1979

Construction of a Multiscore Measure of Depressive Moods and Affects

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CONSTRUCTION OF A MULTISCORE MEASURE OF DEPRESSIVE MOODS AND AFFECTS

by

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A Thesis Submitted to the Faculty of the Graduate School of Loyola University of Chicago in Partial Fulfillment of the Requirements for the Degree of

Master of Arts

April

1979

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to Tom Petzel, chairman of my thesis committee, for his guidance and support throughout the many phases of the long program of research. I am also indebted to Emil Posavac, the other member of my thesis committee, especially for keeping this thesis both statistically and grammatically suitable for print. Both Dr. Petzel and Dr. Posavac gave freely of their time, despite being responsible for directing the Clinical and Social Divisions, respectively.

There is no doubt, however, that my wife Sheila Berndt, has been most responsible for helping me successfully complete this thesis. Besides emotional support she has been involved from the beginning in almost every phase of the research, including item construction, data analysis, and typing. Without her, this thesis would have taken a quite different form.

VITA

The author, David John Berndt, is the son of Melvin John Berndt (deceased) and Edith (Wilkinson) Berndt of Woodstock, Illinois. He was born on July 14, 1950 in Elgin, Illinois. He is married to Sheila Berndt, M.D., a family practice physician.

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In September 1968 he entered Illinois State University where he majored in psychology. He was elected to the freshman honor society, and served on the Student and Academic Senates. Dissatisfied with the relevancy of his education, David left school in the middle of his sophomore year.

After travel and work experience in the real world, he elected to continue his education in 1974, again majoring in psychology, this time at the College of Charleston in Charleston,

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Publications and Professional Presentations

Berndt, D.J. Construct validation of the personal and socio-political dimensions of Rotter's Internal-External Locus of Control Scale. Psychological Reports, 1978, 42, 1259-1263.

Berndt, D.J. Induction of mood states and their effect on subjective time estimation. Paper presented at the Mid-western Psychological Association Meeting, Chicago, Illinois, May 5, 1978.

Berndt, D.J. The multidimensional controversy over Rotter's Internal-External Locus of Control Scale. Paper presented at the South Carolina Psychological Association Meeting, Hilton Head Island, South Carolina, April 1, 1977.

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CHAPTER 1

INTRODUCTION

While a variety of depression inventories are currently in use, most give only a global evaluation of severity of depression. O'Connor, Stefic, and Gresock (1957) were the first to suggest a multi-score approach for a depression inventory, after finding independant dimensions in a factor analysis of Hathaway and McKinley's (1942) Minnesota Multiphasic Personality D Scale. Although no study seems to have followed through on the specific suggestions by O'Connor et al., two inventories (Hunt, Singer, & Cobb, 1967; Wessman & Ricks, 1966) provide crude scores for several symptoms relevant to depression. Unfortunately, the psychometric adequacy of these scales has not yet been sufficiently demonstrated.

This study, therefore, has as its main objective the construction and initial evaluation of a new device for measuring depression, the Multiscore Depression Inventory (MDI). The MDI includes ten subscales designed to measure the severity of the following depression relevant symptoms: Low Self-Esteem, Fatigue,

Irritability, Pessimism, Instrumental Helplessness, Cognitive Difficulty, Social Introversion, Sad Mood, Guilt, and Learned Helplessness.

While a rationale is presented in Chapter II for inclusion in the inventory of these particular symptoms, nevertheless it would be appropriate at this point to justify the choice of a multiscore approach to the measurement of depression. If depression is viewed only as a unidimensional construct, a quantitative measure of severity of depression would suffice. Indeed, in such a case the primary consideration would be not the precise quantification of a few essential symptoms, but rather an attempt at sampling, as thoroughly as possible, the population of all relevant signs and symptoms. If, however, qualitative distinctions are useful, or more than one dimension of depression exists, then the accurate quantification of relevant individual symptoms is desirable.

Although the contemporary confusion in the depression literature makes it impossible to resolve this point, nevertheless a variety of theorists seem to find Kendell's (1968) unidimensional conceptualization inadequate. In his recent review of contemporary

classification systems, Kendell (1976) argues for his unidimensional approach on the grounds of both practical utility and parsimony. However, he also acknowledges that his model does not adequately account for the variety of manifestations of depression, and he discusses several classification systems which approach the classification muddle quite differently. For example, Eysenck (1970) conceptualizes depression as a two-dimensional system on the basis of factor analytic studies. From another perspective, other theorists find typologies useful, and Kendell (1976) lists eleven different typological systems. It is because of such confusion and disagreement that Kendell argues that natural boundaries, if they exist at all, are not obvious. The present study, however, assumes that natural boundaries, or true qualitative differences, have not been conclusively identified because precise quantification of the individual symptoms has usually been neglected, particularly in the self-report inventories. Separate, reliable, and valid scores for some important symptoms of depression might shed considerable light on what typologies, if any, are most appropriate.

Although clarification of relevant typologies is an important reason for quantification of depressive symptoms, the rationale behind the MDI is not derived from a fascination with classification.

On the contrary, this author agrees with Hunt's (in press) observation that people find both satisfaction and profit in giving names to things they do not understand.

If the primary purpose of the MDI is not assistance in differential diagnosis, what then are the more important goals of this multiscore approach? The purposes of clinical diagnosis have evolved considerably in recent years, and the present study has its basis in part in a desire to keep up with these changes. Specifically, such changes are reflected in the goals of the task force charged with organizing the third edition of the American Psychiatric Association's Diagnostic and Statistical Manual (DSM-III). According to an initial report from members of the task force (Spitzer, Sheehy, & Endicott, 1977), there is a new emphasis on communication of information within the classification process. Spitzer et al. suggest that diagnosis should serve a multi-purpose function, including providing information which facilitates the following: aiding professional communication, assisting in determining the treatment of choice, providing information about prognosis regardless of treatment, and facilitating

systematic inquiry into etiological and pathophysiological processes. More accurate measurement of severity of self-reported symptoms can only improve the information yield, and increase the effectiveness with which an instrument can assist in meeting these goals.

In addition to the main goals of providing increased information through a multiscore approach, the MDI attempts to achieve a number of secondary goals. First, it is designed to measure trait rather than state aspects of depression. Although many of the existing depression inventories do appear to measure, at least to some extent, trait aspects of depression, only the scale by Costello and Comrey (1967) is explicitly labelled trait. A second objective is to systematically reduce the amount of variation confounded with social desirability. This must be cautiously approached, since much of the shared variation is probably legitimate, and likely to be related differentially between subscales. For example, Irritability and Social Introversion are more likely to share constant valid variation with social desirability than some of the other subscales. Finally, the instrument is constructed for, and standardized on, a non-clinical population (i.e. college students), with the hope that it can at some future date be extended

to clinical populations. The precedent with other depression inventories has generally been the reverse approach, constructing the inventory for clinical populations, and later attempting to generalize to non-clinical populations. This has resulted in less than adequate discrimination among the lower scores, and item content that may be largely inappropriate, if not insulting, to someone experiencing less severe depression (e.g. Salzman, Kochansky, & Shader, 1972). Furthermore, an instrument constructed with a college population should be useful in both counselling settings and in analogue studies.

In summary, the MDI is designed to measure both severity of depression, and severity of several symptoms of depression. Its initial construction and evaluation on a college population is the intent of this project, although future research will attempt to extend its usefulness to various clinical populations. The advantages of such an approach will hopefully include improved professional communication, consistent with the goals of the task force responsible for DSM-III, the construction of an instrument which adequately measures trait depressive symptoms, and improved efficiency resulting from methodically removing some of the extraneous variation often ignored in the construction of other instruments.

CHAPTER II

REVIEW OF RELATED LITERATURE

The literature related to depression and its measurement is vast, and the present review will limit itself to two major aspects. First, this review will survey the various instruments that have been proposed for measurement of depression. Secondly, the literature will be discussed as it relates to the various symptoms that have been proposed as subscales for the MDI.

The Measurement of Depression

A review of the instruments designed to assess depression revealed a variety of instruments with a diverse set of formats. For example, the instruments may be self-report and self-administered, such as the MMPI-D scale (Hathaway & McKinley, 1942), or they may be designed as an observer rating scale, such as the Hamilton (1960, 1967) Rating Scale for Depression. They may be designed specifically to measure either state or trait depression, or, as is often the case, they may confound both state and trait aspects of depression. Many depression subscales are also included in rating instruments which assess other psychiatric syndromes,

and provide a subscore for depression. Projective techniques have also been useful for assessing depression, and innovative techniques have surfaced, such as Cohen and Rau's (1972) non-verbal Facial-Expression photographs. The present review will be limited to objective instruments designed primarily for the assessment of depression. First, self-report depression instruments will be surveyed. Then the topic of observer rating scales will be discussed.

Before, however, going further, it would be useful to briefly examine the relevant merits of the two approaches. While many authors agree with Hamilton (1972) that self-report measures of depression are inadequate because they neglect non-verbal behaviour, and cannot assess important symptoms like agitation and psychomotor retardation, it can be equally true that observer ratings can miss important subjective variables, particularly when, as Popoff (1969) notes, physical symptoms serve to distract the observer. Pichot (1974) maintains that depression is unique in that it can be measured equally well by either the patient or an observer, and the popularity and proliferation of self-report measures attests to their utility. There are disadvantages, however, to both approaches. The main limitations to self-report measures are the subject's lack of skill and experience, and the tendency to approach

testing with various response biases (Paykel, Prusoff, Klerman, & DiMascio, 1973). On the other hand, most problems with observer rating scales derive from rater variation due to theoretical bias, halo effects, and other rater response biases. The choice of which of these two formats is most appropriate should depend on consideration of the purpose for which the instrument is to be used.

Self-Report Depression Inventories

In this section, the review will begin with an in-depth consideration of the three most commonly used self-report measures of depression. These three instruments are Hathaway and McKinley's (1942) MMPI-D scale, the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), and Zung's (1965) Self Rating Depression Scale (SDS). A brief description of most of the other self-report measures will then be presented.

The first self-report measure of depression to become widely used was Hathaway and McKinley's (1942) MMPI-D scale. It consists of 60 statements which require a response of either True or False. The items were empirically selected from a large pool of items because of their ability to discriminate a psychiatric group of depressed patients from a normal group. Easily administered and scored, this instrument became the prototype self-report measure, and has frequently been used to validate other scales that followed.

Several criticisms have arisen which have considerably reduced the credibility of the scale as a valid measure of depressive illness. In the first place, factor analytic studies (Comrey, 1957; O'Connor, Stefic, & Gresock, 1957) have demonstrated that the scale is factorially complex. In fact, Comrey found nine factors, and the one he labelled depression contained only five items that loaded higher than .30. Moreover, the construct validity of the MMPI-D scale has been disputed on the grounds that it reflects personality factors rather than illness (Snaith, Ahmed, Mehta, & Hamilton, 1971). In addition, this scale has been criticized by McNair (1974) as being less sensitive to drug effects than other scales.

Because of these, and other, criticisms, several authors have attempted to develop better scales from the MMPI. McCall (1958) found 26 items from the original 60 which he considered face valid, and demonstrated that they were better at discriminating depressed and non-depressed psychotics than the other items. Similarly, Dempsey (1964) also developed a short version of the MMPI-D by using an empirical method designed to isolate a single dimension. His 30 item version of the scale, while more internally

consistent than the full scale, shared many items with Comrey's (1957) largest factor, purported to measure neuroticism rather than depression. Another attempt to develop a short form was made by Canter (1960), whose abbreviated form was again more internally consistent than the MMPI-D, and showed some evidence of validity. A somewhat different method of deriving a better scale was employed by Stein (1968), who used the full scale MMPI and derived clusters, including one labelled Depression and Apathy versus Positive and Optimistic Outlook. The cluster shared only ten items with the MMPI-D; however, both scales were highly correlated (.81). Rosen (1962) also derived a new depression scale from the full MMPI. His Depression Reaction Scale was developed empirically, by choosing items which discriminated a group of neurotic depressives from a group of all other psychiatric patients. The 42 item scale shared only four items with the MMPI-D. Despite all of these (and other) attempts to refine a better MMPI depression scale, Dahlstrom, Welsh, and Dahlstrom (1972) conclude, after weighing the merits of the various studies, that none of the proposed revisions were any better than the original MMPI-D.

The Beck Depression Inventory (BDI) was developed by Beck, Ward, Mendelson, and Erbaugh (1961). Today it is the most widely

used self-report depression inventory. It consists of 21 categories of symptoms or attitudes, which were rationally selected on the basis of clinical observations of depressed patients. For each category there is a graded series of four or five alternative statements, ranging in severity from neutral (0), to extremely severe (3). The patient consequently has a multiple choice situation for each category, and scores are summed across categories for a total severity of depression score. Internal consistency reliability has been reported to range from .53 (Weckowicz, Muir, & Cropley, 1967), to a split-half reliability coefficient of .93, reported by Beck et al. in their 1961 study. Miller and Seligman (1973) report a test-retest reliability of .74 over three months.

There are several reasons why the BDI is the most widely used self-report measure of depression. Beck and Beck (1972) report that the BDI has been used in more than 100 studies as a criterion measure, and evidence in support of its construct validity is strong in studies cited by Beck and Beamsderfer (1974). Moreover, it also appears that the BDI is one of the few depression inventories which shows discriminant validity for anxiety (Beck, 1970; Mendels, Wernstein, & Cochrane, 1972). Furthermore, McNair (1974) found the BDI was better than any other measure of depression in detecting drug effects.

While the validity of Beck's scale has been supported from a variety of approaches, users should also be aware of its limitations. The BDI is particularly susceptible to response set bias because of its format, since the most socially desirable alternative is always presented first, and subjects may fail to consider all the alternatives (Meyer, 1977). Hamilton's (1972) criticism mentioned above is particulary pertinent to the BDI, which emphasizes cognitive rather than non-verbal behaviour, perhaps more than other scales, because of Beck's cognitive theoretical orientation. Another limitation of the BDI is the lack of sufficient reliability data, especially test-retest reliability, particularly important in light of its frequent use for for repeated measures.

Two revisions of the BDI have been published, although neither seem to have been used much. Beck and Beck (1972) developed a 13 item short form of the BDI intended for use as a screening device by family physicians. Items were selected which correlated well with both the original BDI, and maximally with clinical ratings of severity of depression. A subsequent investigation by Beck, Rial, and Rickels (1974) indicated both objectives had been successfully achieved. The other revision by May,

Urquhart, and Tarran (1969) attempts to minimize the response set problems by randomizing the order of each statement within a category, and the order of categories. Despite this change in format, the authors found validity coefficients comparable to the original scale.

Zung's Self-Rating Depression Scale (SDS) is an instrument that has received considerable usage, especially in psychiatric settings. The symptoms assessed were derived from common factors in three factor analytic studies of depression. Items were extracted from verbatim records of patient interviews. The SDS consists of 20 items on which subjects rate themselves on four point, Likert-type scales, anchored on the extremes by "none or little of the time" and "most or all of the time". Half of the items were symptomatically negative, and half of the items were positive. The chief advantages of the SDS are its ease of scoring, its usefulness for group administration, its demonstrated validity and sensitivity in drug studies (McNair, 1974), and the availability of other forms of the SDS, including translated versions (Zung, 1969), an interviewer rating scale version (Zung, 1972), and a form designed for completion by a significant other (Zung, Coppedge, & Green, 1974).

Many criticisms, however, have been raised about the SDS.

First, the requirement that patients compare their present state to a previous condition presents difficulties for chronic patients with long-standing illness (Wang, Treul, & Alverno, 1975). Moreover, because the items were taken from verbatim interviews by psychiatric patients, some of the items are rather objectionable to non-psychiatric patients (Froese, Vasquez, Cassem, & Hackett, 1974; Salzman, Kochansky, & Shader, 1972). Furthermore, the four anchor points represent frequency of occurrence, and this results in mild persistent symptoms counting more than severe, infrequent symptoms (Carroll, Fielding, & Blashki, 1973). Finally, Hamilton (1972) criticizes the scale for not including items on hypochondriasis, guilt, and retardation. He also states that the item designed to assess suicidal tendencies was poorly written.

Before the MMPI had its impact in the early 1940's, three measures of depression had been developed, although they were designed and used for research rather than in clinics. Jasper (1930) was the first to propose an instrument, the Depression-Elation Scale (D-E), that purported to measure only depression in a self-report format. No convincing evidence, beyond general observation, had been presented prior to Jasper's instrument, for

the functional unity of what he termed the dimension of depression-elation. Jasper envisioned his scale as tapping a general depression factor analogous to Spearman's (1904) general factor of intelligence. Subsumed under depression-elation, Jasper suggested, was not only depression-elation, but optimism-pessimism, and enthusiasm-apathy. Jasper's D-E was a self-administered, 40 item trait measure. Twenty of the items were objective, non-personal items measuring primarily pessimism, usually about sociopolitical institutions. The other 20 items were more personal in nature. Subjects chose from five alternatives ranging from elation to depression for each question, and also rated each question for how difficult it was to choose the right answer.

Chant and Myers in 1936 were the first to use a Thurstone type scaling mechanism in the development of the next self-report depression inventory. This instrument, the Depression-Pessimism: Optimism-Elation scale, contained 22 items with scale values ranging from .3 for "I wish I had never been born" to 10.7 for "Life could not be better for me" (Chant & Myers, 1936, p. 135). The score is computed by taking the average score of all items checked "yes".

