
J		U	

FOR OFFICE USE ONLY.

Score __________

Assignment

BECK DEPRESSION INVENTORY

INVENTORY ONE

DIRECTIONS

This is a questionnaire. On the questionnaire are groups of statements. Pick the one statement in each group which best describes the way you feel today, that is, right now. Remember to read all of the statements in the group before making your choice. Record the statement number beside the group letter on the answer sheet provided!

If there are two or more statements that fit the way you feel, record the higher of the two statements.

If you feel somewhere between two statements, record the statement you are closer to.

A.

- 0 I do not feel sad
- 1 I feel blue or sad
- 2a I am blue or sad all the time and I can't snap out of it
- 2b I am so sad or unhappy that it is quite painful
- 3 I am so sad or unhappy that I can't stand it

B.

- 0 I am not particularly pessimistic or discouraged about the future
- 1a I feel discouraged about the future
- 2a I feel I have nothing to look forward to
- 2b I feel that I won't ever get over my troubles
- 3 I feel that the future is hopeless and that things cannot improve

C.

- 0 I do not feel like a failure
- 1 I feel I have failed more than the average person
- 2a I feel I have accomplished very little that is worthwhile or that means anything
- 2b As I look back on my life all I can see is a lot of failures
- 3 I feel I am a complete failure as a person (parent, husband, wife)

D.

- 0 I am not particularly dissatisfied
- 1a I feel bored most of the time
- 1b I don't enjoy things the way I used to
- 2 I don't get satisfaction out of anything any more
- 3 I am dissatisfied with everything

E.

- 0 I don't feel particularly guilty
- 1 I feel bad or unworthy a good part of the time
- 2a I feel quite guilty
- 2b I feel bad or unworthy practically all the time now
- 3 I feel as though I am very bad or worthless

REVISED HAMILTON RATING SCALE FOR DEPRESSION

VISUAL ANALOGUE SCALE

N.

0 I don't feel I look any worse than I used to
1 I am worried that I am looking old or unattractive
2 I feel that there are permanent changes in my appearance and they make me look unattractive
3 I feel that I am ugly or repulsive looking

O.

0 I can work about as well as before
1a It takes extra effort to get started at doing something
1b I don't work as well as I used to
2 I have to push myself very hard to do anything
3 I can't do any work at all

P.

0 I can sleep as well as usual
1 I wake up more tired in the morning than I used to
2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep
3 I wake up early every day and can't get more than 5 hours sleep

Q.

0 I don't get any more tired than usual
1 I get tired more easily than I used to
2 I get tired from doing anything
3 I get too tired to do anything

R.

0 My appetite is no worse than usual
1 My appetite is not as good as it used to be
2 My appetite is much worse now
3 I have no appetite at all any more

S.

0 I haven't lost much weight, if any, lately
1 I have lost more than 5 pounds
2 I have lost more than 10 pounds
3 I have lost more than 15 pounds

T.

0 I am no more concerned about my health than usual
1 I am concerned about aches and pains or upset stomach or constipation
2 I am so concerned with how I feel or what I feel that it's hard to think of much else
3 I am completely absorbed in what I feel

U.

0 I have not noticed any recent change in my interest in sex
1 I am less interested in sex than I used to be
2 I am much less interested in sex now
3 I have lost interest in sex completely

ANSWER SHEET

NAME: ____________________ DATE: ____________

GROUP	STATEMENT NUMBER	GROUP	STATEMENT NUMBER
Z	2a	K	
A		L	
B		M	
C		N	
D		O	
E		P	
F		Q	
G		R	
H		S	
I		T	
J		U	

FOR OFFICE USE ONLY.

Score ____________

Assignment

REVISED HAMILTON RATING SCALE FOR DEPRESSION

VISUAL ANALOGUE SCALE

REVISED HAMILTON RATING SCALE FOR DEPRESSION

Date ______________ Rater ______________ Subject ______________

Listed below are 14 groupings of symptoms. Each of the items is defined by a series of statements. Assess how much the patient is affected by each of the 14 groupings during the past week. Indicate degree of behaviour observed by checking (✓) the correct number after each item.