Guilford and Guilford (1939) developed the third scale, while using factor analysis in early exploration of introversion-extro-

version. The Guilfords developed a 17 item factor, labelled Factor-D, which included a few items obviously related to depression; however, a large proportion of the items dealt with retrospection, meditation, and introspection. Although Guilford and Guilford were exploring personality rather than developing a new inventory for depression, Abramowitz (1969) chose to include the items as a measure of self reported depression in a study of the relationship between depression and locus of control.

During the period when the MMPI-D and Beck were gaining acceptance, most of the measures of depression that were published were observer rating scales, with the exception of one self-report instrument developed by Friedman, Mowbrey, and Hamilton in 1961. This instrument, known as the Behavioural and Subjective Depression Questionnaire, was a 25 item trait measure. Some validity was indicated in its differential sensitivity in a controlled drug study, and its correlations with before and after ratings by psychiatrists of overt depression. It was not until 1965, the year Zung published the SDS, that self-report depression inventories began to appear regularly again in the literature, and by 1970 eight new self-report measures had been published.

Two of these were in the adjective checklist format. In 1965, Zuckerman and Lubin published the normative data on the Multiple Affect Adjective Checklist (MAACL). The MAACL consists of 131 adjectives arranged in alphabetical order. A person taking the test simply checks all those adjectives which apply to him, and by varying the instructions the MAACL can be used as either a state or trait measure. Besides a scale for Depression there are also scales for anxiety and hostility. The scales contain an approximately equal number of plus (checked) and minus items. Test-retest reliability is not very good for the trait administration (.68), and much worse for the state measure (.15 to .84), and fluctuates greatly from population to population (Pankratz, Glaudin, & Goodmonson, 1972; Zuckerman & Lubin, 1965). Meanwhile, Herron, Bernstein, and Rosen (1968), found evidence for a strong plus or minus response set in the MAACL. Internal consistency reliability ranges from .60 to .92 (Herron, Bernstein, & Rosen, 1968; Zuckerman & Lubin, 1965). The other adjective checklist which measures depression is Lubin's (1967) Depression Adjective Checklist. Similar in format to the MAACL, the DACL measures only depression, and consists of seven equivalent forms useful for repeated measurement experiments. A further advantage

of the DACL is its brevity: it takes less than three minutes to complete. Moreover, the DACL probably has the most extensive norms of all the depression inventories, as a result of a recent nationwide poll (Levitt & Lubin, 1975), which provides data on a cross-section of the country for over 3,000 respondents.

The other six self-report inventories published between 1965 and 1970 each contributed a unique perspective to the measurement of depression. Wessman and Ricks (1966) provided another state instrument useful for repeated measurements, with the further advantage of measuring 16 different affects. However, Wessman and Ricks eschewed an empirical approach to scale construction in favor of a set of scales rationally derived. Each of the 16 scales consisted of ten statements ranging, with hypothetically equal gradations, from one pole to its opposite for each affect. Although the psychometric features of the scales have not been adequately demonstrated, the scales have proved useful in a study of cyclothymic moods by Becker and Nichols (1974).

Costello and Comrey (1967) were the first to construct a measure of depression designed with the specific intent of reducing variation due to anxiety. The final result of some thorough

research were two orthogonal measures of trait anxiety and depression. The trait aspect is insured by measuring most of the items on a nine-point scale ranging from "always" to "never". The remaining items are on a nine-point intensity scale, but are distinctively phrased to assess trait characteristics. This specific attention to constructing a trait measure is a unique credential for the scale. Test-retest reliability is in the .70's, and split half reliability was .90. Validation efforts have been sparse, but it appears that, while it is efficient in differentiating anxiety from depression, it is not well designed for measuring presence or severity of depression (Costello, Belton, Abra, & Dunn, 1970; Costello & Comrey, 1967; Mendels, Weinstein, & Cochrane, 1972).

The approach taken by Leckie and Withers (1967) was quite different from the others who were constructing self-report inventories in the late 1960's. Leckie and Withers claim that their scale measures a level of personality, or character structure, beneath the symptomatology measured by the published inventories. Items were drawn from the literature on psychoanalytic theories of depression. The final scale contained 11 items that were symptomatic, 32 items that were regarded as unconscious items, and nine

items that were termed "threshold" items. Test-retest reliability was satisfactory, but validity has not been demonstrated.

A multiscore approach similar, in some respects, to the MDI was attempted by Hunt, Singer, and Cobb (1967), who proposed 19 symptom categories for the 101 item inventory, and computed a score for each category. Individual items were chosen from a variety of inventories, and grouped rationally rather than empirically, with few items under each symptom. Because most categories contained relatively few items, internal consistency is rather poor, ranging in a normal population from .11 for the four item Burdened index, to .83 for the eight item index of Low Self-Esteem. Test-retest reliability was also poor for the scales.

Popoff, in 1969, devised a brief test that included "covert" statements of depression, as well as some of the usual symptoms. The covert items were chosen because they might be endorsed more frequently by patients who were denying their illness and somaticizing their depression. While Popoff had proposed his scale as a remedy for the deficiencies of the SDS, Downing and Rickels (1972) compared the two tests, and concluded that the SDS was more effective in detecting depression.

The sixth self-report inventory of depression published in

the period between 1965 and 1970 was, again, unique. Plutchnik, Platman, Tilles, and Fieve (1970) proposed the only test in the literature designed to differentiate manic as well as depressive states from normal. The Mania-Depressive scale consists of 16 items that detect a manic condition, and 46 which discriminate depression from a normal state. Ten of the items were common to both scales, seven scored oppositely, while the three items scored in the same direction were all related to irritability.

Since 1970, perhaps due to the extensive use of the BDI, SDS, and observer rating scales, only two new self-report depression inventories have been published, and both seem only to be new approaches to the same problem addressed by Costello and Comrey (1967). The 40 item Institute for Personality and Ability Testing (IPAT) Depression scale was developed by Krug and Laughlin (1976), as a companion scale for the IPAT Anxiety Scale Questionnaire (Krug, Scheier, and Cattel, 1976). The items were required to show discriminant validity with the anxiety scale, and were derived from a large scale factor analysis. The other scale designed to differentiate between anxiety and depression was Mould's (1975) Paired Anxiety and Depression Scale. Mould's scale consists of 16 pairs of words, with a depression word (usually selected from the BDI) always paired with an anxiety word. The forced choice format

results in a measure of the relative balance between anxiety and depression, but is not useful as a quantitative measure of either.

In summary, over the years a variety of self-report measures of depression have been published. The most commonly used inventories are the BDI, the SDS, and the MMPI-D. A variety of the instruments were published between 1965 and 1970, each with a unique contribution, but recently there have been few advances in the self-report measurement of depression.

Observer Rating Scales

Observer or interviewer rating scales are numerous in the literature, and as the MDI utilized the self-report format, the present review will not discuss them in depth. Nevertheless, a brief survey of the existing rating scales is in order.

The first observer rating scale measuring only depression was devised by Lehman, Cohn, and DeVerteuil (1958), for use in evaluation in drug treatment studies. Patients were rated by psychiatrists on seven four-point scales, on both affective and somatic disorders. Although Lehman et al. report that differences among raters were insignificant, no statistical evidence was presented. An obviously state measure, its initial validity was indicated by its sensitivity to changes after treatment with Imipramine.

The Hamilton Rating Scale, introduced in 1960 and revised in 1967, is today the most widely used observer rating scale. Designed for assessment of severity of depression in already diagnosed cases, the 17 item Hamilton Rating Scale has shown good evidence of interrater reliability, most likely due to Hamilton's use of fairly explicit criteria for the rating process. The scale is a state instrument commonly used in drug evaluation studies.

Cutler and Kurland (1961) proposed a 27 item rating scale, also designed to measure state depression severity. The items are scored as either present or absent. The authors report that sufficient interrater reliability was obtained with untrained personnel after a short orientation training.

Two observer rating instruments were developed by Grinker, Miller, Sabshin, Nunn, and Nunnally (1961) for their monumental study of depression. One scale was a 47 item checklist for the patients feelings and concerns. The other instrument included 87 items concerned with current, observable behaviour. Interestingly, interrater reliability was better when psychiatrists judged the patients feelings than when they rated the patients observable behaviour.

Since 1961 a variety of rating scales have been published, with very few innovations or improvements on these early rating scales. Overall, Hollister, Pakorny, Casey, and Katz (1962) developed a 31 item scale which proved more sensitive than two other measures to changes due to Imipramine. Wechsler, Grosser, and Bussfield (1963) constructed a 28 item scale which separated patients feelings from the observations of the interviewer. A brief and simple rating scale was published by Simpson, Hackett, and Kline (1966) which, despite its brevity, provided reliabilities greater than .80. Later (1967) Hackett, Gold, Kline, and Winick introduced the SAD-GLAD scale (Systemized Assessment of Depression-Graduated Linear Assessment of Delight). Hackett et al. claim good interrater reliability, but do not report statistics to back up the claim. A modified version of Hamilton's (1960, 1967) scale was presented by Rickels, Jenkins, Zamostein, Rabb, and Kanther (1968); however, they neglected to report reliability information. Still another rating scale, this time proposed by Gilbert and Gilbert (1968) consisted of 47 items. Their instrument required the observers to base their ratings on patient self-report, rater observations, and an interview with a spouse or peer. A behavioural approach to observer ratings (Williams, Barlow, & Agras, 1972) uses time sampling methods to record frequencies of four categories of

behaviour. Finally, Asberg, Kragh-Sorenson, Mindham, and Tuck (1973) provide a nine item scale with several translations, making it useful in cross cultural studies.

In summary, a variety of observer rating scales for depression have been constructed. The most commonly used scale is Hamilton's (1960, 1967), while most other scales are similar in format. Most are state measures designed for use in drug effectiveness studies. While these rating scales have much to commend them, the MDI was constructed in a self-report format, primarily for the reasons discussed in the introduction to this chapter.

Important Symptoms of Depression

In order to keep the MDI from being unreasonably long, and yet achieve the goal of reliable quantification of different symptoms, the present review was obligated to attempt a nearly impossible task, i.e. to justify which of the multitude of depression relevant symptoms are important enough to warrant inclusion in the inventory. A number of considerations were consequently useful in the rational process by which ten symptom categories were derived. The ten symptoms will be discussed, and in each case a brief rationale for its inclusion will be presented.

Before discussing each symptom, however, it should be noted that the following considerations played a role in the selection process. First, an attempt was made to include symptoms from the various dimensions that factor analyses have isolated. Zung (1965) derived his SDS categories in this manner. His task was relatively easy, since he synthesized only three studies, whereas today there are a variety of perspectives and conflicting methods, which leave the dimensional structure of depression unresolved. Second, the various typologies and classification systems were scrutinized for the cardinal symptoms. Another criterion was the critical emphasis some symptoms received in the important theories of depression. Similarly, symptoms were selected which were considered potentially useful in research related to etiology, prognosis, and treatment of choice. Another approach to symptom selection was to review depression inventories to determine how often others had included the symptoms. Table 1 on page 28 indicates the presence or absence of each of the symptoms in the MDI in 15 selected depression measures. The lack of consensus is not surprising, considering the varying theoretical perspectives, and is similar to findings by Levitt and Lubin (1975), who found "self-devaluation" as the only common element in 16 selected instruments. Finally, it

Table 1

Presence of Ten Symptoms in Selected

Depression Measures

Instruments \ Symptoms	Low Self-Esteem	Irritability	Pessimism	Fatigue	Instrumental Helplessness	Cognitive Difficulty	Sad Mood	Social Introversion	Guilt	Learned Helplessness
Zung, W.W.K. (1965)	X	X	X	X	X	X	X			X
Beck, Ward, Mendelson, Mock, & Erbaugh (1961)	X	X	X	X	X	X	X	X	X	X
Hathaway & McKinley MMPI-D (1942)	X	X		X	X	X	X	X		X
Hamilton, M. (1960)							X		X	X
Cutler & Kurland (1961)	X		X			X				
Leckie & Withers (1967)	X	X	X		X	X	X	X	X	X
Overall, Hollister,(1966) Johnson, & Pennington	X		X	X	X	X	X		X	X
Jasper, H.H. (1930)	X		X				X			X
Simpson, Hackett, & Kline (1966)			X	X			X	X	X	
Plutchnik, Platman, Tilles, & Fieve (1970)	X	X	X	X	X	X	X	X		X
Guilford & Guilford (1939)			X				X	X		
Wecksler, Grosser, & Busfield (1963)	X		X	X		X	X	X	X	X
Costello & Comrey (1967)	X		X		X		X			X
Hunt, Singer, & Cobb (1967)	X		X	X	X		X	X	X	
Wessman & Ricks (1966)	X	X		X	X	X	X	X	X	X
Totals	12	6	12	9	9	9	14	9	8	11

must be admitted that the final selection of ten symptoms was considerably affected by the personal wishes of the author. In other words, some symptoms were chosen over others equally important simply because the author considered them of primary importance.

Sad Mood

Sad Mood, or trait depressive affect, was included as a symptom category for several reasons. First, all but one of the scales in Table 1 included at least one item measuring sadness. Although not everyone who is depressed admits to sadness, it is certainly the symptom most commonly associated with depression by the public. Moreover, many factor analytic studies have identified a major factor variously labelled depressive affect or mood (e.g. Giambra, 1977; Grinker et al., 1961; Hunt et al., 1967). Furthermore, a sad mood has been shown to be one of the best symptoms for discriminating depression from schizophrenia (Harrow, Colbert, Detre, & Bakeman, 1966). Sad mood is the first criterion specified for the classification of a depressive disorder by the Research Diagnostic Criteria (Spitzer, Endicott, & Robins, 1978), and similarly for depressive episodes in the most recent version of DSM-III. Theoretically, Jacobson (1953, 1957), Nowlis (1963),

and Wessman and Ricks (1966), all consider depressive mood to be an important influence on all parts of the personality. Other theorists, however, such as Beck (1967), and Lazarus (1968), view sad affect as mediated by prior cognitive appraisals, and Beck in particular sees it as a secondary symptom in depression.

Low Self-Esteem

Low Self-Esteem is commonly considered an important symptom in depression, particularly among theorists of the ego-analytic persuasion. Jacobson (1953) argues that low self-esteem is the result of an aggressive cathexis of the self-representations by the critical superego. Bibring (1953) differs somewhat in emphasis in that he sees fluctuations in self-esteem as signals or warnings of impending helplessness. Certainly, the antecedents of low self-esteem (Coopersmith, 1967) are similar to those hypothesized by depression theorists. In Table 1, 12 of the 15 studies assessed some aspect of self-esteem, and for Levitt and Lubin (1975) "self-devaluation" was the only common element in their summary of 16 instruments.

Fatigue

Fatigue will be included as a symptom, primarily to provide a self-report correlate of psychomotor retardation. Psychomotor

retardation, as Hamilton (1972) observes, cannot be measured in a self-report format. Yet many typologies (Garside & Kerr, 1972; Overall, Hollister, Johnson, & Pennington, 1966) consider psychomotor retardation a significant sign, and Roth et al. (1972) indicate it is useful in differentiating anxiety from depression. Fatigue and loss of energy are included as useful criteria in Spitzer, Endicott, and Robin's (1978) Research Diagnostic Criteria, and also in the proposed DSM-III. Whether or not fatigue will serve as a phenomenological correlate of psychomotor retardation is, of course, debatable. Beck (1967), in fact, suggests that fatigue and retardation are both the result of pessimistic cognitions. Whatever the relationship between fatigue and retardation, it is evident from Table 1 that many psychometricians consider it an important symptom. Jacobson (1971) suggests that fatigue and retardation in depression serve as psychosomatic symptoms that divert patients' attention from their depressed affective states.

Guilt

Guilt is an aspect of depression which has generated considerable discussion. Psychoanalytic theorists of course, emphasize its central role in depression. Freud (1921) saw guilt as tension between the ego and ego-ideal. A strict ego-ideal produces

rebellion by the ego, which can be sufficient to produce full blown depressions. Rado (1928) mentions that self-reproaches by depressives stem from their conviction that they are to blame (because of aggressive feelings) for the loss of important objects. Laxer (1964), from an experimental approach, found low self-esteem for depressed patients with low mood and guilt, whereas patients with little guilt but low mood had normal self-esteem. Guilt is also an important symptom because it consistently appears as an important dimension in factor analytic studies. Lorr (1969), in fact, found it to be the only dimension common to all eight analyses in his review. Guilt has also found its way into the Research Diagnostic Criteria of Spitzer, Endicott, and Robins (1978), as well as the proposed DSM-III.