KEY (1-5): 1 = Not present 2 = Trivial or mild 3 = Moderate
4 = Moderately severe 5 = Severe

KEY (1-3): 1 = Absent 2 = Slight or doubtful 3 = Clearly present

Range		1	2	3	4	5
1-5	DEPRESSED MOOD - gloomy attitude, pessimism about future, feeling of sadness					
1-3	GUILT - self reproach, feels he has let people down, ideas of guilt					
1-3	AVOIDANCE - questions value of living, wishes he could escape present environmental situation					
1-3	INSOMNIA, INITIAL - experiencing difficulty falling asleep					
1-3	INSOMNIA, MIDDLE - restless and disturbed during night, waking during night					
1-3	INSOMNIA, DELAYED - waking in early hours of morning and unable to fall asleep again					
1-5	WORK & INTEREST - indecision, decreased social activities, producitivity decreased					

Range		1	2	3	4	5
1-5	RETARDATION - slowness of thought, speech, activity, apathy					
1-3	AGITATION - restlessness associated with anxiety					
1-5	ANXIETY, PSYCHIC - tension and irritability, worrying about minor matters, apprehensive					
1-3	ANXIETY, SOMATIC - headaches					
1-3	SOMATIC SYMPTOMS, GASTRO-INTESTINAL - loss of appetite					
1-3	SOMATIC SYMPTOMS, GENERAL - loss of energy, fatigue-ability					
1-3	LOSS OF WEIGHT - interpreted in terms of subject's understanding					

TOTAL =
(possible 50)

VISUAL ANALOGUE SCALE SCORE

0 1 2 3 4 5 6 7 8 9 10

Depression absent — Mild depression — Moderate depression — **Extreme (severe) depression**

APPENDIX E

CARD SORTING TASK MATERIALS

ASSISTANT'S INSTRUCTIONS: CARD SORTING TASK

INTRODUCTION

Hello, my name is ______________________. In a minute or so you are going to take this card sorting test. First, I thought you might like to know a little more about it. We've found from past experience that it can be useful in helping us to help you.

It consists of sorting ~~cards correctly, and~~ quickly from a deck onto this board. This is not as simple as it might seem. It involves several abilities -- the ability to recognize forms as they appear, the ability to remember where they go and the ability to handle the cards. Most of all, it means coordinating all these abilities in order to do a good job.

Now let me explain exactly what you are going to do. You're going to sort these cards so that they match the ones here. You will have 20 seconds and I want to see if you can sort 20 or more cards correctly in this time. This is not as easy as it may seem. So, you will have 5 tries, or trials, with 20 seconds on each try. I want to see if in one of those five trials, any one of them, you can make the goal of sorting 20 or more cards.

You see here (point to peg board) is the number of cards and here the number of tries or trials. And this (point to line at card 20) is the goal. After each trial, I put in one of these pegs in the board and that way you'll be able to follow just how you are doing as far as the goal goes.

RESEARCH ASSISTANT'S PROCEDURE - CARD SORTING TASK

1. Fill in trial number (trial 1 for preliminary estimate before the first trial).
   Give to subject. He/she fills in 2 questions (estimates)
   Turn over away from subject, so as not to influence future decisions.

2. Trial 1.

3. Secretly, fill in actual number of seconds to complete the sorting of cards (whatever number depending on trial number).

4. Count the number of cards for subject. Insert peg at appropriate point (i.e. for success group, in trial 1, this will be 12).

5. Trial 2
   Trial 3
   Trial 4
   Trial 5

6. Subjective estimate of performance.
   Compared to other people who have taken this test how well do you feel you performed using a scale of 1-100 where 50 represents the 'average' person.

7. Return subject to reception area or
   Thank subject and tell him/her that he/she will be contacted by telephone in a few days, as to results of the assessment.

CARD SORTING TASK - SCORE SHEET - RESEARCH ASSISTANT

N.B. THIS SHEET IS NOT TO BE USED BY PATIENTS

PATIENT NO. ______ DATE: __________ TESTER: ______

TRIAL	PROBABILITY OF SUCCESS	LEVEL OF ASPIRATION	ACTUAL PERFORMANCE	SUBJECTIVE ESTIMATE OF PERFORMANCE
1			12	
2			15	
3			18	
4			19	
5			21	
TOTAL x				

CARD SORTING TASK - SCORE SHEET - RESEARCH ASSISTANT

N.B. THIS SHEET IS NOT TO BE USED BY PATIENTS

PATIENT NO. ______ DATE: __________ TESTER: ______

TRIAL	PROBABILITY OF SUCCESS	LEVEL OF ASPIRATION	ACTUAL PERFORMANCE	SUBJECTIVE ESTIMATE OF PERFORMANCE
1.			14	
2.			15	
3			15	
4			16	
5			18	
TOTAL x				

TRIAL NO. ______________

1. What do you think, are your chances of sorting 20 cards correctly in 20 seconds on at least one of the remaining trials? Mark the scale anywhere to show your estimate as a percentage.

0	10	20	30	40	50	60	70	80	90	100%

Can't possibly do it	Less than even chances I can do it	Chances are even that I can or can't	More than even chance I can do it	Can certainly do it

2. What score are you going to make on the next trial? (circle one)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

TRIAL NO. ______________

1. What do you think, are your chances of sorting 20 cards correctly in 20 seconds on at least one of the remaining trials? Mark the scale anywhere to show your esti[illegible] as a percentage.

0	10	20	30	40	50	60	70	80	90	100%

Can't possibly do it	Less than even chances I can do it	Chances are even that I can or can't	More than even chance I can do it	Can certainly do it

2. What score are you going to try to make on the next trial? (circle one)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

APPENDIX F

NONVERBAL BEHAVIOUR RATING SHEET

MOTOR ACTIVITY - DEPRESSION STUDY

DATA SHEET

SUBJECT ______________ SESSION (Pre, Post) __________ Rater __________

GROUP ______________ DURATION - 5 MINUTES

FACIAL MOVEMENT:	TOTALS
Frequency of eye contact	
Total duration of eye contact (in seconds)	
Frequency of smiles	
HAND MOVEMENTS:	
Frequency of illustrators	
Frequency of self adaptors	
a. scratch-pick	
b. rub-massage	
c. squeeze-pinch	
d. hold-support	
e. cover	

Location code: eyes = E, ears = R, nose = N, mouth = M
cheek area = C, forehead = F, temple = T
arm = A, chest = CH, shoulder = S

APPENDIX G

SUBJECT QUESTIONNAIRE

DEPRESSION STUDY - B.F. SHAW

SUBJECT SCREENING QUESTIONNAIRE

This study is designed to assist individuals who feel they are depressed or prone to depression. Please answer Question 1 but feel free to omit any of the others.

1. Would you be interested in participating in a self-study group focused on helping people who are depressed?

   Yes ____ No ____

   If yes, please provide a phone number where you can be contacted ____________.

2. Have you ever participated in a psychological study before?

   Yes ____ No ____

   If yes, briefly give details:

3. State in your own words the nature of your main problems and their duration.

4. Give a brief account of the history and development of your complaints (from onset to present).

5. Have you consulted any other professional health workers about your problems?

   Yes ____ No ____

   If yes, briefly give details (i.e. when was contact, how long did it last).