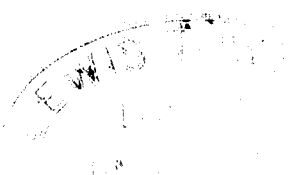
Helplessness - Learned and Instrumental

While helplessness is considered a central symptom in depression, the present study will assess two kinds of helplessness: learned and instrumental. Learned helplessness (Abramson, Seligman, & Teasdale, 1978; Seligman, 1975) is a major theoretical model for depression, which stresses the role of learned experience that reinforcement and responding are independant. Such learning leads depressed individuals to believe that active coping is futile. No

inventory currently exists which purports to measure a trait aspect of this belief. Although Rotter's (1966) concept of locus of control had been emphasized in early perspectives of learned helplessness (Hiroto, 1974; Miller & Seligman, 1973), it does not include a comprehensive generalized construct analogous to learned helplessness, if nothing else because it neglects accompanying motivational aspects. Also, Rotter's (1966) measure of locus of control is confounded with pessimism (Lamont, 1972). The other kind of helplessness which the MDI will attempt to measure is instrumental helplessness. This kind of helplessness is quite different: the posture of helplessness implied here is designed to meet the dependency needs of the depressed patient, and describes the type of person who is clinging or manipulative, and actively seeks the help of others. The theoretical emphasis on instrumental forms of helplessness is represented in the writings of various theorists (Adler, 1961; Bonime, 1966; Chedoff, 1970; Cohen, Baker, Cohen, Fromm-Reichmann, & Wigert, 1954), and the term "instrumental" while similar to the conceptualization by Sacco and Hokanson (1978), differs in that the proposed emphasis includes positive reinforcement as well as avoidance of stress.

Cognitive Difficulty

A variety of cognitive difficulties are usually associated



with depression, and this symptom was included to provide a balance to the other symptoms that deal largely with the affective aspects of depression. Nine of the 15 instruments reviewed in Table 1 include some aspect of cognitive difficulty in their inventories. Friedman (1964) found that while depressed patients consistently rated as low the quality of their own performance on cognitive tasks, actual decrements in performance occurred in only nine out of 82 measures. The impairment that did occur was largely on tasks which indicated decrements in concentration, short term memory, psychomotor speed, and visual-motor coordination. From a theoretical perspective, Jacobson (1971, p. 172) conceptualizes inhibition of thinking in depression as a hypochondriacal symptom, and considers patients' preoccupation with their "stupidity" no different from somatization involving gastrointestinal or heart conditions. Loss of concentration is also considered more relevant to endogenous than reactive depression, and is consequently useful for investigators concerned with the endogenous/reactive typology (Rosenthal & Gudeman, 1967).

Pessimism

Pessimism can be considered one of the more important symptoms of depression. A negative view of the future is part of Beck's (1967) cognitive triad, which predisposes the patient to depression.

Pessimism is also important because it is the psychological variable most frequently associated with suicide (Beck, 1967; Leonard, 1974). A theoretical analysis of the role of pessimism in depression from a psychoanalytic viewpoint is presented by Jacobson (1972, p. 121). She sees it as a denial of "pleasurable reality", with the purpose of avoiding anxiety and pain.

Social Introversion

Social introversion was included as a trait which measures a predisposition to socially withdraw. Social withdrawal during depression is a commonly noted clinical symptom (Beck, 1972). Social introversion was identified as relevant to depression in early factor analytic studies of introversion-extroversion by Guilford and Guilford (1939). Furthermore, Lewinsohn (1972) theorizes that inadequate social skills are the most important antecedents of depression, in that they result in a low rate of positive reinforcement.

Irritability

Finally, irritability was included as a symptom, despite the fact that less than half of the 15 instruments in Table 1 assess any aspect of hostility, much less irritability. This lack of attention to the symptom of irritability is surprising, due to its

theoretical and practical relevance. Theoretically, psychoanalytic theorists have commonly viewed depression as the result of hostility turned against the self (Fenichel, 1945; Freud, 1917), although more recent theorists have challenged the importance of this explanation (Bibring, 1953; Cohen et al., 1954). A number of researchers have found subgroups of depressives with irritability as a key symptom (Overall, Hollister, Johnson, & Pennington, 1966; Paykel, 1971), and irritability is associated with reactive, but not endogenous depression (Rosenthal & Gudeman, 1967). Moreover, irritability is the only symptom common to both mania and depression (Plutchnik, Platman, Tilles, & Fieve, 1970).

In conclusion, the rationale has been presented for including in the MDI the following symptoms: low self-esteem, fatigue, sad mood, guilt, learned helplessness, instrumental helplessness, cognitive difficulties, pessimism, social introversion, and irritability. Research, theory, and precedent have been called upon to justify the choice of these particular symptoms. Nonetheless, this choice was rational rather than empirical, and the question of their validity is one that will require years of thorough empirical evaluation. Consequently, the MDI is presented only as a research instrument, and caution should restrain interested investigators

from basing decisions of importance on the MDI until it has demonstrated its usefulness. In addition, it should be stressed that while all of the symptoms were included because they were considered central to the concept of depression, there was no intent to claim that they were exclusively categorized under depression. On the contrary, many of the symptoms are frequently encountered in a variety of syndromes outside of depression. It is only the combination of these symptoms, which perhaps in various patterns, might adequately describe the depressions.

CHAPTER III

METHOD

A sequential strategy of test construction similar to the one advocated by Jackson (1970) was employed in the development of the MDI. Four major steps were employed. First, a pool of substantively defined items was developed. The second step involved an initial evaluation of the items for ambiguity and content saturation. Next, a complicated sequential item analysis selected the best items remaining in the item pool. The final step was the crossvalidation, at which time the normative data were collected, and reliability and validity were assessed.

Development of a Substantively Defined Item Pool

An item pool of 961 items was generated, each of which was designed to measure one of the ten symptoms proposed for the MDI. A number of considerations were involved in this first step. First, the subscales had to be given preliminary definitions. The second consideration was the avoidance of response sets. Finally, a number of specific criteria were also considered.

Preliminary definitions were written in the form of descriptive character sketches. These character sketches were made as specific as possible, and included not only descriptions of the symptom as it was expressed, but whenever possible the description also indicated how the symptom category was different from other conceptually similar symptoms. These descriptive definitions were merely preliminary definitions, since it was expected that the symptom definitions would be revised as the construction process provided additional clarification of the constructs. The format of character sketches was useful in the second step in which the items were initially evaluated.

The second consideration in development of the item pool was the avoidance of response bias. To avoid problems arising from acquiescent response styles (Jackson & Messick, 1965), approximately half the items were written to be scored in the positive direction, and the other half were designed for scoring negatively. Extreme levels of social desirability response (Crowne & Marlowe, 1964; Edwards, 1966) were avoided to the extent that this is possible in item construction. Furthermore, to avoid the bias of a single writer, items were generated by two writers, one a male graduate student, and the other a female family physician.

A number of other considerations were also heeded. In the first place, items were designed to specifically measure relatively stable characteristics of the symptom (trait rather than state). Secondly, an effort was made to avoid items likely to be pertinent to unique populations, such as references to college activities. A third consideration was to keep the items as brief and concise as possible, and phrased in simple, easily understood language. Finally, a special effort was made to write items that would be less offensive to a normal population than the inventories designed for clinical use.

Initial Evaluation of the Item Pool

The second step in the construction of the MDI was the initial evaluation of the original item pool, after which 362 items were retained. This "rough cut" stage of item selection was concerned with three evaluative criteria: ambiguity, content saturation, and repetitiveness.

In order to get a crude estimate of the ambiguity of the items, 20 undergraduate students were asked to rate all of the items in the item pool along a five-point Likert-type scale, anchored on the left with "very unclear and ambiguous", and on the right with "very clear and easily understood". A rating for ambiguity was computed for

each item by summing across all 20 subjects. Within each symptom category, items were then rank ordered for relative ambiguity.

In order to roughly evaluate the content saturation of the items, 18 more undergraduate students were asked to rate the entire item pool on the degree to which the items measured the intended construct. Subjects read the preliminary definition (character description) for each symptom, and then rated the items on a five-point Likert scale, anchored on the left by "not at all similar to the character", and on the right by "very much like the character". A rating for content saturation was obtained by summing ratings across subjects. Within each symptom category items were rank ordered for content saturation.

The "rough cut" elimination of the poorest items took into consideration the rank orders for ambiguity and content saturation, and also any items that appeared to be overly repetitive. The rank orders for both content saturation and ambiguity were summed for each symptom category, and the items with the poorest summed rank were eliminated until 362 items remained in the item pool. The only exception to this procedure was that some items that were deemed overly repetitive were also eliminated, and the item with the higher rank was retained.

Sequential Item Analysis

At this stage, the remaining items were administered to 200 undergraduate students (86 males and 114 females). In addition to the 362 items for the MDI, students were administered the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964). Other tests were also included at the end to provide data for another project. These filler tasks also served the purpose of reducing the disruptive influence of students leaving who finished early.

A sequential item analysis then successively eliminated items in the following steps. First, 13 items that were endorsed by less than 5% of the students were excluded. In the next step, item-total correlations were computed for each item with the total scale with the item removed; also correlations were computed with the other nine symptom subscales, as well as the social desirability scale. Items were eliminated at this stage if they did not have an item-total correlation of at least .30, or if their item-total correlation did not adequately exceed correlations with the other nine scales and the social desirability scale.

Jackson's (1970) Differential Reliability Index (DRI) was then computed for the remaining items. This index indicates how

much of the variation for each item is due to content saturation with social desirability removed. Remaining items were arranged in descending order according to their DRI's. Selection of the items for the research form of the MDI consisted primarily of choosing the remaining items with largest DRI's for each subscale. However, the final selection also involved a rational process involving the following considerations: First, the MDI research form was to be as short as possible without sacrificing reliability. Secondly, an attempt was made to balance the true and false keyed items for the full scale, and as much as was feasible within the subscales. The third consideration was that a wide range of item endorsement proportions should be included. Furthermore, item content was selected to be sufficiently diverse so that repetitively similar items were occasionally excluded. Appendix A includes all items that were eliminated at the various stages.

Determination of Initial Reliability and Validity

Responses from the 200 students on the 118 items of the research form of the MDI were analyzed for internal consistency reliability of subscales and total score by the use of the Kuder-Richardson formula 20 (Kuder & Richardson, 1937). Item-total

correlations were also computed for each item with each subscale total (with the item removed). Results are reported in Chapter IV, but items demonstrated sufficient reliability and validity to warrant crossvalidation of the scale, to determine the extent to which results capitalized on chance errors within the original sample.

Crossvalidation

The 118 item research form of the MDI was given to 263 students (101 males and 162 females) attending Loyola University over summer and fall semesters of one year. In addition, 200 of the students were given the DACL and the Beck (1967) Depression Inventory, to assess the concurrent validity of the full scale MDI with already established instruments. The Kuder-Richardson formula 20 was used to again compute internal consistency reliabilities for the subscales and total score of the MDI. Item correlations with the subscale (with the item removed) were again computed for all items. In addition, to examine the meaningfulness of a total score, correlations were computed between subscale totals and the total MDI score (with the subscale removed). Results will be presented in Chapter IV.

Test-Retest Reliability

Reliability across a time interval of three weeks was

assessed for subscales and total score of the MDI with 107 students (44 males and 63 females) taking the test at the two intervals. Results are included in Chapter IV.

Content Validity

Initial content validity of the subscales was measured by having students role play the various symptoms. Character sketches were constructed which described the symptoms in terms of a character, listing relevant attributes and demarcating attributes of other symptoms that were irrelevant. Character sketches are listed in Appendix B. Students first took the MDI under the standard instructions, and then, after reading the character sketches, role played the symptom while taking the inventory a second time. Means for the role played symptoms were compared with means for the symptoms attained during the standard administration. Fourteen subjects each role played Fatigue, Instrumental Helplessness, Low Self-Esteem, Social Introversion, Irritability, and Cognitive Difficulty. Twelve subjects each role played Learned Helplessness, Pessimism, Sad Mood, and Guilt. A total of 142 students consequently participated in this phase.

CHAPTER IV

RESULTS

The research form of the Multiscore Depression Inventory in its standardized form, along with response keying is included as Appendix C. After sequential item selection, nine scales were constructed with twelve items each, while in the Guilt subscale only ten items remained. For the full scale MDI, 65 items are keyed so that a positive response indicates depression, while 53 items are keyed negatively. Thus 55% of the items are positively keyed, while 45% are negatively keyed.

For the individual subscales the balance of response keying varies considerably. The Fatigue scale for example, is evenly balanced, with six items positively keyed, and six keyed negatively. Fully six of the ten scales are balanced to the extent that neither positive nor negative keying exceeds two-thirds of the responses. Learned Helplessness has only one true keyed response, and 11 false. Guilt has two answers keyed negatively and eight positively. Irritability is keyed so that two responses are scored negatively and ten positively. Similarly, Instrumental Helplessness has three

responses keyed negatively, in contrast with nine responses positively keyed.

Internal Consistency and Test-Retest Reliability

Homogeneity of item content (internal consistency) was measured twice in the present study. Table 2 (p. 48) lists Kuder-Richardson formula 20 reliability coefficients for both the original and the crossvalidation samples. In the original sample, subscale reliabilities ranged from r =.79 for the short ten item Guilt scale, to r =.91 for the Fatigue subscale, while most subscales had reliabilities in the mid .80's. For full scale reliability, r =.96. For the crossvalidation sample, the average subscale reliability dropped from r =.85 to r =.82, while the full scale reliability remained r =.96.

Test-retest reliability over a three week interval was computed for the full scale MDI (r =.82), and for the subscales: Sad Mood (r =.70); Fatigue (r =.81); Learned Helplessness (r =.68); Social Introversion (r =.86); Irritability (r =.72); Instrumental Helplessness (r =.38); Pessimism (r =.77); Low Self-Esteem (r =.76); Cognitive Difficulty (r =.82); and Guilt (r =.78). All correlations were based on an n = 107.

Table 2

Internal Consistency Reliabilities For Original and Crossvalidated Samples on Total and Subscale Scores of the MDI

Scale	Sample	
	Original (n = 200)	Crossvalidated (n = 263)
Sad Mood	.87	.86
Fatigue	.91	.91
Learned Helplessness	.83	.71
Social Introversion	.86	.84
Irritability	.84	.85
Instrumental Helplessness	.85	.87
Pessimism	.84	.85
Low Self-Esteem	.86	.82
Cognitive Difficulty	.82	.82
Guilt	.79	.78
Full Scale MDI	.96	.96

Note. All subscales have 12 items except Guilt which has ten.

Item-Total Correlations

Item-total correlations were computed between each item and the scale total, for both the original sample (n = 200), and the crossvalidation sample (n = 263). For the original sample, all item-total correlations were significant at a high level ($p < .001$).[1] For the original sample, item-total correlations ranged from r =.58 to r =.70 on the Fatigue subscale, with the average r =.65. Item-total correlations for Learned Helplessness ranged from r =.36 to r =.56, with the average r =.48. For Pessimism, the item-total correlations ranged from r =.37 to r =.58, with correlations averaging r =.49. The original sample Sad Mood scale demonstrated item-total correlations ranging from r =.44 to r =.61, with average item-total r =.55. For Guilt, the item-total correlations ranged from r =.32 to r =.63, while for this scale the average r =.46. The scale measuring Low Self-Esteem contained item-total correlations ranging from r =.45 to r =.64, with an average r =.53. The Social

[1]In this discussion, all item-total correlations were corrected by removing the item from the total score.

Introversion scale evidenced item-total correlations with a range from r =.44 to r =.68. The mean correlation for this scale was r =.54. Item-total correlations for the Irritability scale ranged from r =.34 to r =.65, with an average r =.52. Instrumental Helplessness produced item-total correlations that ranged from r =.42 to r =.64, with an average correlation of r =.52. For the remaining subscale of the original sample, Cognitive Difficulty, item-total correlations ranged from r =.39 to r =.56, with an average item-total correlation of r =.48.

For the crossvalidation sample, all the subscales contained corrected item-total correlations that were significant (all p<.001). In the Fatigue subscale, the lowest r =.47, and the highest item-total correlation was r =.78. The mean correlation for the Fatigue scale was r =.64. For Learned Helplessness, item-total correlations ranged from r =.26 to r =.44, with a mean r =.35. Pessimism evidenced item-total correlations ranging from r =.39 to r =.63. The mean item-total correlation for the scale was r =.52. Item-total correlations for the Sad Mood scale ranged from r =.44 to r =.73. The average item-total correlation for the scale was r =.54. For the short Guilt subscale the range of item-total correlations was from r =.22 to r =.62, with an average correlation of r =.45.

The Low Self-Esteem scale items demonstrated item-total correlations ranging from r =.38 to r =.63. The mean correlation for items in the Low Self-Esteem scale was r =.49. Item-total correlations for Social Introversion ranged from r =.34 to r =.56. The mean item-total correlation was r =.50. Irritability item-total correlations ranged from r =.36 to r =.71, with an average item-total correlation of r =.54. The range of item-total correlations for Instrumental Helplessness was from r =.43 to r =.67. The mean item-total correlation for this scale was r =.57. Finally, the item-total correlations for the Cognitive Difficulty scale ranged from r =.43 to r =.67, and the average was r =.57.

In addition, item-total correlations in the crossvalidation sample were computed between all 118 items and the total MDI score, again corrected by removing the item from the total score. All items correlated positively with the MDI, ranging from r =.10 (p <.06) for an item in the Irritability scale, to r =.63 (p <.001) for an item in the Sad Mood scale. The average corrected item-total correlation was r =.40 (p <.001).

Scale Intercorrelations

For the crossvalidation sample, correlations between all the scales were computed, and are illustrated in Table 3 (p. 52). In

Table 3

Intercorrelations of Subscales of the MDI and Subscale-Full Scale Corrected[a] Correlations

	Sad Mood	Fatigue	Learned Helplessness	Social Introversion	Irritability	Instrumental Helplessness	Pessimism	Low Self-Esteem	Cognitive Difficulty	Guilt
Sad Mood										
Fatigue	.65									
Learned Helplessness	.67	.54								
Social Introversion	.47	.39	.42							
Irritability	.28	.11	.15	.16						
Instrumental Helplessness	.55	.37	.44	.42	.34					
Pessimism	.66	.43	.60	.34	.27	.55				
Low Self-Esteem	.63	.47	.59	.46	.14	.60	.62			
Cognitive Difficulty	.32	.37	.39	.21	.16	.39	.49	.41		
Guilt	.49	.36	.48	.26	.23	.50	.53	.63	.55	
MDI Full Scale	.77	.58	.69	.49	.28	.66	.72	.73	.51	.64

Note. All correlations are based on a sample n =263.

[a] Correlations with MDI are corrected for each scale by removing the scores from that scale.

addition, correlations were computed between each of the scales and the total MDI score, corrected by removing the score for that scale from the total. These corrected subscale - full scale correlations range from r =.28 for Irritability to r =.77 for the Sad Mood subscale. All scores intercorrelate significantly, ranging from the r =.11 ($p < .05$) between Irritability and Fatigue, to the highest correlation, r =.67 ($p < .001$) between Sad Mood and Learned Helplessness.

Concurrent Validity for the Full Scale MDI

In the crossvalidation sample, 200 students also completed Beck's (1967) Depression Inventory and Lubin's (1967) DACL (Form-A) with trait instructions. Correlations were computed between the full scale MDI and each of these instruments. For the Beck scale the relationship was significant (r =.69, $p < .001$). Similarly, a very high validity coefficient was obtained for the DACL (r =.78, $p < .001$). In this sample, the MDI shared 48% of the variation with the Beck, while the DACL shared 36%. Similarly, the MDI accounted for 60% of the variation in the DACL.

Content Validity for the MDI Subscales

Results of the role playing exploration of the content validity demonstrated significant differences between role playing and standard administration responses for each of the ten subscales in the expected directions. Students role playing Learned Helplessness

scored higher on that scale, $\overline{X}$ = 11.67, than when they took the MDI in the standard format, $\overline{X}$ = 1.17, $\underline{t}(22) = 23.18$, $\underline{p} < .001$. Students role playing Pessimism scored higher on the Pessimism scale, $\overline{X}$ = 11.67, than under standard instructions, $\overline{X}$ = 3.08, $\underline{t}(22) = 7.76$, $\underline{p} < .001$. Students scored higher on the Sad Mood scale, $\overline{X}$ = 10.91, while role playing Sad Mood, than under standard instructions, $\overline{X}$ = 1.50, $\underline{t}(22) = 9.42$, $\underline{p} < .001$. Students scored $\overline{X}$ = 11.14 on the Instrumental Helplessness scale while role playing the character sketch, and scored significantly lower on the scale, $\overline{X}$ = 1.70, when responding normally, $\underline{t}(26) = 11.66$, $\underline{p} < .001$. A mean score of 11.00 was obtained on the Fatigue scale for students role playing Fatigue, and this was significantly greater than their score without role playing, $\overline{X}$ = 2.93, $\underline{t}(26) = 7.14$, $\underline{p} < .001$. For the Guilt scale, subjects who role played Guilt had a $\overline{X}$ = 9.42, which was greater than their score in the standard format, $\overline{X}$ = 2.67, $\underline{t}(22) = 8.25$, $\underline{p} < .001$. Students role playing Cognitive Difficulty scored $\overline{X}$ = 10.29 on that scale, which was greater than their score, $\overline{X}$ = 4.07, under normal conditions, $\underline{t}(26) = 5.76$, $\underline{p} < .001$. For scores on the Irritability scale, students role playing Irritability scored higher, $\overline{X}$ = 11.00, than

under the standard administration, $\bar{X}$ = 4.21, $t(26)$ = 5.31, $p < .001$. The mean score on the Low Self-Esteem scale was higher, $\bar{X}$ = 11.21, for students role playing the Low Self-Esteem character sketch, than for students under normal conditions, $\bar{X}$ = 1.21, $t(26)$ = 15.62, $p < .001$. Finally, students who role played Social Introversion scored higher on that scale while role playing, $\bar{X}$ = 12.00, than while taking the standard version, $\bar{X}$ = 3.00, $t(26)$ = 8.03, $p < .001$.

Normative Data

Because the data from the crossvalidation sample were based on a sufficiently large sample, data for males and females are included in Table 4 (p. 56) in order to provide initial normative data. A comparison of male and female scores on the full scale and subscales reveals that all the differences are non-significant, with the exception of the scale measuring Cognitive Difficulty, in which females endorsed significantly more items, $\bar{X}$ = 4.91, than did the males, $\bar{X}$ = 3.88, $t(261)$ = 2.48, $p < .05$. However, this difference, while statistically significant, accounts for a very small portion of the variance, $\omega^2 = .02$. Consequently, it would appear appropriate to pool the data. A pooled sample of males and females is presented in Table 5 (p. 57), based on this sample of 263.

Table 4

Normative Data for Male and Female College Students on the MDI and MDI Subscales

	Sample			
	Males (n = 101)		Females (n = 162)	
Scale	Mean	SD	Mean	SD
Learned Helplessness	2.30	2.24	2.51	2.28
Pessimism	3.02	2.90	3.57	3.38
Guilt	3.39	2.51	3.47	2.79
Fatigue	2.87	3.51	3.57	3.86
Low Self-Esteem	1.79	2.32	2.21	2.75
Social Introversion	3.53	3.48	3.12	2.92
Cognitive Difficulty	3.88	3.16	4.91	3.33
Irritability	2.90	2.86	2.90	3.26
Instrumental Helplessness	1.85	2.64	1.91	2.68
Sad Mood	2.27	2.70	2.57	3.07
Full Scale MDI	27.95	18.69	30.75	21.43

Note. Range of possible scores is 0-12 on all subscales except Guilt, where the possible range is 0-10. Possible range on Full Scale MDI is 0-118

Table 5

Normative Data on a Pooled Sample of Male and Female College Students[a] on the MDI

Scale	Mean	SD	Standard Error	Range [b]
Learned Helplessness	2.43	2.27	.14	0-12
Pessimism	3.36	3.20	.20	0-12
Guilt	3.44	2.68	.17	0-10
Fatigue	3.30	3.74	.23	0-12
Low Self-Esteem	2.05	2.59	.16	0-12
Social Introversion	3.27	3.15	.19	0-12
Cognitive Difficulty	4.51	3.30	.20	0-12
Irritability	2.90	3.11	.19	0-12
Instrumental Helplessness	1.89	2.56	.16	0-12
Sad Mood	2.46	2.93	.18	0-12
Full Scale MDI	29.67	20.43	1.26	0-101

[a]Total number of students is 263 (101 males and 162 females).

[b]Range of possible scores is 0-12 on all subscales except Guilt, in which the possible range is 0-10. The possible range on the full scale MDI is 0-118.

CHAPTER V

DISCUSSION AND IMPLICATIONS

For the initial construction and evaluation of a new inventory of depression, the present study shows some promising beginnings. In this chapter, the results will be evaluated for each step, and at the end of the chapter there will be a discussion of the implications of the present study.

Evaluation of Results

Scale Construction

The construction of the scale made use of the advantages of both the rational and empirical approaches to test construction, relying heavily on Jackson's (1970) sequential item selection strategy. By beginning with a thorough review of the literature, item generation did not take place in a theoretical vacuum. A large pool of items permitted the construction of a scale which has many psychometric advantages.

Use of the Differential Reliability Index (Jackson, 1970) permitted a modest reduction in variation shared with social desirability. While some of this shared variation may be theo-

retically relevant to depression, nonetheless a reduction was desirable. While such reduction was a consideration in item construction, it awaits evaluation in future studies.

Another advantage of the item selection strategy employed was the inclusion of convergent and discriminant validity in the selection of items. Extremely fine discriminations were required, since many of the concepts were "unchartered territory", both theoretically and experimentally. The requirement that items correlate more highly with their own scales than with conceptually very similar scales insured a good start at validation of the constructs, even in the item construction phase.

Two unfortunate side effects of the strategy, however, did result. First, nearly half of the subscales were imbalanced for positive and negative keying, as items were eliminated differentially. While this may make these particular scales more susceptible to the influence of acquiescent response bias, nonetheless the process was at times enlightening. For example, in the items for the Learned Helplessness scale, nearly all the positively keyed items initially correlated more highly with Pessimism. While this drastic reduction in positively keyed items was a drawback with regards to acquiescence bias, it nonetheless pointed to

an interesting relationship between Learned Helplessness and Pessimism. For instance, a True response to the item "Life seems out of my control" correlated more highly with Pessimism than with Learned Helplessness. While this is not the place to speculate on the relationship between Pessimism and admitting to Helplessness, it certainly suggests that the two concepts need further clarification. For example, there may be a causal relationship between Learned Helplessness and Pessimism.

The other unfortunate result of the stringent item selection criteria was the necessity of limiting the Guilt scale to ten items. To some extent, this may have been the result of poorly written items, but it is interesting to note that Buss and Durkee (1957) also had considerable trouble generating adequate items for a guilt scale on their Hostility Inventory, even with a second attempt at item generation. Nonetheless, the shorter Guilt scale, besides having lower reliability, adds to the difficulty in assessing the feasibility of computing a full scale score, because subscales would not contribute equally to a full scale score.

Reliability

Internal consistency reliabilities can hardly be interpreted as anything but excellent. The full scale MDI reliability is as high as most ability tests, and was stable on crossvalidation. The MDI initially appears, on the whole, to have excellent internal consistency. In general, the correlations for the subscales were similarly remarkable, both for their strength, and stability on crossvalidation. Most of the subscales had reliabilities more comparable to longer ability tests than 12 item measures of personal constructs. In addition, internal consistency reliabilities remained the same or improved for half the scales on crossvalidation, and the average decrease in reliability was only from $\underline{r}$ =.85 to $\underline{r}$ =.83. The two scales with reliabilities in the .70's, Guilt and Learned Helplessness, should of course be interpreted with more caution, although they are still high enough to be useful for most research purposes. The Guilt scale, with internal consistency reliability approaching the .80's, is two items shorter than the other scales. If the Spearman-Brown Formula were used to assess the likely reliability of a similarly constructed Guilt scale, equal in length to the other scales, the reliability would increase from $\underline{r}$ =.78 to $\underline{r}$ =.81. The Learned

Helplessness scale, however, seems to have a much lower reliability than it appeared to have during the initial item selection phase. While it is likely that the initial reliability estimate was spuriously high, due to capitalization on chance errors within the particular sample, especially since the initial item pool was large, nonetheless it is possible that the crossvalidated correlation is spuriously low due to sample specific characteristics. Internal consistency reliability for this scale might be better evaluated if it were computed on still another sample. Nevertheless, from the lowest to the highest reliabilities, internal consistency for the subscales appears initially to be more than adequate to warrant continued use of the MDI in its research form.

One possible problem should be noted with regard to the high reliabilities. While on the one hand they indicate a high degree of homogeneity, on the other hand validity may be attenuated by the constricted range of content in each subscale. The more alike the items are, the less likely they are to have adequately sampled the domain of items appropriate for the constructs. Since that domain, at least in personality tests, can never be

catalogued, the practical implication is that a highly homogeneous scale may have the ultimate effect of narrowing a construct, at least as it is conceptualized by the scale. Whether that sharpening of the construct leads to a more valid or less valid measure depends on the "goodness of fit" between the theorists' conceptualization and the newly specified construct. In a sense then, the problem raised by a scale that is perhaps too homogeneous is one of construct validity, and in the case of the MDI scale, the necessity for considerable clarification of the constructs still remains for future research.

Test-retest reliability appears in general to be moderate for the full scale, and most of the subscales. This indicates that, in general, the MDI and its subscales measure adequately trait rather than state concepts, at least in the sense that the measures have some stability over a three week interval. The fact that the reliabilities are less than perfect might well reflect that the constructs are not, by nature, perfectly stable, and one would expect some changes in, for example, Sad Mood to occur over a three week interval, and that these changes might be different among different individuals. To the extent that

this is true, the coefficients may actually underestimate the reliability of the test, due to real changes over time. The two helplessness subscales, however, are more suspect. While Learned Helplessness approaches reliabilities in the .70's, some caution is necessary if one is to interpret this scale from a trait perspective. If, however, the crossvalidated internal consistency reliability is a relatively accurate estimate, then there is not a wide discrepancy between stability across time and across items, and the low coefficient may well be attributed primarily to heterogeneity of items, rather than to an unstable scale. No similar claim can be made for Instrumental Helplessness however, which appears to have poor consistency over time. One can only conclude that Instrumental Helplessness, as operationalized in the MDI, is predominantly a state measure.

A perplexing, and yet interesting, problem is posed by the instability of the Instrumental Helplessness scale. Why should Instrumental Helplessness fare so poorly while the other scales obtained adequate test-retest reliability? Comparison of the wording of the items does not indicate any apparent difference in style - Instrumental Helplessness contains the same style of

"trait" wording that characterizes the other subscales. Apparently then, either the concept of Instrumental Helplessness as a trait was inadequately clarified by the author, or alternatively it was inappropriate to conceptualize Instrumental Helplessness from a trait perspective. Retrospectively, it is apparent that some of the concepts included under the construct of Instrumental Helplessness might be, by nature, transitory, regardless of how carefully the items are constructed. For example, the feeling of being neglected or misunderstood may be mediated more by reactions to transient interpersonal difficulties, than by a consistent personality organization which seeks to elicit helping behaviours from others. Alternatively, it is possible that the low test-retest reliability is a sample or population specific phenomenon, and that persons with a more trait orientation to instrumentally helpless behaviour are less often found in colleges, and more often found in the clinics.

Validity of Items: Item-Total Correlations

The fact that for all the subscales, all the items correlated significantly with the corrected total scale score for both initial and crossvalidation samples speaks well for the validity of the items. To the extent that the total score is an accurate

measure of the construct, then these item-total correlations serve as a test of convergent validity. In addition, during the item selection process, evidence of discriminant validity was required against all the other subscales. The fact that corrected item-total correlations held up well on crossvalidation is evidence that the validity was not due primarily to spurious capitalization on chance errors. Admittedly, some of the coefficients did decrease on crossvalidation, but all of them remained significant, and for many items increases were noted in item-total correlations upon crossvalidation.

Scale Intercorrelations and Subtest-Total Correlation

In its research form, the appropriate method of conputing an MDI full scale score is a matter that remains to be resolved. Should subscale scores be transformed to standard scores and then added? Can a full scale score be legitimately computed by simply adding all 118 items?

The problem of a full scale score is a theoretical, as well as a statistical one. Is it theoretically meaningful to give equal weight to Fatigue and to Cognitive Difficulty when assessing severity of depression? If not, a system of weights may have to be developed for each subscale. An assumption that is required, if

scales are to be added together, is that the scales all share some underlying variation that represents a general factor of depression. While Kendell (1976) suggests that there is basically a single dimension in depression, he acknowledges the lack of agreement in the literature on this controversy. Nonetheless, almost all the depression inventories surveyed in Chapter II compute a total score by adding items that probably do not always covary within individuals. This appeal to precedent is not meant to ignore the tenuous theoretical assumptions behind computation of total scores, and the author acknowledges that the appropriate method of combining scores derived from several symptoms awaits further investigation. Until an optimal approach to weighting of subscale scores is developed, the precedent of a simple summed score should not be discarded, particularly if evidence can be found to support the validity of such an approach.

Part of the results of the present thesis provide initial evidence that lends support to such an approach. If subscales are going to be added together, one should require that the subscales all intercorrelate significantly. This requirement is adequately met with the intercorrelations of subscales noted in the present study, with the possible exception of the Irritability

subscale, which has much lower correlations with the other scales. It is interesting to note that in Table 1 (p. 28), Irritability was the symptom least common to the inventories surveyed, and it may be the least valid of the subscales to include in a total score.

Further support of the validity of a total score obtains from the subscale correlations with the corrected total scale score (Table 3, p. 52). Again, Irritability, while significant, fares the most poorly, with a subscale-full scale corrected $\underline{r}$ =.28. In contrast, the other correlations are quite adequate.

Finally, a crucial test of the feasibility of computing a full-scale score is the utility of such a score. Initial evidence that the MDI full scale score has concurrent validity is demonstrated by the correlations obtained among the MDI, the BDI, and the DACL. The fact that the MDI correlates quite highly with two established measures of depression is suggestive that the MDI full scale score measures much the same thing as other depression measures. Results indicating that the MDI accounts for more of the variation in each of the instruments than they share with each other is evidence that it is a conceptually relevant measure. If anything, the problem might be that it correlates too highly, par-

ticularly with the DACL, which would indicate that it was redundant. This, however, cannot be considered a serious criticism if the subscale scores prove to be a useful feature of the instrument. Nonetheless, the usefulness of a full scale score, as well as the subscale scores, cannot be demonstrated without considerably more evidence of validity, particularly predictive and construct validity.