ALL INFORMATION WILL REMAIN CONFIDENTIAL

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(Office use only)

Computer Code

PERSONAL INFORMATION

1. Name: ____________________   ___ ___ ___ (1 2 3)

2. Who referred you? ____________________   ___ (4)

3. Age (in years): _____ Birthdate: ___ ___ ___ (Day Mo. Yr.)   ___ ___ (5 6)

4. Sex: (M or F) _____   ___ (7) M=1 F=2

5. Marital Status (S M D Sep): _____   ___ (8) S=1 M=2 D=3 Sep=4

6. Education (last grade completed) _____   ___ ___ (9 10)

7. Occupation: ____________________

Annual income of family (approx.) _____   ___ (11)

8. Have you been seen for psychiatric reasons before (If yes list below) _____   ___ (12)

Year	Problem	Duration

(Continue on back)

9. Family History: Spouse's name ____________________

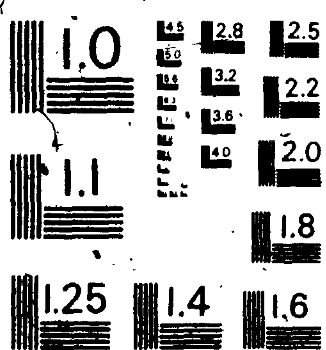
Children: Name | Age

Name	Age

(Continue on back)

10. Briefly, what reason(s) do you have for coming to this clinic? (i.e. depressed, headache, etc.)

3 OF/DE 3



PY RESOLUTION TEST CHART
REAU OF STANDARDS - 1963 - A

ARC - 374

DEPRESSION STUDY

PROCEDURE AND CONDITIONS

This study is concerned with helping persons who are depressed or prone to depression and recording the changes in their depression during and following the course of treatment. If you agree to participate you will be required to attend treatment and assessment sessions. You will be expected to attend:

(a) two 1-hour assessment sessions (the session you are now attending and another in the week following treatment).
(b) two 30-minute assessment sessions (one after 2 weeks of treatment and another one month after treatment termination)
(c) eight 2-hour treatment sessions in a four week period (i.e. two sessions per week).

It should be emphasized that the self study groups you will join have been successfully used with many depressed persons. The methods of assessment, however, are relatively new. Included in the assessment procedure will be an interview that will be videotaped. In addition, all self study sessions will be audio-taped. Information from these tapes will be strictly confidential and will be used to help programme your treatment.

This study is being conducted at the University of Western Ontario under the direction of Dr. Evans, Ph.D. Following the initial assessment you will be informed if you meet the requirements for inclusion in the study. There is the possibility that you will be asked to begin treatment four weeks after the initial assessment. During this time, however, your condition will be monitored during the assessment sessions.

CONSENT TO PARTICIPATE IN STUDY

I, ______________________________ of ____________________
hereby consent to participate in the study on depression conducted at the University of Western Ontario. I have read and understand the procedure and conditions of the study. I also understand that I am free to withdraw from the study at any time.

Date ____________________ ____________________________
Signature

____
Witness

____
Address of Witness

LIFE HISTORY QUESTIONNAIRE

Purpose of This Questionnaire:

The purpose of this questionnaire is to obtain a comprehensive picture of your background. In scientific work, records are necessary, since they permit a more thorough dealing with one's problems. By completing these questions as fully and as accurately as you can, you will facilitate your therapeutic program. You are requested to answer these routine questions in your own time instead of using up your actual consulting time.

It is understandable that you might be concerned about what happens to the information about you, because much or all of this information is highly personal. Case records are strictly confidential. NO OUTSIDER IS PERMITTED TO SEE YOUR CASE RECORD WITHOUT YOUR PERMISSION.

If you do not desire to answer any questions, merely write "Do not care to answer".

Name: ______________________ Date: ______________

1. Clinical:

(a) State in your own words the nature of your main problems and their duration:

(b) Give a brief account of the history and development of your complaints (from onset to present):

(c) On the scale below please estimate the severity of your problem(s):

Mildly upsetting	Moderately severe	Very severe	Extremely Severe	Totally Incapacitating

(d) Whom have you previously consulted about your present problem(s)?

2. Personal Data:

(a) Date of birth: ____________ Place of birth: ____________

(b) Mother's condition during pregnancy (as far as you know:)

(c) Underline any of the following that applied during your childhood:

Night terrors	Bed wetting	Sleepwalking
Thumb-sucking	Nail-biting	Stammering
Fears	Happy childhood	Unhappy childhood

Any other:

(d) Health during childhood:

List illnesses:

(e) Health during adolescence?