Content Validity of the Subscales

Aside from the item-total correlations, the only evidence for subscale validity discussed to this point has been appeals to the item selection process, which includes face validity and convergent and discriminant validity requirements. Other evidence from the role playing procedure supports the content validity of the subscales. The highly significant results demonstrate both that the items were face valid for college students, and that the subscales contain appropriate samples of the content domain. Whether or not they were effectively representative samples of the content domain can never be determined, since these domains are not amenable to complete specification. Although present evidence is sufficient to warrant their further use as a research tool, further investigation of the validity of the subscales is

certainly in order.

Implications for Future Research

The MDI is a sufficiently reliable and valid instrument to warrant its use as a research instrument, at least with college populations. A program of systematic evaluation and refinement would seem to be the next step, and suggestions for such a program will now be outlined.

Although considerable effort has already been expended on the psychometric evaluation of the MDI with college students, the task is far from complete. First, test-retest reliabilities should be assessed for different time intervals, to effectively evaluate the temporal stability of the scores. Another pressing need is concurrent validation of the subscales with tests measuring similar constructs. Furthermore, the dimensions of the MDI should be explored, either through cluster analytic or factor analytic techniques. If the latter is employed, oblique rotation would probably be indicated, since the factors are theoretically assumed to covary. While factor analytic or cluster analytic techniques are important methods of investigating construct validity, equally important in this regard is the generation of hypotheses which are logically derived from the constructs, and empirically testable.

Finally, criterion validity with college students should be assessed in a manner that goes beyond correlations with existing measures. Appropriate criteria might be peer ratings, structured interviews rated by clinicians, or a contrasted groups approach.

If the MDI can be shown to be psychometrically sound for a population of college students, it might then be usefully employed as an assessment device at universities, in counselling centers and similar settings. Since the MDI was constructed for this population, it is more likely to be less offensive, and more face valid, than measures developed on clinical populations. In addition, the high yield of information provided by quantified scales should prove useful to the counsellor. One essential prerequisite to a cautious clinical use of the MDI would be the collection of an adequate normative sample. Local norms may be the most useful, and their development is particularly necessary until such time as adequate sampling can generate normative data with wider applicability.

Since the MDI, unlike most depression inventories currently in use, was generated on a relatively normal population, it may prove to be particularly useful in settings which require the assessment of depressive symptoms in relatively undisturbed popu-

lations. Family practice clinics, industry, nursing homes, and the military, are but a few examples of settings which may eventually find the MDI a particularly relevant tool. Certainly, any application to other populations should not be made without collection of appropriate norms, and investigation of psychometric adequacy for the new populations.

While the MDI would logically seem to be more appropriate for normal populations, its applicability to clinical settings is an empirical question that warrants investigation. Again, gathering of appropriate normative data and psychometric evaluation are both in order. Modifications may be necessary, particularly since the items may not adequately represent the severe pathology associated with psychotic depressions.

A brief note of caution here is in order, regarding the appropriateness of profile analysis. Attempts to compare the standardized scale scores must be accompanied with appropriate caution, and should take into account both the reliabilities and standard errors of measurement of the subscales.

In conclusion, in its research form the MDI appears to be psychometrically adequate for college populations, although further investigation would be useful. While it is promising as a

research tool, considerable refinement and investigation will be necessary before it can be legitimately used as a clinical aid. While the MDI may be particularly relevant to other normal settings beyond the university, its applicability to clinical populations deserves investigation. While the initial results are generally positive, whether or not the MDI will be a useful contribution is a pragmatic question that will only be answered by rigorous empirical evaluation.

SUMMARY

A total of 645 undergraduate students participated in various stages of construction and initial evaluation of a new inventory of depression. Following a review of the literature, ten symptoms were selected as the most important symptoms based on a variety of criteria. These ten selected symptoms and moods included: Low Self-Esteem, Irritability, Pessimism, Fatigue, Instrumental Helplessness, Cognitive Difficulty, Sad Mood, Social Introversion, Guilt, and Learned Helplessness. Working operational definitions were given to each of the ten symptoms, and an initial item pool of 961 items was constructed, in a true/false format, with approximately equal numbers of true and false keyed items for each scale.

Reduction of the scale from 961 items to its research form of 118 items followed a sequential item selection strategy similar to that suggested by Jackson (1970). First, a "rough cut" of items was accomplished by having 20 students rate the item pool for ambiguity, while another group of 20 undergraduate students

rated the items for content saturation. Ambiguity, content saturation, and repetitiveness were then considered in reducing the item pool to 362 items.

Next, a large sample of students took the 362 item version of the MDI, along with a measure of social desirability. Items were then eliminated which were too infrequent, or did not correlate well with the scale for which they were designed. All items which correlated higher with other scales than with their intended scale were also eliminated. Final item selection then took into account homogeneity, the item endorsement proportion, avoidance of acquiescent response sets, and redundancy.

The result was a 118 item research form of a questionnaire labelled the Multiscore Depression Inventory. Initial internal consistency reliabilities were excellent, and ranged from $\underline{r}$ =.79 to $\underline{r}$ =.91 for the subscales, and indicated impressive homogeneity for the full scale, with an $\underline{r}$ =.96. Upon crossvalidation very little attenuation of these reliabilities was noted. Test-retest reliability was moderately good over a three week interval, with the exception of the Instrumental Helplessness scale, which was only moderately stable over that period. Item validity was indicated by significant item-total correlations, subscales demon-

strated content and face validity by sensitivity to a role playing manipulation, while the full scale MDI demonstrated concurrent validity by high correlations with two established measures of depression.

A systematic program for further psychometric evaluation of the MDI is outlined, and extending its use to other populations, both normal and clinical, was suggested, provided such progress proceeded cautiously. It was stressed that in its present form the MDI appears potentially useful as a research tool, but evidence is inadequate at this point to justify its use as a clinical tool.

REFERENCES

Abramowitz, S.I. Locus of control and self-reported depression among college students. Psychological Reports, 1969, 25, 149-150.

Abramson, L., Seligman, M.E.P., & Teasdale, J. Learned helplessness in humans: critique and reformulation. Journal of Abnormal Psychology, 1978, 87 (1), 49-74.

Adler, K. Depression in the light of individual psychology. Journal of Individual Psychology, 1961, 17, 56-76.

Asberg, M., Kraigh-Sorenson, P., Mindham, R.H.S., & Tuck, J.R. International reliability and communicability of a rating scale for depression. Psychological Medicine, 1973, 3, 458-465.

Beck, A.T. Depression: clinical, experimental, and theoretical aspects. New York: Hoeber, 1967.

Beck, A.T. Depression: causes and treatment. Philadelphia: University of Pennsylvania Press, 1970.

Beck, A.T., & Beck, R.W. Screening depressed patients in Family Practice. A rapid technique. Postgraduate Medicine, 1972, 52, 81-85.

Beck, A.T., & Beamsderfer, A. Assessment of depression: the depression inventory. Modern Problems of Pharmacopsychiatry, 1974, 7, 151-169.

Beck, A.T., Rial, Y.W., & Rickels, K. Short form of the depression inventory: crossvalidation. Psychological Reports, 1974, 34, 1184-1186.

Beck, A.T., Ward, C.H., Mendelson, M., Mock, J., & Erbaugh, J. An inventory for measuring depression. Archives of General Psychiatry, 1961, 4, 561-571.

Becker, J., & Nichols, C.H. Communality of manic-depressive and "mild" cyclothymic characteristics. Journal of Abnormal and Social Psychology, 1964, 19, 531-538.

Bibring, E. The mechanism of depression. In P. Greenacre (Ed.) Affective disorders. New York: International Universities Press, 1953.

Bonime, W. The psychodynamics of neurotic depression. In S. Arieti (Ed.) American handbook of psychiatry: vol.3. New York: Basic Books, 1966.

Buss, A.H., & Durkee, A. An inventory for assessing different kinds of hostility. Journal of Consulting Psychology, 1957, 21 (4), 343-349.

Cantor, A. The efficacy of a short form of the MMPI to evaluate depression and morale loss. Journal of Consulting Psychology, 1960, 24, 14.

Carrol, B.J., Fielding, J.M., & Blashki, T.G. Depression rating scales: a critical review. Archives of General Psychiatry, 1973, 28 (3), 361-366.

Chant, S.N.F., & Myers, C.R. An approach to the measurement of mental health. American Journal of Orthopsychiatry, 1936, 6, 134-140.

Chedoff, P. The core problem in depression: interpersonal aspects. Science and Psychoanalysis, 1970, 17, 56-61.

Cohen, B.D., & Rau, J.H. Nonverbal technique for measuring affect using facial expression photographs as stimuli. Journal of Consulting and Clinical Psychology, 1972, 38, 449-451.

Cohen, M.B., Baker, G., Cohen, R.A., Fromm-Reichmann, F., & Weigert, E.B. An intensive study of 12 cases of manic-depressive psychosis. Psychiatry, 1954, 17, 103-137.

Comrey, A.L. A factor analysis of items on the MMPI depression scale. Educational and Psychological Measurement, 1957, 17, 578-585.

Coopersmith, S. The antecedents of self-esteem. San Francisco: Freeman, 1967.

Costello, C.G., Belton, G.P., Abra, J.C., & Dunn, B.E. The amnesic and therapeutic effects of bilateral and unilateral ECT. British Journal of Psychiatry, 1970, 116, 69-78.

Costello, C.G., & Comrey, A.L. Scales for measuring depression and anxiety. Journal of Psychology, 1967, 66, 303-313.

Crowne, D.P., & Marlowe, D. A new scale of social desirability, independant of psychopathology. Journal of Consulting Psychology, 1960, 24, 349-354.

Crowne, D.P., & Marlowe, D. The approval motive: studies in evaluative dependence. New York: Wiley, 1964.

Cutler, R.P., & Kurland, H.D. Clinical quantification of depressive reactions. Archives of General Psychiatry, 1961, 5, 280-285.

Dahlstrom, W.G., Welsh, G.S., & Dahlstrom, L.E. An MMPI handbook, vol. 1: clinical interpretation. Minneapolis: University of Minnesota Press, 1972.

Dempsey, P. A unidimensional depression scale for the MMPI. Journal of Consulting Psychology, 1964, 28, 364-370.

Downing, R.D., & Rickels, K. Some properties of the Popoff Index. Clinical Medicine, 1972, 79, 11-18.

Edwards, A.L. A comparison of 57 MMPI scales and 57 experimental scales matched with the MMPI scales in terms of item social desirability scale values and probabilities of endorsement. Educational and Psychological Measurement, 1966, 26, 15-27.

Eyesenck, H.J. The classification of depressive illness. British Journal of Psychiatry, 117, 241-250.

Fenichel, O. The psychoanalytic theory of neurosis. New York: Norton, 1945.

Freud, S. (1917) Mourning and melancholia. In J. Strachey (Ed.) The standard edition, vol. 14. London: Hogarth Press, 1957.

Freud, S. (1921) Group psychology and the analysis of the ego. In J. Strachey (Ed.) The standard edition, vol.19. London: Hogarth Press, 1957.

Friedman, A.S. Minimal effects of severe depression on cognitive functioning. Journal of Abnormal and Social Psychology, 1964, 69, 237-243.

Friedman, C., DeMowbrey, M.S., & Hamilton, V. Imipramine (Tofranil) in depressed states: A controlled trial with in-patients. Journal of Mental Science, 1967, 107, 948-953.

Froese, A., Vasquez, E., Cassem, N.H., & Hackett, T.P. Validation of anxiety, depression, and denial scales in a coronary care unit. Journal of Psychosomatic Research, 1974, 18, 137-141.

Giambra, L. Independant dimensions of depression: a factor analysis of three self-report depression measures. Journal of Clinical Psychology, October, 1977, 33 (4), 929-935.

Gilbert, J., & Gilbert, J.E. Rater reliability of a depressive rating scale. Journal of Psychology, 1968, 68, 173-180.

Grinker, R.R., Miller, J.B., Sabshin, M., Nunn, R., & Nunnally, J.C. The phenomena of depressions. New York: Harper & Row, 1961.

Guilford, J.P., & Guilford, R.B. Personality factors D,R,T, and A. Journal of Abnormal and Social Psychology, 1939, 34, 23-36.

Hackette, E., Gold, R.L., Kline, N.S., & Winick, L. Controlled evaluation of psychotropic drugs in a private psychiatric practice: Doxepin vs. Amitryptyline (Elavil). Psychosomatics, 1967, 8, 162-165.

Hamilton. M. A rating scale for depression. Journal of Neurology, Neurosurgery, and Psychiatry, 1960, 23, 56-62.

Hamilton. M. Development of a rating scale for primary depressive illness. British Journal of Social and Clinical Psychology, 1967, 6, 278-296.

Hamilton, M. Rating scales and depression. In P. Kielholz (Ed.) Depressive illness: Diagnosis, assessment, treatment. Baltimore, Md.: Williams & Wilkins, 1972.

Harrow, M., Colbert, J., Detre, T., & Bakeman, R. Symptomatology and subjective experiences in current depressive states. Archives of General Psychiatry, 1966, 14, 203-213.

Hathaway, S.R., & McKinley, J.C. A multiphasic personality schedule (Minnesota III, The measurement of symptomatic depression). Journal of Psychology, 1942, 14, 73-84.

Herron, E.W., Bernstein, L., & Rosen, H. Psychometric analysis of the multiple affect adjective checklist: MAACL - today. Journal of Clinical Psychology, 1968, 24, 448-450.

Hiroto, D.S. Locus of control and learned helplessness. Journal of Experimental Psychology, 1974, 102, 187-193.

Hunt, S.M.Jr., Singer, K., & Cobb, S. Components of depression. Archives of General Psychiatry, 1967, 16, 441-448.

Hunt, W.A. Psychiatric diagnosis: a historical perspective. In Bellock, A.S., Hersen, M. & Kadzin, A.E. (Eds.) New perspectives in abnormal psychology. New York: Oxford University Press, in press, p. 44-45.

Jackson, D.N. A sequential system for personality scale development. In C. D. Spielberger (Ed.) Current topics in clinical and community psychology, vol. 2. New York: Academic Press, 1970.

Jackson, D.N., & Messick, S. Acquiescence: the non-vanishing variance component. American Psychologist, 1965, 20, 498.

Jacobson, E. On normal and pathological moods. The Psychoanalytic Study of the Child, 1957, 12, 73-114.

Jacobson, E. Contribution to the metapsychology of cyclothymic depression. In P. Greenacre (Ed.) Affective disorders. New York: International University Press, 1953.

Jacobson, E. Depression. New York: International Universities Press, 1971.

Jasper, H.H. The measurement of depression-elation and its relation to a measure of extroversion-introversion. Journal of Abnormal and Social Psychology, 1930, 25, 307-318.

Kendell, R.E. The classification of depressive illnesses. London: Oxford University Press, 1968.

Kendell, R.E. The classification of depressions: A review of the contemporary confusion. British Journal of Psychiatry, 1976, 129, 15-28.

Krug, S.E., & Laughlin, J.E. Handbook for the IPAT depression scale. Champaign, Illinois: Institute for Personality and Ability Testing, 1976.

Krug, S.E., Scheier, I.H., & Cattell, R.B. Handbook for the IPAT anxiety scale. Champaign, Illinois: Institute for Personality and Ability Testing, 1976.

Kuder, G.F., & Richardson, M.W. The theory of estimation of test reliability. Psychometrika, 1937, 2, 151-160.

Laxer, R.M. Self-concept changes of depressive patients in general hospital treatment. Journal of Consulting Psychology, 1964, 28, 214-219.

Lazarus, A.A. Learning theory and the treatment of depression. Behavioural Research and Therapy, 1968, 6, 83-89.

Leckie, E.V., & Withers, R.F.J. A test of liability to depressive illness. British Journal of Medical Psychology, 1967, 40, 273-282.

Lehmann, H.E., Cohn, C.H., & DeVerteuil, R.L. The treatment of depressive conditions with Imipramine (G22355). Canadian Psychiatric Association Journal, 1958, 3, 155-161.

Leonard, C.V. Depression and suicidality. Journal of Consulting and Clinical Psychology, 1974, 42, 98-104.

Levitt, E.E., & Lubin, B. Depression: concepts, controversies, and some new facts. New York: Springer, 1975.

Lewinsohn, P.M. Clinical and theoretical aspects of depression. In H.E. Adams & W.K. Boardman (Eds.) Advances in experimental psychology. New York: Pergamon Press, 1972.

Lorr, M. The depressive syndromes and endogenous versus reactive dichotomy: an integration. Paper delivered at the American Psychological Association Meeting, 1969.

Lubin, B. Depression adjective checklists: manual. San Diego, California: Educational and Industrial Testing Service, 1967.

May, A.E., Urquhart, A., & Tarran, V. Self-evaluation of depression in various diagnostic and therapeutic groups. Archives of General Psychiatry, 1969, 21, 191-194.

Meyer, J.M. Assessment of depression. In P. McReynold's (Ed.) Advances in psychological measurement, vol. 4. San Francisco: Josey Boss, 1977.

McCall, R.J. Face validity of the D scale of the MMPI. Journal of Clinical Psychology, 1958, 14, 77-80.

McNair, D.M. Self-evaluations of antidepressants. Psychopharmacologia, 1974, 37, 281-302.

Mendels, J., Weinstein, N., & Cochrane, C. The relationship between depression and anxiety. Archives of General Psychiatry, 1972, 27, 649-653.

Messick, M. Response style and content measures from personality inventories. Educational and Psychological Measurement, 1960, 22, 41-56.

Miller, W.R., & Seligman, M.E.P. Depression and perceptions of reinforcement. Journal of Abnormal Psychology, 1973, 82, 62-73.

Mould, D.E.D. Differentiation between depression and anxiety: a new scale. Journal of Consulting and Clinical Psychology, 1975, 43 (4), 592.

Nowlis, V. The concept of mood. In S.M. Farber & R.H.L. Wilson (Eds.) Conflict and creativity: part 2. New York: McGraw-Hill, 1963.

O'Connor, J., Stefic, E., & Gresock, C. Some patterns of depression. Journal of Clinical Psychology, 1957, 13, 122-125.

Overall, J.E., Hollister, L.E., Johnson, M., & Pennington, V. Nosology of depression and differential response to drugs. Journal of the American Medical Association, 1966, 195, 945-950.

Overall, J.E., Hollister, L.E., Pakorny, A.D., Casey, J.F., & Katz, G. Drug therapy in depression. Clinical Pharmacology and Therapeutics, 1962, 3, 16-22.

Pankratz, L., Glaudin, V., & Goodmonson, C. Reliability of the multiple affect adjective checklist. Journal of Personality Assessment, 1972, 36, 371-373.

Paykel, E.S. Classification of depressed patients: a cluster analysis derived grouping. British Journal of Psychiatry, 118, 275-288.

Paykel, E.S., Prusoff, B.A., Klerman, G.D., & DiMascio, A. Self-report and clinical interview ratings in depression. Journal of Nervous and Mental Disease, 1973, 156, 166-182.

Pichot, P. Introduction. Modern Problems of Pharmacopsychiatry, 1974, 7, 1-7.

Plutchnik, R., Platman, S.R., Tilles, R., & Fieve, R.R. Construction and evaluation of a test for measuring mania and depression. Journal of Clinical Psychology, 1970, 26, 499-503.

Popoff, L.M. A simple method for diagnosis of depression by the Family Physician. Clinical Medicine, 1969, 76, 24-30.

Rado, S. The problem of melancholia. International Journal of Psychoanalysis,1928, 9, 420-438.

Rickels, K., Jenkins, B.W., Zamostein, B., Raab, E., & Kanther, M. Pharmacotherapy in neurotic depression: differential population responses. Journal of Nervous and Mental Disease, 1968, 145, 475-485.

Rosen, A. Development of MMPI scale based on a reference group of psychiatric patients. Psychological Monographs, 1962, 76, Whole No. 527, 1-25.

Rosenthal, S.H., & Gudeman, J.E. The self-pitying constellation in depression. British Journal of Psychiatry, 1967, 113, 485-489.

Roth, M., Gurney, C., Garside, R.F., & Kerr, T.A. Studies in the classification of affective disorders: the relationship between anxiety states and depressive illness - I. British Journal of Psychiatry, 1972, 121, 147-161.

Rotter, J.B. Generalized expectations for internal versus external control of reinforcement. Psychological Monographs, 1966, 80, Whole No. 609.

Sacco, W.P., & Hokanson, J.E. Expectations of success and anagram performance of depressives in a public and private setting. Journal of Abnormal Psychology, 1978, 87 (1), 122-130.

Salzman, C., Kochansky, G.E., & Shader, R.I. Rating scales for geriatric psychopharmacology - a review. Psychopharmacology Bulletin, 1972, 8, 3-50.

Seligman, M.E.P. Helplessness. San Francisco: Freeman, 1975.

Simpson, G.M., Hackett, E., & Kline, N.S. Difficulties in systematic rating of depression during out patient drug treatment. Canadian Psychiatric Association Journal, 1966, 11, 116-165.

Snaith, R.P., Ahmed, S.N., Mehta, S., & Hamilton, M. Assessment of the severity of primary depressive illness: Wakefield Self-Assessment Depression Inventory. Psychological Medicine, 1971, 1, 143-149.

Spitzer, R.L., Sheehy, M., & Endicott, J. DSM-III: guiding principles. In V.M. Rakoff, H.C. Stancer, & H.B. Kedward's (Eds.) Psychiatric diagnosis. New York: Bruner/Mazel, 1977.

Stein, K.B. The TSC scales: the outcome of a cluster analysis of 550 MMPI items. In P. McReynold's (Ed.) Advances in Psychological Assessment, vol. 1. Palo Alto, California: Science and Behaviour Books, 1968.

Wang, R.I., Treul, S., & Alverno, L. A brief self-assessing depression scale. Journal of Clinical Pharmacology, 1975, 15, 163-167.

Wechsler, H., Grosser, G.H., & Busfield, B.L. The depression rating scale: a quantitative approach to the assessment of depressive symptomatology. Archives of General Psychiatry, 1963, 9, 334-343.

Weckowicz, T.E., Muir, W., & Cropley, A.J. A factor analysis of the Beck inventory of depression. Journal of Consulting Psychology, 1967, 31, 23-28.

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

Williams, J.G., Barlow, D.H., & Agras, W.S. Behavioural measurement of severe depression. Archives of General Psychiatry, 1972, 27, 330-337.

Zuckerman, M., & Lubin, B. Normative data for the multiple affect adjective checklist. Psychological Reports, 1965, 16, 438.

Zung, W.W.K. A self-rating depression scale. Archives of General Psychiatry, 1965, 12, 63-70.

Zung, W.W.K. A cross-cultural survey of symptoms in depression. American Journal of Psychiatry, 1969, 126, 116-121.

Zung, W.W.K. The depression status inventory: an adjunct to the self-rating depression scale. Journal of Clinical Psychology, 1972, 28, 539-543.

Zung, W.W.K., Coppedge, H.M., & Green, R.L.Jr. The evaluation of depressive symptomatology: a triadic approach. Psychotherapeutics and Psychosomatics, 1974, 24 (2), 170-174.

APPENDIX A

APPENDIX A

Items Eliminated at Successive Stages From the Original Item Pool

1. Items Removed at the "Rough Cut" Stage Because of Ambiguity, Low Content Saturation, or Redundancy

The following items were eliminated from the scale designed to assess Fatigue:

True

I am nearly always worn out.

Often I feel drained and listless.

I seldom feel lively and energetic.

My energy level is seldom high.

I often feel weary and overworked.

It is rare for me to feel vitality.

My vitality is usually low.

I often feel tired and beat.

I am habitually worn out.

I am usually bushed and beat.

I often feel drowsy and done in.

I often feel like dragging my feet.

I always feel like a dead-weight.

I frequently get too tired to do anything.

I never seem to be able to get going fast.

Even standing up often seems too much effort.

My body often feels heavy and slow.

I am often tired.

I am seldom full of life and energy.

I usually feel slowed down and weary.

I rarely feel strong and vigorous.

I never have enough energy to get things done.

I am hardly ever full of vim and vigor.

I never have much zest or zip.

I often feel heavy.

I can often barely hold my head up.

I often slump from fatigue.

False

I can go on forever without getting tired.

I almost never feel like collapsing from fatigue.

I do not often feel worn out.

I usually feel light and free.

I am a tireless worker.

I rarely feel sluggish.

I'm usually spry and lively.

My body usually feels as light as a feather.

I usually feel alert.

I am always a fast worker.

I am rarely worn out.

I am not often exhausted.

I seldom feel drained and listless.

I don't often feel droopy and tired.

I hardly ever feel weak and fatigued.

It is usual for me to feel vitality.

I rarely feel tired and beat.

I am not easily fatigued.

It is unusual for me to feel tired.

I am not often bushed or beat.

It's unusual for me to feel drowsy and done in.

It's not like me to drag my feet.

I never feel like a dead-weight.

My eyes rarely feel tired.

I rarely feel like resting my head on the table.

The following items were eliminated from the scale designed to assess Learned Helplessness:

<u>True</u>

I often feel indifferent.

I am unusually frustrated most of the time.

I gave up a long time ago.

Everything has always seemed "out of my hands".

Sometime back I just gave up hope.

I often just can't seem to get going.

Everything usually seems to take too much effort.

There is not hope for me anymore.

I find I have become numb from too much pain.

I have been paralyzed; it is just too much to even move a finger.

My life seems to have come to a halt.

I often feel like I am in a stupor.

I commonly feel empty inside.

I can't be bothered to do anything.

I often feel that the bottom has fallen out of my world.

I would usually rather sit than do anything.

I often wish they would stop the world and let me off.

I usually feel I don't have much choice.

I am a rather apathetic person.

I have no interest in the world around me.

If things get tough, I usually give up easily.

I usually have trouble getting started in the morning.

I am not the enthusiastic type.

I hardly ever find life interesting.

Everything seems generally out of focus.

I often find it difficult to get any work done.

I rarely take an interest in my work.

It takes too much effort to convince people of anything.

I often feel like I have lost all motivation.

I have no desire for anything.

False

I rarely feel indifferent.

I usually have little trouble getting going.

I am not an apathetic person.

Things may get tough, but I still hang in there.

I can usually pick myself up and start over.

It is my second nature never to give up hope.

There is always some hope.

I don't have any trouble getting started in the morning.

I am ordinarily free to do things my own way.

I am usually able to survive no matter how rough it gets.

I seldom feel listless.

I usually have to be doing something.

I am good at taking charge.

I am a person who will not take no for an answer.

I am a person who will always persevere.

I usually have no trouble getting going.

Nothing is ever too much effort.

I don't usually find going to work much of an effort.

I can never just sit and do nothing.

I do not accept defeat easily.

I am not usually apathetic.

Life is never meaningless for me.

I seldom feel paralyzed or unable to act.

I rarely feel lost.

I rarely feel that life is empty.

Things rarely seem complicated.

I seldom feel overwhelmed.

I am usually bursting with enthusiasm.

I rarely feel discouraged.

My efforts are rarely wasted.

I often feel like nothing can stop me.

I usually feel inventive and resourceful.

Hope always brings fulfillment.

I am passionately absorbed in life.

I am usually stimulated and receptive.

The following items were eliminated from the scale designed to measure Pessimism:

True

I am often pessimistic.

I am not usually optimistic.

I nearly always dread the future.

I usually don't expect things to turn out well.

My future often looks gloomy.

Tomorrow is something that rarely brings good.

The wheel of fortune is rarely on my side.

Lady luck always seems to be against me.

I always know the worst is going to happen.

I am not an optimist.

I hardly ever look forward to each new day.

My future hardly ever seems bright.

I am not a lucky person.

Tomorrow is something I hardly ever look forward to.

I seldom feel there are better things to come.

My future never seems golden.

Things never seem to turn out well for me.

Providence scarcely ever seems to smile on me.

My future rarely seems full of possibilities.

My prospects rarely look good.

I'm rarely inclined to look for the silver lining.

Every day of my life will be disappointing.

False

I usually hope for good weather.

I am not a pessimist.

My future usually seems golden.

I often look forward to life's many opportunities.

Providence often seems to smile on me.

My future usually seems full of prospects.

I am not often pessimistic.

I am usually optimistic.

I rarely dread the future.

I usually expect things to turn out well.

I ordinarily expect the best.

My future has rarely seemed bleak.

I usually look at the world through rose-colored glasses.

My future seldom looks gloomy.

Tomorrow is something that usually brings good.

I often think about the future.

Fate rarely seems to be against me.

My future hardly ever seems like a closed door.

I don't often think negatively about the future.

I'm not often discouraged about the future.

I usually feel my troubles can be overcome.

I always expect the best.

I have always wanted to live a long life.

The following items were eliminated from the scale designed to assess Sad Mood:

True

I am often depressed.

I am regularly down in the dumps.

My heart is usually heavy.

I am basically a sad person.

I often feel heavy-hearted.

I have no sense of humor.

I generally wear a long face.

I frequently feel miserable and tormented.

I often sulk and brood.

I usually take things to heart.

I have had more than my share of grief and pain.

Life for me is usually a walking hell.

It often seems that there is no happiness possible.

Everything usually seems black.

I often feel that I'm breaking up.

I am usually unhappy.

My life is never full of joy.

I am not known as a cheerful person.

I hardly ever feel bliss.

The world hardly ever fills me with delight.

I hardly ever feel bright and carefree.

My world never seems like paradise.

I don't usually feel like laughing and smiling.

I am not a fun person to be around.

I rarely feel like singing.

My heart never leaps for joy.

I am not known for my cheerfulness.

My life is never full of sunshine.

I feel depressed and low.

I feel completely down.

I seldom feel gay and carefree.

I often mope around the house.

<u>False</u>

I am seldom unhappy.

I am regarded as a cheerful person.

I frequently feel bliss.

The world nearly always fills me with delight.

My world often seems like paradise.

My heart often leaps from joy.

My life is full of sunshine.

I often take heart at the little joys in life.

I frequently rejoice at the wonder of life.

I always feel exhilarated by the beauty of the world.

I rarely get the blues.

I am a jolly person.

I usually feel pleased and pleasant.

I often feel like celebrating.

I rarely feel miserable.

I am not often sad.

It's unusual for me to be down in the dumps.

I scarcely ever feel like crying.

My heart is usually light.

I am usually glad to be alive.

My heart rarely aches.

I am basically a happy person.

I don't often feel heavy-hearted.

I don't often feel blue.

I am not often a wet blanket.

I rarely feel down.

I usually find it easy to put on a happy face.

I usually feel on top of the world.

I usually feel pretty good.

My world is most often full of joy.

I usually feel light-hearted.

I frequently feel elated.

I rarely feel low in spirits.

I often feel ecstatic.

I rarely feel downcast.

I seldom feel tearful.

I rarely feel dejected.

I usually feel gay and carefree.

I rarely feel pathetic.

The following items were eliminated from the scale designed to assess Guilt:

True

I should really feel bad after the things I've done.

I've hurt too many people in my life.

I am irresponsible and no good.

I often feel I have betrayed myself.

My parents are often ashamed of me.

I constantly feel guilty.

The past weighs me down.

I can't escape the damage I have done.

People who shirk responsibility must really feel guilty.

It bothers me that I don't do more for my friends.

Failure makes me very disappointed.

I may be a success but I feel like I should be doing more.

I often feel I am a failure because of my own mistakes.

I deserve everything I get.

I am frequently disgusted with myself.

My parents frequently feel that I've let them down.

I often brood over the mistakes that I've made.

I am very rarely free from guilt.

I usually think in terms of right and wrong.

I often brood over the pain I've caused.

My parents don't approve of me and my ways.

I am disappointed in myself.

My parents are not proud of me.

It seems that all I've ever done is hurt people I love.

I've caused too much hurt.

Everything that goes wrong is my fault.

I can't seem to help hurting people.

I often think I'm a very selfish person.

I often feel bad about the decisions I've made.

I often feel I have done disservice to my parents.

I often feel I am not good enough.

I am often guilt-laden.

I often loathe myself for the times I have hurt people.

I hate to look back at all the pain I've caused.

False

I rarely feel guilty.

My parents rarely have felt that I've let them down.

I seldom brood over the mistakes I've made.

I am for the most part free of guilt.

I scarcely ever brood about the pain I've caused.

I don't often think about my mistakes.

My parents approve of me and my ways.

My parents have hardly ever been disappointed in me.

I am not disappointed in myself.

I don't think much about the past.

I don't live in the past.

Failure rarely bothers me.

I don't often hurt people.

I don't usually blame myself if things go wrong.

I never worry about what my parents think of me.

Failure doesn't particularly upset me.

I rarely have a heavy conscience.

When things go wrong I don't usually blame myself.

I hardly ever feel bad about the things I've done.

I rarely feel I am the cause of my own suffering.

I have lived up to my patents' hopes pretty well.

My parents are hardly ever ashamed of me.

I don't deserve all the pain I get.

I am scarcely ever ashamed of myself.

I rarely feel disappointed in myself.

I don't worry about any damage I may have done.

I don't feel I've deserved all that's happened to me.

I have never hurt anyone.

The following items were eliminated from the scale designed to assess Low Self-Esteem:

True

I am not a very competent person.

I am of no value to anyone.

I don't know why anyone would want to be like me.

I am not a very stable person.

I have nothing to contribute to anything.

Most people probably don't like me.

I have too many shortcomings.

My life is of no consequence.

Nobody would notice if I were not here.

I am mediocre at everything.

Most of my accomplishments are pitiful.

I am for the most part a shabby person.

I frequently feel superfluous.

I am hard to like.

I am generally dissatisfied with who I am.

I usually dislike myself.

I am pretty far from the goals I set.

I am nothing like I would like to be.

I usually wish I could be more popular.

I am not usually very effective at things I try.

I seldom work at my potential.

No matter how hard I try, things usually go wrong.

People don't ever seem to see much value in me.

I often hold nothing but contempt for myself.

I frequently despise myself.

<u>False</u>

I usually like myself.

I am usually effective at the things I try.

I seldom feel insignificant.

I usually have some influence at work.

I am a significant person.

My accomplishments are considerable.

When something needs done I can usually do it.

I am usually fairly self-confident.

I like being the age I am.

I am in my prime.

I usually like who I am.