List illnesses:

(f) What is your height? ______ your weight? ______

(g) Any surgical operations? (Please list them and give age at time).

(h) When were you last examined by a doctor? ______

______

(i) Any accidents? ______

(j) List your five main fears:

(1)
(2)
(3)
(4)
(5)

(k) Underline any of the following that apply to you:

Headaches	Dizziness	Fainting spells
Palpitations	Stomach trouble	No appetite
Bowel disturbances	Fatigue	Insomnia
Nightmares	Take sedatives	Alcoholism
Feel tense	Feel panicky	Tremors
Depressed	Suicidal ideas	Take drugs
Unable to relax	Sexual problems	Shy with people
Don't like weekends and vacations	Overambitious	Can't make decisions
Can't make friends	Inferiority feelings	Home conditions bad
Can't keep a job	Memory problems	Unable to have a good time
Financial problems		Concentration difficulties

Others:

(l) Underline any of the following words which apply to you:

Worthless, useless, a "nobody", "life is empty"

Inadequate, stupid, incompetent, naive, "can't do anything right."

Guilty, evil, morally wrong, horrible thoughts, hostile, full of hate.

Anxious, agitated, cowardly, unassertive, panicky, aggressive.

Ugly, deformed, unattractive, repulsive.

Depressed, lonely, unloved, misunderstood, bored, restless,

Confused, unconfident, in conflict, full of regrets.

Worthwhile, sympathetic, intelligent, attractive, confident, considerate.

Others:

(m) Present interests, hobbies, and activities:

(n) How is most of your free time occupied?

(o) What is the last grade of schooling that you completed?

(p) Scholastic abilities; strengths and weaknesses:

(q) Were you ever bullied or severely teased?

(r) Do you make friends easily?

Do you keep them?

3. Occupational Data:

(a) What sort of work are you doing now:

(b) Kinds of jobs held in the past?

(c) Does your present work satisfy you? (If not, in what ways are you dissatisfied?)

(d) What do you earn? ________ How much does it cost you to live? ________

(e) Ambitions:

Past:

Present:

4. Sex Information:

(a) Parental attitudes to sex (e.g., was there sex instruction or discussion in the home?)

(b) When and how did you derive your first knowledge of sex?

(c) When did you first become aware of your own sexual impulses?

(d) Did you ever experience any anxieties or guilt feelings arising out of sex or masturbation? If yes, please explain.

(e) Any relevant details regarding your first or subsequent sexual experience:

(f) Is your present sex life satisfactory? (If not, please explain).

(g) Provide information about any significant heterosexual (and/or homosexual) reactions:

5. Menstrual History:

Age at first period? ____ Were you informed or did it come as a shock? ____

Are you regular? ____

Duration: ____

Do you have pain? ____

Date of last period? ____ Do your periods affect your moods? ____

6. Marital History:

How long have you been married? ____

How long did you know your marriage partner before engagement? ____

Husband's/wife's age: ____

Occupation of husband or wife: ____

Personality of husband or wife (in your own words):

In what areas is there compatibility?

In what areas is their incompatibility?

How do you get along with your in-laws? (This includes brothers- and sisters-in-law).

How many children have you?
Please list their sex and age(s).

Do any of your children present special problems?

Any relevant details regarding miscarriages or abortions?

Give details of any previous marriage(s):

7. Family Data:

(a) Father:

Living or deceased? ____________

If deceased, your age at the time of his death? ________

Cause of death? ______________________________

If alive, father's present age? __________

Occupation: ________________________

Health: ____________________________________

(b) Mother:

Living or deceased? ____________

If deceased, your age at the time of her death? ________

Cause of death? ______________________________

If alive, mother's present age? __________

Occupation: ________________________

Health: ____________________________________

(c) Siblings:

Number of brothers: _______ Brothers' ages: ____________

Number of sisters: _______ Sisters' ages: ____________

Relationship with siblings:

(a) Past:

(b) Present:

Give a description of your father's personality and his attitude toward you (past and present):

Give a description of your mother's personality and her attitude toward you (past and present):

In what ways were you punished by your parents as a child?