I rarely feel I am worthless.

I am rarely disappointed in myself.

I usually feel useful.

I usually feel I am of some value.

I usually think that I look good.

I rarely feel inadequate.

I have a good deal to offer.

I have at least a few talents.

Most people usually find me interesting.

Most people probably like me.

I usually have something worthwhile to contribute.

I usually have something important to say.

I have no more than the usual number of shortcomings.

I rarely feel inferior.

My life is of some consequence.

I rarely feel unimportant.

I always do the best I can.

I get my way when I want it.

I seldom doubt myself.

I usually have self-confidence to spare.

I usually work to the best of my ability.

I am usually satisfied with things as they are.

Most often I feel that many people admire me.

People often recognize me wherever I go.

I rarely despise myself.

I am usually proud of my accomplishments at work.

I'm worth my weight in gold.

The following items were eliminated from the scale designed to assess Social Introversion:

True

I often feel like I am not part of the crowd.

I never really feel that I fit in with others.

I am not really a sociable person.

I often wish everyone would go away.

I frequently feel I have to hide.

I usually hate to be around crowds.

I often wish I were like other people.

People often make me want to crawl into a hole.

I do not enjoy being around people.

I often want to retreat from the human race.

I am a retiring type.

I rarely want to approach my acquaintances.

People often seem to smother me.

I often run away from social situations.

I often have nothing to say to other people.

I often feel I couldn't face company.

I frequently feel I just can't reach people.

I often have difficulty in communicating with people.

I usually prefer isolation.

I frequently want no human contact.

There is usually a great distance between myself and others.

I rarely feel good rapport with others.

I'd often rather read a book than be around others.

I frequently feel unsociable.

<u>False</u>

I nearly always love parties.

I like to keep in touch with my friends.

I frequently feel good rapport with others.

I go crazy if I am alone for long.

I always feel comfortable around others.

Time usually goes faster when I am with somebody.

I rarely panic when I am around people.

I find it easy to communicate with people.

I usually get on well with everybody.

I get along smoothly with others.

I am usually eager to mix at parties.

I usually feel part of the crowd.

Normally I feel I fit in well with others.

Most of the time I am a sociable person.

I usually like to be around crowds.

I am not really a loner.

I hardly ever feel like getting away from everybody.

I rarely wish to be left alone.

I am a friendly type of person.

I often visit my acquaintances.

I frequently call my friends on the telephone.

People rarely make me uncomfortable.

One reason that I like dances is that I enjoy the people.

I usually enjoy meeting new people.

I'm often the life of the party.

I never isolate myself from my friends.

I always enjoy the warmth of companionship.

The following items were eliminated from the scale designed to assess Irritability:

True

I often get upset about little things.

I am frequently aggravated.

I am basically irritable.

I get irritated easily.

I think many people are insulting.

I have been known to sneer a lot.

I am usually a bit of a scrooge.

People think I am pretty crusty.

I am often contemptuous of those around me.

Most people are pretty rotten.

I am not too pleasant to people.

I am in the habit of losing my temper easily.

I raise Cain when I don't get what I want.

I am often piqued at my friends.

I often feel bitter.

I detest many people.

I am usually thin-skinned.

I often feel peeved at people.

I am usually rather touchy.

I am always quick to lose my temper.

I am characteristically crabby.

I often get sore without much reason.

I frequently get impatient.

I commonly carry a chip on my shoulder.

I frequently get antagonized.

I often argue just for the sake of arguing.

People often get on my nerves.

I am very rarely pleasant to be around.

I am a rather intolerant person.

I dislike a lot of people.

I am always impatient with bad drivers.

Trivial things often irritate me.

I am often rude to those whom I dislike.

I frequently argue with people.

I never 'give in' in an argument.

I often get mad as a hornet.

I can never take criticism.

I often get 'put out' with others.

<u>False</u>

I am a very tolerant person.

Trivial things never irritate me.

I don't fly off the handle easily.

I rarely get upset about little things.

I am not easily aggravated.

I am basically placid.

I do not get irritated easily.

I hardly ever sneer.

I am not often contemptuous of others.

Most people are pretty decent.

I am usually pleasant to people.

People rarely irritate me.

I am not easily provoked.

I am not in the habit of losing my temper easily.

If someone crosses me I hesitate before causing a scene.

I rarely lose control of my temper.

I don't often get annoyed with people.

I am hardly ever piqued at my friends.

I scarcely ever snap at people.

I don't detest many people.

I am normally thick-skinned.

I don't often get sore without good reason.

I am not easily antagonized.

People rarely get on my nerves.

I'm not often touchy about what people say to me.

It normally takes a lot to upset me.

I always try and see the other person's point of view.

I never argue for the sake of argument.

I see myself as a reasonable kind of person.

I usually manage to control my temper.

If I get angry, it's usually with good reason.

I usually cooperate well with others.

I am rarely touchy.

I am rarely short-tempered.

The following items were eliminated from the scale designed to assess Instrumental Helplessness:

True

People don't appreciate me.

I am frequently slighted by my friends.

I often feel like others are ignoring me.

I frequently feel my friends don't care.

Noone ever cares if I am lonely.

Nobody ever cares how badly I hurt.

I don't usually get enough consideration.

It's not uncommon for me to feel forgotten.

I usually feel like my friends have overlooked me.

My family are usually inconsiderate.

Rarely does anybody care that I suffer.

Everytime I need someone, they are not there.

My family often let me down.

My friends have forsaken me.

I frequently feel like everybody is against me.

I often feel that nobody is dependable.

People often let me down.

Everybody is always terribly insensitive.

I always feel lost when someone I love leaves.

I often feel scorned and pushed aside.

I don't get my fair share of attention.

Other people aren't usually very good to me.

People don't treat me fairly.

Often people don't keep their word to me.

I'm never satisfied with the love I get.

My family are always neglecting me.

My friends often exclude me from things.

Other people are always putting me off.

False

Everybody treats me pretty fairly.

People usually keep their word to me.

My friends usually include me in everything.

I seldom feel rejected and unwanted.

I usually feel wanted.

I rarely need help.

I always feel I am important to my family.

I am never slighted by my friends.

My family are usually attentive to me.

My friends always listen to my problems.

It's unusual for me to feel forgotten.

It's unusual for my friends to overlook me.

Everytime I need someone, they are there.

I can normally rely on my friends.

I never feel helpless.

My friends are nearly always there when I need them.

My friends have not forsaken me.

I get enough support from the people I need.

I usually have somewhere to go and someone to do things with.

I usually feel I can share my problems with others.

The following items were eliminated from the scale designed to assess Cognitive Difficulty:

True

I often find it difficult to make decisions.

I often have trouble making up my mind about things.

My brain often seems addled.

I often wish things were not so confused.

My thoughts seem foggy.

I often find myself worrying over little things.

I worry constantly.

My thoughts often drift while I am trying to listen to someone.

I often feel dizzy.

My thoughts are often disordered.

I am usually easily distracted from reading anything.

My thoughts are frequently in disarray.

I often feel bewildered when I am faced with making decisions.

I always seem to be losing track of my thoughts.

I usually find it difficult to keep my mind uncluttered.

My mind is always muddled.

I am often perplexed when faced with a problem.

My mind is never sharp and keen.

I often have trouble concentrating on my work.

I usually find it difficult to make the right decision.

I can seldom think rapidly.

I am hardly ever alert.

I am often bothered by my cluttered thinking.

My mind is often in a turmoil.

I always find it difficult to choose presents.

My mind generally feels dull.

My thoughts are often monotonous and uncontrollable.

My mind is usually stagnant.

I frequently mull over old problems.

I am often beside myself with worry.

False

My mind can usually sort out a confused situation.

I never give a second thought to which clothes I put on.

I rarely have trouble making important decisions.

I have never worried about having a brain tumour.

I rarely feel confused.

It takes a lot to confuse me.

I rarely feel that my thoughts are going round in circles.

I rarely worry.

I always say "don't worry, be happy".

My thoughts rarely drift during a conversation.

My mind rarely wanders.

I seldom feel dizzy.

I usually find it easy to make the right decision.

I am not easily distracted when I am reading.

My thoughts are rarely disordered.

My thinking is not often muddled.

My thoughts are rarely in disarray.

I am usually confident about making the right decision.

My mind is never muddled.

I am rarely perplexed when faced with a problem.

My thinking is hardly ever jumbled.

I am usually alert.

Most of the time I am a quick thinker.

My mind is not often a blank.

My mind is rarely in a turmoil.

I usually find it easy to choose presents.

My mind is free from worry.

I don't often think about the past.

II. Items Removed Because Proportions of Item Endorsement Were Less Than 5%

Scale	Item	%
Learned Helplessness		
	There is never any use in trying. (T)	2.1
	I just don't have the heart to try anymore. (T)	2.1
	Things have always seemed hopeless. (T)	4.2
	There is no point in trying, nothing can be changed. (T)	3.8
	Life has no pleasure. (T)	4.9
Sad Affect		
	My life is grim and cheerless. (T)	3.5
Guilt		
	I am basically a moral failure. (T)	3.5
Low Self-Esteem		
	I am a fairly competent person. (F)	4.2
	I am worth getting to know. (F)	4.9
	I am a somebody. (F)	4.2
	I am not that well-liked at work. (T)	4.9
	I am a nobody. (T)	4.9
Cognitive Difficulty		
	My mind is hardly ever sharp and keen. (T)	3.5

III. Items Removed Due to Low Item-Total Correlations

Scale	Item	Item-Total Correlation
Fatigue		
	My feet are never tired. (F)	.18
	I often get tired when I haven't done anything. (T)	.04
Learned Helplessness		
	I always face my problems "head on". (F)	.29
	I usually have a lot of willpower. (F)	.29
	I often feel my choices are unlimited. (F)	.14
	I often try something new just for a change of pace.(F)	.29
	I do not accept defeat. (F)	.29
Pessimism		
	I've always felt there better things to come. (F)	.19
	I can usually find good in almost anything. (F)	.26
	I am often afraid that I will not always have a job. (T)	.27
Sad Mood		
	I often feel like singing. (F)	.21
	Every day for me is like a holiday. (F)	.21
	I am often sad. (T)	.26
Guilt		
	I have not lived up to my parents' hopes. (T)	.22
	I deserve to be punished for my mistakes. (T)	.26

Scale	Item	Item-Total Correlation
Guilt		
	My problems are entirely my own fault. (T)	.14
	The pain I get is well deserved. (T)	.21
	I am usually the cause of my own suffering. (T)	.22
	I sometimes feel like my parents are looking over my shoulder. (T)	.26
	My parent were not very strict. (F)	.04
	My parents have been proud of me. (F)	.18
	I don't think of myself as being a bad person. (F)	.16
	I haven't hurt many people in my life. (F)	.26
	I can do anything without feeling guilty. (F)	.02
	I never think of myself as selfish. (F)	.24
	I am rarely concerned with moral issues. (F)	.07
	I have never felt disgusted with myself. (F)	.27
	I seldom think in terms of right and wrong. (F)	.09
Low Self-Esteem		
	I always know the right thing to say. (F)	.25
	I am usually very capable. (F)	.26
	I am very competent at my work. (F)	.27
	I am close to reaching my goals. (F)	.27
	Even at my worst I am better than most people. (F)	.21

Scale	Item	Item-Total Correlation
Low Self-Esteem		
	I am not a very modest person. (F)	.12
	I am basically full of shit. (T)	.17
Social Introversion		
	I'm usually lonesome when I am by myself. (F)	.27
	I try to get out of the house as often as possible.(F)	.08
	I never run away from social situations. (F)	.15
Irritability		
	I often find myself in the role of peacemaker. (F)	.20
	People think I am fairly easy-going. (F)	.24
Instrumental Helplessness		
	I seldom feel that my friends don't care enough. (F)	.23
	I never feel completely helpless. (F)	.21
	I often need help doing even simple things. (T)	.19
	It's unfair when someone who can help me refuses.(T)	.21
Cognitive Difficulty		
	I often make snap decisions. (F)	.06
	My brain has always been in good working order. (F)	.27

IV. Items Which Did Not Demonstrate Adequate Discriminant Validity

Scale	Item	Item-Total Correlation	Discriminant Scale	r
Fatigue				
	I always have enough energy to get things done. (F)	.34	Social Desirability	.35
	Just a little effort usually tires me out. (T)	.41	Learned Helplessness	.45
Learned Helplessness				
	I always feel eager and encouraged in new situations. (F)	.48	Social Introversion	.48
	I am normally in command of situations. (F)	.38	Low Self-Esteem	.39
	I find life stimulating. (F)	.58	Pessimism	.56
	I usually find life interesting.(F)	.45	Pessimism	.40
	I am usually rather apathetic. (T)	.33	Instrumental Helplessness	.31
	I often feel very discouraged. (T)	.61	Pessimism	.62
	I am a person who has lost interest in life. (T)	.39	Pessimism	.50
	Going to work is often too much effort. (T)	.28	Pessimism	.31
	I would usually rather sit and do nothing. (T)	.43	Fatigue	.41
	I find even the simplest tasks are too much work. (T)	.36	Social Introversion	.41

Scale	Item	Item-Total Correlation	Discriminant Scale	r
Learned Helplessness				
	Life is full of restrictions and limitations to my freedom. (T)	.38	Instrumental Helplessness	.36
	I commonly feel trapped and smothered. (T)	.45	Pessimism	.44
	Life is usually too much trouble. (T)	.49	Pessimism	.48
	Life is meaningless for me. (T)	.42	Pessimism	.49
	Life seems out of my control. (T)	.50	Pessimism	.54
	I often feel like a puppet on a string. (T)	.43	Low Self-Esteem	.48
	I often don't have the will to get up in the morning. (T)	.39	Fatigue	.41
	I seldom take the initiative. (T)	.42	Low Self-Esteem	.44
	I find life boring on the whole.(T)	.47	Pessimism	.47
	I usually avoid trying anything new. (T)	.36	Low Self-Esteem	.36
	There is is no real reason for my existence. (T)	.44	Pessimism	.44
	I often wish life were simpler.(T)	.35	Social Desirability	.36
	I am basically indifferent to things. (T)	.30	Guilt	.48
	My problems seem to pile up on me. (T)	.42	Instrumental Helplessness	.43

Scale	Item	Item-Total Correlation	Discriminant Scale	r
Learned Helplessness				
	I often would prefer to sleep than face my difficulties. (T)	.44	Cognitive Difficulty	.45
	Everything sometimes seems utterly futile and empty. (T)	.37	Instrumental Helplessness	.41
	I often wonder why I should go on.(T)	.38	Pessimism	.40
	Life frequently seems nothing but drudgery. (T)	.50	Pessimism	.49
	My life seems barren and dry. (T)	.45	Social Introversion	.50
	I often feel hollow and empty. (T)	.50	Pessimism	.56
Pessimism				
	I usually expect the best. (F)	.32	Learned Helplessness	.35
	My future usually seems promising.(F)	.49	Learned Helplessness	.48
	I generally look forward to each new day. (F)	.47	Sad Mood	.44
	Tomorrow is something I regularly look forward to. (F)	.40	Sad Mood	.39
	I usually feel that nothing will turn out right for me. (T)	.54	Learned Helplessness	.54
	I have sometimes felt that my life is going gradually down the drain.(T)	.44	Learned Helplessness	.49

Scale	Item	Item-Total Correlation	Discriminant Scale	r
Sad Mood				
	I am a fun person to be around.(F)	.52	Low Self-Esteem	.55
	I am often in a festive mood.(F)	.55	Social Introversion	.58
	I am usually glad to be alive.(F)	.38	Pessimism	.38
	My life is joyless and unhappy.(T)	.30	Low Self-Esteem	.38
	I often feel on the verge of tears.(T)	.37	Pessimism	.42
	I often feel miserable.(T)	.54	Low Self-Esteem	.53
	I often feel dismal.(T)	.39	Low Self-Esteem	.39
Guilt				
	I am always apologising.(T)	.27	Low Self-Esteem	.29
	I frequently feel ashamed of myself.(T)	.48	Low Self-Esteem	.51
	The past never weighs me down.(F)	.37	Learned Helplessness	.42
Low Self-Esteem				
	I am proud of my accomplishments.(F)	.34	Pessimism	.37
	I would not change much about me.(F)	.35	Learned Helplessness	.38
	My friends all come to me for advice.(F)	.23	Social Introversion	.27
	I usually feel like I am as good as the next person.(F)	.28	Pessimism	.33

Scale	Item	Item-Total Correlation	Discriminant Scale	r
Low Self-Esteem				
	I usually take good care of myself. (F)	.43	Learned Helplessness	.45
	I am generally satisfied with who I am. (F)	.48	Pessimism	.46
	I frequently feel embarrassed. (T)	.44	Guilt	.43
	I have no talents and nothing to offer anyone. (T)	.33	Pessimism	.38
	I don't like myself much. (T)	.55	Pessimism	.55
	I don't dress as well as I would like to. (T)	.23	Instrumental Helplessness	.23
	My life has, all in all, been insignificant. (T)	.43	Learned Helplessness	.42
	I feel my life is a big zero. (T)	.42	Pessimism	.42
	I often wish I were a different age. (T)	.28	Guilt	.33
Social Introversion				
	I usually don't want to be bothered with anyone. (T)	.35	Sad Mood	.36
	I often lock my door to keep everybody away. (T)	.50	Sad Mood	.49
	I often wish I was invisible. (T)	.39	Learned Helplessness	.40
Irritability				
	I am always pleasant to be around.(F)	.28	Sad Mood	.25
	I am always careful not to hurt other peoples' feelings. (F)	.38	Social Desirability	.41

Scale	Item	Item-Total Correlation	Discriminant Scale	r
Irritability				
	I usually think before I speak.(F)	.39	Social Desirability	.37
	I don't often feel bitter.(F)	.43	Pessimism	.43
	People frequently irritate me.(T)	.45	Social Introversion	.43
	I don't get along with many people.(T)	.30	Sad Mood	.41
Instrumental Helplessness				
	My family are always considerate.(F)	.32	Social Desirability	.33
	I rarely feel ignored.(F)	.41	Sad Mood	.41
	I usually feel needed.(F)	.41	Learned Helplessness	.48
	I usually feel like everybody is on my side.(F)	.37	Social Introversion	.41
	I often feel rejected and unwanted.(T)	.54	Low Self-Esteem	.55
	I often wish I could share my burden.(T)	.36	Cognitive Difficulty	.34
Cognitive Difficulty				
	I can usually think rapidly.(F)	.45	Learned Helplessness	.46
	I usually think accurately and efficiently.(F)	.46	Learned Helplessness	.53

Scale	Item	Item-Total Correlation	Discriminant Scale	r
Cognitive Difficulty				
	Ideas usually come quickly to me.(F)	.24	Learned Helplessness	.30
	I sometimes wonder if I have a brain tumour.(T)	.32	Fatigue	.35
	I often can't get to sleep because of worry.(T)	.37	Fatigue	.38

V. Items Removed After Correction For Social Desirability

Scale	Item
Fatigue	
	I am often full of life and energy.(F)
	I generally feel vivacious and refreshed.(F)
	I rarely feel slow and heavy.(F)
	I rarely feel tired and beat.(F)
	I am easily fatigued.(T)
	I often feel like collapsing from fatigue.(T)
	I often feel like resting my head on the table.(T)
	I am usually exhausted.(T)
Learned Helplessness	
	I never give up completely.(F)
	There is always a way if you really try. (F)
	I am the enthusiastic type.(F)
	I always do a great deal on my own initiative.(F)
	I always persevere, no matter how rough the going.(F)
	I take interest and delight in everything around me.(F)
	Nothing ever seems impossible.(F)
	I am usually a take-charge type of person.(F)
	I usually feel that I am the master of my own fate.(F)
	I often feel like a puppet on a string.(T)

I seldom take the initiative.(T)

Sometimes everything seems utterly futile and empty.(T)

Pessimism

I am a lucky person.(F)

I frequently feel that things will improve.(F)

I always expect rain at a picnic.(T)

I am a pessimist.(T)

Things usually go from bad to worse for me.(T)

Fate seems to be against me.(T)

I have always expected to die young.(T)

My future has always seemed bleak.(T)

Sad Mood

I am hardly ever depressed.(F)

I am an unhappy person.(T)

I often feel like crying.(T)

I frequently feel despair and loneliness.(T)

I rarely have good days.(T)

I usually feel dejected.(T)

Guilt

I rarely criticize myself.(F)

Low Self-Esteem

I think of myself as fairly popular.(F)

I am of little value to anyone.(T)

I am really not very good at anything.(T)

I never have anything important to say.(T)

Social Introversion

I enjoy mingling with people.(F)

I always enjoy making new friends.(F)

I am characteristically unsociable.(T)

I can't stand to be around people for long.(T)

Most of the time I avoid talking to people.(T)

I often feel uncomfortable when I am around people.(T)

I seldom call my friends on the telephone.(T)

For company I usually prefer animals to people.(T)

I often isolate myself from my friends.(T)

Irritability

I am rarely rude to those whom I dislike.(F)

I am not often argumentative.(F)

When I am provoked I explode like a powder keg.(T)

I am usually a grouch.(T)

Instrumental Helplessness

Other people are always pretty good to me.(F)

I usually feel appreciated and respected.(F)

I never can rely on my friends.(T)

Often people don't keep their word to me.(T)

Cognitive Difficulty

I usually have no trouble making up my mind.(F)

It is often hard even to make simple decisions.(T)

My thinking is frequently muddled.(T)

Things often go wrong because I can't think clearly.(T)

APPENDIX B

APPENDIX B

Character Sketches

Pessimism: Mr. Pessimist

Mr. Pessimist has a very negative view of the future. He feels unlucky and doesn't foresee a change in his luck in the foreseeable future. He does not necessarily think poorly of himself and is not, by nature, irritable. However he feels his life is gradually going down the drain. He doesn't give up trying, but he can't see the silver lining or the bright side of things. He doesn't blame others for his bad luck either, he simply feels he has little to look forward to beyond an endless stream of troubles. As his name implies, he is the ultimate pessimist.

Learned Helplessness: Mr. Helpless

Mr. Helpless has given up. He has learned that no matter what he does, life goes on as if he wasn't there. He is not pessimistic because he doesn't think about the future: planning ahead is futile because his efforts are never rewarded. People might care about him, and he might even think well of himself, but he certainly doesn't believe any of the good that has come his way is through his own efforts. He has no ambition or motivation and the world has lost all of its value: life is uninteresting, dull, and unrewarding. He sees no reason for trying very hard at anything and gives up easily. In short, as his name suggests, he is helpless and discouraged.

Fatigue: Mr. Fatigue

Mr. Fatigue is the kind of person who has no energy. He is worn out, tired, and he's suffering, as his name suggests, from complete fatigue. Although he is not necessarily pessimistic or lacking in interest in the world around him, he is so pooped and drowsy that he would like nothing better than to go to sleep for a long time. While he may be willing to face his problems or to interact with others, all of these considerations are irrelevant to him because he is consumed with the need for a good rest. He is physically drained and would like to lay his head on the table right now and go to sleep. He does manage to finish the inventory but it takes him much longer than it should.

Instrumental Helplessness: Mr. Help Me

Mr. Help Me is very dependant on others to get things done for him. He wants very much to have his friends and family take care of him, but feels they never do enough. He feels abandoned and neglected and complains that he is helpless - by this he means that is is not getting enough help. This helpless stance is designed to get others to help: to pay more attention, give more of their time, and to listen to his complaints. It is not that he feels unable to help himself, or pessimistic about his chances, he just wishes others would give him more help, and pay more attention to his needs. While he is dissatisfied, he is not necessarily irritable. As his name clearly implies, Mr. Help Me is primarily concerned with getting more help from others. He feels misunderstood, neglected, and generally left out of the picture, but is very concerned with changing his situation for the better.

Irritability: Mr. Grouch

Mr. Grouch is very irritable. He is not necessarily without friends, despite his touchiness and outspoken manner. It is primarily his explosive temper, rather than a pessimistic outlook, which makes him appear negativistic. He is as happy and carefree as the next guy, but when he is crossed, he "blows his top" very easily, and you often find Mr. Grouch involved in a heated argument. As his name suggests, he is very much a grouchy kind of guy.

Social Introversion: Mr. Alone

Mr. Alone is not one for going out much. He prefers to sit at home with a book or the TV, and sees his home as a fortress where where he can avoid others. While he is uncomfortable around others he is not necessarily uncomfortable with himself. And although he avoids contact with others he is not usually grouchy - he simply stays, as his name implies, more or less alone.

Guilt: Mr. Guilt

Mr. Guilt feels terrible about the things he has done in his life. He feels disappointed in himself and regrets his past mistakes. He feels as secure and hopeful as the next fellow - his present and future are alright - but his past makes him feel miserable. His conscience is a real burden and he feels he has noone to blame but himself. As his name implies, he is the most guilt-ridden fellow you'll ever meet.

Low Self-Esteem: Mr. Incompetent

Mr. Incompetent has very low self-esteem. He is insecure and uninfluential, to the point where he is convinced that others find him dull and colorless. He is convinced he could never win an election, but he is nonetheless as sociable and outgoing as anyone else. He feels useless and inferior but does not necessarily have a pessimistic outlook on life. While he has energy enough to try his hand at new tasks, his basic feelings of inadequacy haunt him. He feels that he is, as his name suggests, very incompetent.

Sad Mood: Mr. Blue

Mr. Blue is usually in a "blue" mood. He is often sad and depressed, and generally down in the dumps. It is not that he is particularly pessimistic or lonely or even tired, he simply is very sad. At times he is even on the verge of tears, although he is not upset because of guilt or feelings of inadequacy. As his name suggests, he has a bad case of the blues.

Cognitive Difficulty: Mr. Bewildered

Mr. Bewildered is worried about his mind. It just doesn't seem to work right for him. He gets confused, can't make up his mind, and he finds his thoughts jumbled and his mind wandering. Despite this he has not lost hope, and still feels pretty good about himself. He is not sad or lonely, and is still as active as ever, both socially and at work. Nonetheless, he is, as his name suggests, bewildered by his problems about "thinking straight", and wishes he could keep a clear mind.

APPENDIX C

APPENDIX C

Standard Format of the Research Form of the Multiscore Depression Inventory

Standard instruction for the MDI:

This is a questionnaire designed to discover some of your typical feelings and attitudes. Your task is to read each item very carefully and decide whether or not that item is true for you. There are no right or wrong answers, since different people have different attitudes and moods. We are interested in how you usually feel, about yourself and about your world. Answer each item on your answer sheet either True (T) if it usually applies to you, or False (F) if it does not usually apply to you. Remember to mark on your answer sheet, and not in this test booklet.

Item	Scale
1. The more people around me, the better I feel. (F)	Social Introversion
2. I blame myself when things go wrong. (T)	Guilt
3. I often have trouble setting my mind to things.(T)	Cognitive Difficulty
4. Lady luck is usually on my side.(F)	Pessimism
5. My blood boils when someone upsets me.(T)	Irritability
6. As a rule, I have a lot of zest and zip.(F)	Fatigue.
7. I am always interested in the world around me. (F)	Learned Helplessness
8. I usually feel gleeful and jolly.(F)	Sad Mood
9. I usually feel unattractive.(T)	Low Self-Esteem
10. No-one seems to understand when I complain. (T)	Instrumental Helplessness

11.	My mind is usually uncluttered.(F)	Cognitive Difficulty
12.	I always enjoy being around people.(F)	Social Introversion
13.	I often have a heavy conscience.(T)	Guilt
14.	It seems like I am always tired.(T)	Fatigue
15.	I usually feel free and unrestrained.(F)	Learned Helplessness
16.	I usually feel bright and carefree.(F)	Sad Mood
17.	I am often annoyed with people.(T)	Irritability
18.	The wheel of fortune is often on my side.(F)	Pessimism
19.	I am often held back by my own inadequacies.(T)	Low Self-Esteem
20.	I am quite satisfied by the love I get.(F)	Instrumental Helplessness
21.	I hardly ever regret any of my actions.(F)	Guilt
22.	I have let myself down many times.(T)	Guilt
23.	My thoughts keep going round in circles.(T)	Cognitive Difficulty
24.	I frequently feel drowsy and in need of a nap.(T)	Fatigue
25.	I always expect the worst.(T)	Pessimism
26.	I often feel downcast.(T)	Sad Mood
27.	I don't often argue with people.(F)	Irritability
28.	I generally feel inferior.(T)	Low Self-Esteem
29.	I want to go away somewhere, away from people.(T)	Social Introversion

30.	I don't get enough support from the people I need.(T)	Instrumental Helplessness
31.	I am in full control of my life.(F)	Learned Helplessness
32.	I am usually full of ambition.(F)	Learned Helplessness
33.	My opinion of myself is fairly high.(F)	Low Self-Esteem
34.	I usually like to stay to myself.(T)	Social Introversion
35.	It is unusual for me to dislike someone.(F)	Irritability
36.	My future looks rosy.(F)	Pessimism
37.	I frequently feel high in spirits.(F)	Sad Mood
38.	I often feel I get a raw deal out of life.(T)	Instrumental Helplessness
39.	The same thoughts run through my head over and over again.(T)	Cognitive Difficulty
40.	I am usually full of vim and vigor.(F)	Fatigue
41.	I often feel sluggish and slowed down.(T)	Fatigue
42.	I often feel that my troubles are never going to end.(T)	Pessimism
43.	I am always thinking about my mistakes.(T)	Guilt
44.	I am sure most people find me boring.(T)	Low Self-Esteem
45.	I am usually inventive and resourceful.(F)	Learned Helplessness
46.	My life is often full of joy.(F)	Sad Mood
47.	The fewer people around me, the better I feel. (T)	Social Introversion

48.	I usually feel talkative. (F)	Social Introversion
49.	I am easily provoked. (T)	Irritability
50.	My friends often ignore my problems.(T)	Instrumental Helplessness
51.	My thought processes are crisp and precise. (F)	Cognitive Difficulty
52.	I never feel hatred towards myself. (F)	Guilt
53.	I rarely feel like facing my problems.(T)	Learned Helplessness
54.	A few mistakes never stop me. (F)	Learned Helplessness
55.	Most people think highly of me.(F)	Low Self-Esteem
56.	I often feel worn out. (T)	Fatigue
57.	My future seems to get better and better.(F)	Pessimism
58.	I frequently feel blue. (T)	Sad Mood
59.	I frequently feel merry and playful. (F)	Sad Mood
60.	People don't treat me fairly. (T)	Instrumental Helplessness
61.	No-one ever considers how I might be feeling. (T)	Instrumental Helplessness
62.	I am hot-headed. (T)	Irritability
63.	I rarely lose track of my thoughts. (F)	Cognitive Difficulty
64.	I often feel droopy and tired. (T)	Fatigue
65.	I am an optimist. (F)	Pessimism

66.	I often feel bad about the things I've done. (T)	Guilt
67.	Other people find me interesting.(F)	Low Self-Esteem
68.	I am rarely any influence on anyone.(T)	Low Self-Esteem
69.	I am a loner. (T)	Social Introversion
70.	I flare up when someone crosses me.(T)	Irritability
71.	I always have trouble making important decisions. (T)	Cognitive Difficulty
72.	I am a sociable and outgoing person. (F)	Social Introversion
73.	I am always willing to try again. (F)	Learned Helplessness
74.	I usually wish people would just leave me by myself. (T)	Social Introversion
75.	I often feel weak and fatigued. (T)	Fatigue
76.	My future for the most part looks pretty bright. (F)	Pessimism
77.	I never seem to do anything right. (T)	Low Self-Esteem
78.	I am short tempered most of the time.(T)	Irritability
79.	I usually get adequate consideration.(F)	Instrumental Helplessness
80.	I have a permanent case of the blues.(T)	Sad Mood
81.	My mind is usually buzzing with confusion.(T)	Cognitive Difficulty
82.	I often feel motivated and aroused. (F)	Learned Helplessness
83.	Life is always full of opportunities.(F)	Learned Helplessness

84.	I don't often give up hope.(F)	Learned Helplessness
85.	I do many things that I later regret.(T)	Guilt
86.	I am usually full of pep.(F)	Fatigue
87.	I often feel like smiling and laughing.(F)	Sad Mood
88.	Things usually seem to turn out well for me.(F)	Pessimism
89.	I usually don't mind being in crowds.(F)	Social Introversion
90.	I fly off the handle easily.(T)	Irritability
91.	Nobody ever seems concerned enough about me.(T)	Instrumental Helplessness
92.	My thoughts are often jumbled.(T)	Cognitive Difficulty
93.	I usually feel lively and energetic.(F)	Fatigue
94.	I usually feel pretty down.(T)	Sad Mood
95.	I often find it hard to put on a happy face.(T)	Sad Mood
96.	I often feel guilty.(T)	Guilt
97.	I often feel unworthy of my family's love.(T)	Guilt
98.	I usually think of myself as well-liked.(F)	Low Self-Esteem
99.	I usually have a nasty temper.(T)	Irritability
100.	I usually make decisions easily.(F)	Cognitive Difficulty
101.	I get my fair share of attention.(F)	Instrumental Helplessness
102.	Things keep getting better in my life.(F)	Pessimism

103. My vitality is usually high.(F)	Fatigue
104. I often think negatively about the future.(T)	Pessimism
105. I am a happy person.(F)	Sad Mood
106. I frequently feel useless.(T)	Low Self-Esteem
107. I usually avoid parties.(T)	Social Introversion
108. My energy level is usually high.(F)	Fatigue
109. I frequently feel I have nothing to look forward to.(T)	Pessimism
110. I often feel I am worthless.(T)	Low Self-Esteem
111. I often isolate myself from my friends.(T)	Social Introversion
112. I often lose control of my temper.(T)	Irritability
113. It often takes a long time even deciding what clothes to put on.(T)	Cognitive Difficulty
114. On the whole, I have little difficulty with thinking straight.(F)	Cognitive Difficulty
115. My friends are never there when I need them.(T)	Instrumental Helplessness
116. My family never give me enough attention.(T)	Instrumental Helplessness
117. I often explode with anger and frustration.(T)	Irritability
118. I find life fascinating.(F)	Learned Helplessness

APPROVAL SHEET

The thesis submitted by David John Berndt
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The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

1/16/79
Date

Thomas P. Petzel
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