Give an impression of your home atmosphere (i.e., the home in which you grew up. Mention state of compatibility between parents and between parents and children).

Were you able to confide in your parents?

If you have a step-parent, give your age when parent remarried:

Give an outline of your religious training:

If you were not brought up by your parents, who did bring you up, and between what years?

Has anyone (parents, relatives, friends) ever interfered in your marriage, occupation, etc.?

Who are the most important people in your life?

Does any member of your family suffer from alcoholism, epilepsy, or anything which can be considered a "mental disorder?" Give details.

Are there any other members of the family about whom information regarding illness, etc., is relevant?

Recount any fearful or distressing experiences not previously mentioned:

List any situations that make you feel particularly anxious.

List the benefits you hope to derive from therapy.

List any situations which make you feel calm or relaxed.

Have you ever lost control (e.g., temper or crying or aggression?) If so, please describe.

Please add any information not tapped by this questionnaire that may aid your therapist in understanding and helping you.

PATIENT'S THERAPY REPORT

Name (optional): ____________________
Date: ____________________
Therapy Meeting Time: ____________________

This questionnaire contains a series of questions about the therapy sessions which you have just completed. These questions have been designed to make the description of your experiences in treatment simple and quick. There are two types of questions.

One type of question is followed by a series of numbers on the right-hand side of the page. After you read each of the questions, you should circle the number "0" if your answer is "no"; circle the number "1" if your answer is "some"; etc.

The other questions have a series of numbered statements under them. You should read each of these statements and select the one which comes closest to describing your answer to that question. Then circle the number in front of your of your answer.

Please feel free to write additional comments when you want to say things not easily put into categories.

A. WHAT DID YOU WANT OR HOPE TO GET OUT OF TREATMENT?
(For each item, circle the answer which best applies)

During Treatment I Hoped or Wanted to:	No	Some	Yes
Get a chance to let go and get things off my chest.	0	1	2
Learn more about what to do in therapy, and what to expect from it.	0	1	2
Get help in talking out what is really troubling me.	0	1	2
Get relief from tensions or unpleasant feelings.	0	1	2
Understand the reasons behind my feelings and behaviour.	0	1	2
Get some reassurance about how I'm doing.	0	1	2
Get confidence to try new things, to be a different kind of person.	0	1	2
Find out what my feelings really are, and what I really want.	0	[illegible]	2
Get advice on how to deal with my life and with other people.	0	1	2
Have my therapist respond to me on a person-to-person basis.	0	1	2
Get better self-control.	0	1	2
Straighten out which things I think and feel are real and which are mostly in my mind.	0	1	2
Work on a particular problem that has been bothering me.	0	1	2
Get my therapist to say what he really thinks.	0	1	2
Other: ______________	0	1	2

BE SURE THAT YOU HAVE CHECKED EVERY ITEM

B. WHAT PROBLEMS OR FEELINGS WERE YOU CONCERNED ABOUT DURING TREATMENT?

(For each item, circle the answer which best applies)

During Treatment I was Concerned About:	No	Some	Yes
Being dependent on others.	0	1	2
Meeting my obligations and responsibilities.	0	1	2
Being assertive or competitive.	0	1	2
Living up to my conscience: shameful or guilty feelings.	0	1	2
Being lonely or isolated.	0	1	2
Sexual feelings and experience.	0	1	2
Expressing or exposing myself to others.	0	1	2
Loving; Being able to give of myself.	0	1	2
Angry feelings or behaviour.	0	1	2
Who I am and what I want.	0	1	2
Fearful or panicky experiences.	0	1	2
Meaning little or nothing to others; being worthless or unlovable.	0	1	2
Other: ______________________	0	1	2

BE SURE THAT YOU HAVE CHECKED EVERY ITEM

C. DURING THERAPY, HOW MUCH

	Slightly or Not at all	Some	Pretty Much	Very Much
Friendliness or respect did you show towards your therapist?	0	1	2	3
Were you free and spontaneous in expressing yourself?	0	1	2	3
Did you try to persuade your therapist to see things your way?	0	1	2	3
Were you attentive to what your therapist was trying to get across to you?	0	1	2	3
Did you tend to agree with or accept what your therapist said?	0	1	2	3
Did you have a sense of control over your feelings and behaviour?	0	1	2	3
Were you negative or critical towards your therapist?	0	1	2	3
Were you satisfied or pleased with your own behaviour?	0	1	2	3

BE SURE THAT YOU HAVE CHECKED EVERY ITEM

D. HOW DID YOU FEEL ABOUT COMING TO THERAPY?
(Circle the answer which best applies?

1. Eager, could hardly wait to come.
2. Very much looked forward to coming.
3. Somewhat looked forward to coming.
4. Neutral about coming.
5. Somewhat reluctant to come.
6. Unwilling; felt I didn't want to come at all.

E. HOW MUCH PROGRESS DO YOU FEEL YOU MADE IN DEALING WITH YOUR PROBLEMS?
(Circle the answer which best applies)

1. A great deal of progress.
2. Considerable progress.
3. Moderate progress.
4. Some progress.
5. Didn't get anywhere.
6. In some ways my problems seem to have gotten worse.

F. HOW WELL DO YOU FEEL THAT YOU ARE GETTING ALONG EMOTIONALLY AND PSYCHOLOGICALLY AT THIS TIME?

(Circle the answer which best applies)

I am getting along:

1. Very well; much the way I would like to.
2. Quite well; no important complaints.
3. Fairly well; have my ups and downs.
4. So-so; manage to keep going with some effort.
5. Fairly poorly; life gets pretty tough for me at times.
6. Quite poorly; can barely manage to deal with things.

G. HOW HELPFUL DO YOU FEEL YOUR THERAPIST WAS TO YOU? (Circle the answer which best applies)

1. Completely helpful.
2. Very helpful.
3. Pretty helpful.
4. Somewhat helpful.
5. Slightly helpful
6. Not at all helpful.

H. WHAT DO YOU FEEL THAT YOU GOT OUT OF THIS TREATMENT?
(For each item, circle the answer which best applies)

I Feel That I Got:	No	Some	Yes
A chance to let go and get things off my chest.	0	1	2
Hope: A feeling that things can work out for me.	0	1	2
Help in talking about what was really troubling me.	0	1	2
Relief from tensions or unpleasant feelings.	0	1	2
More understanding of the reasons behind my behaviour and feelings.	0	1	2
Reassurance and encouragement about how I'm doing.	0	1	2
Confidence to try and do things differently.	0	1	2
More ability to feel my feelings, to know what I really want.	0	1	2
Ideas for better ways of dealing with people and problems.	0	1	2
Better self control over any moods and actions.	0	1	2
A more realistic evaluation of my thoughts and feelings.	0	1	2
Nothing in particular: I feel the same as I did before therapy.	0	1	2
Other: ______________________	0	1	2

BE SURE THAT YOU HAVE CHECKED EVERY ITEM

I. HOW DID YOUR THERAPIST SEEM TO FEEL DURING TREATMENT?
(For each item, circle the answer which best applies)

My therapist seemed:	No	Some	Yes
Pleased	0	1	2
Thoughtful	0	1	2
Annoyed	0	1	2
Bored	0	1	2
Sympathetic	0	1	2
Cheerful	0	1	2
Frustrated	0	1	2
Involved	0	1	2
Playful	0	1	2
Demanding	0	1	2
Apprehensive	0	1	2
Effective	0	1	2
Perplexed	0	1	2
Detached	0	1	2
Attracted	0	1	2
Confident	0	1	2
Relaxed	0	1	2
Interested	0	1	2
Unsure	0	1	2
Optimistic	0	1	2
Distracted	0	1	2

I. Continued

My therapist seemed:	No	Some	Yes
Affectionate	0	1	2
Alert	0	1	2
Tired	0	1	2
Other: ____________	0	1	2

J. ADDITIONAL COMMENTS: