THE UNIVERSITY OF CALGARY

The Prediction of Recovery From Dysphoria in a College Sample

by

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A THESIS SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR

THE DEGREE OF MASTER OF SCIENCE

DEPARTMENT OF CLINICAL PSYCHOLOGY

CALGARY, ALBERTA

AUGUST, 1997

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Abstract

Possible predictors for recovery from dysphoria were tested in a dysphoric undergraduate university student population. Predictors included the BDI-II, measures of social support, dysfunctional attitudes, sociotropy and autonomy, life events, treatment, and informal coping responses. Interaction variables were computed for life events and sociotropic/ autonomous variables, life events with social support, and life events with dysfunctional attitudes. Subjects completed the measures over two time points, about 6 weeks apart. Data were analysed using a logistic regression procedure. Results indicated that recovery from a dysphoric state was best predicted by negative life events and positive autonomous life events. Use of the BDI-II is discussed in light of the time frame of the study and parameters of the instrument. Implications and recommendations for future research are also discussed.

Acknowledgements

Many people have contributed in many ways to the completion of this thesis. First, I would like to thank my supervisor, Dr. Keith S. Dobson, for all the time and help he has given throughout these first two years of my graduate studies. Dr. Dobson's flexibility and willingness to meet with me about various academic issues has made the process of coming up with, carrying out, and writing a thesis all the more enjoyable.

Thanks are also due to Drs. Candace Konnert and John Mueller for their willingness to serve on my thesis committee. In addition, I would also like to thank all the professors who allowed me to screen their classes for subjects, and the Department of Psychology for giving me access to the student subject pool. Many thanks are also due to Caroline Schnitzler for her help in data collection, scoring, and computer entry. Jodi Cullum was also helpful for scoring subtests and assisting in some statistical calculations.

Many thanks are also due to the friends and family who have supported me throughout this endeavour. I would like to thank Phyl Prout, Joy Hauck, and Angie Baydala for their academic and moral support; my sister Lisa Wilberding for being the best friend a sister could wish for; my parents Marcella Tobola and Bruce Ahnberg for always believing I could do this; and lastly, to Rob Pryor for putting up with many long nights, computer frustrations, and no help with the dishes. I am indeed lucky to be associated with all who are mentioned here, and many who are not.

Dedication

This thesis is dedicated to all people who have ever suffered from depression – or ever will – and have had difficulty finding their way out of the darkness alone. May further research help us all understand what can be done to help people escape from this disorder, intact and alive.

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Introduction

Depression may seem like a common feeling, something that everyone has experienced at times. For some people, however, this feeling of sadness may seem overwhelming, and not lift within a few weeks' time. One of the Diagnostic and Statistical Manual of Mental Disorders: Fourth Edition (DSM-IV; APA, 1994) criteria for an episode of clinical, or Major Depression is the presence of a depressed mood nearly every day for at least two weeks. Other criteria include a lack of interest or pleasure in previously enjoyed activities, problems with sleep, unintentional weight loss or gain, inability to concentrate, and thoughts of death. When these feelings persist, a person's work or school performance, and social network may be affected; there is also a possibility of suicide. Estimates of the lifetime risk for Major Depressive Disorder have varied from 10% to 25% for women, and 5% to 12% for men (APA, 1994).

Most of the research in the area of depression has been focused on the cause of the disorder, and various causal models exist (e.g., Sacco & Beck, 1995; Lewinsohn & Gotlib, 1995; Markowitz & Weissman, 1995). Understanding the cause of depression permits clinicians to predict onset, which has the obvious benefit of allowing mental health professionals to work protectively with those persons at risk.

Searches for predictors of the onset of depression have followed many paths, each leading to a small set of predictors which have been accepted in that area. Predictors of onset are a good place to look for possible predictors of recovery as well. For example, it seems logical that since a lack of positive life events is implicated in the onset of depression (Lewinsohn, Sullivan, & Grosscup, 1980b; as cited in Bootzin & Acocella, 1988), then an increase in positive life events, or a decrease in negative life events might be good predictors of recovery. After reviewing the constructs of depression and dysphoria, the introduction will review constructs that have been implicated in past research as possible predictors, which are used in this thesis.

The prediction of recovery can also be helpful to mental health professionals in terms of creating treatment strategies, as well as knowing which clients may have more positive predictors for recovery to help them out of a depressive state. At this time, however, there are no generally accepted predictors for recovery from a depressive episode or relapse, except that the number of previous depressive episodes is predictive of relapse (APA, 1994). In fact, 50% to 60% of persons who have experienced one episode of depression can be expected to experience at least one more episode.

Very little research has been done looking at how untreated depressed populations recover (Needles & Abramson, 1990). This paucity of research is

surprising given that many depressive episodes remit within a relatively short period of time, even without treatment, and given that many depressed individuals do not seek formal treatment (Beck, 1967, as cited in Needles and Abramson, 1990; Rippere, 1977b; Vredenburg, Flett, & Krames, 1993). The study of the prediction of recovery from depression has generally been limited to treatment outcome studies (Needles & Abramson, 1990). The prediction of recovery can, however, be used to formulate and test theories of depression. A model that can be found to explain both onset and recovery from depression will have more utility than a model which is only able to explain one or the other aspects of the depressive cycle.

This thesis focused on natural, or non-treatment-related, predictors of recovery in a college student population. Previous research looking at natural predictors has focused on testing a particular model (Hopelessness Theory; Needles & Abramson, 1990) or the specificity of predictors of recovery to different neurotic disorders (Brown, Lemyre, & Bifulco, 1992).

Dysphoria

An important construct implicated in the prediction of onset of or recovery from depression and/ or dysphoria is the presence of a negative or dysphoric mood (Lewinsohn, Roberts, Seeley, Rohde, Gotlib, & Hops, 1994; Lewinsohn, Gotlib, & Seeley, 1995; Wong & Whitaker, 1994). Depression has been defined in the DSM-IV (APA, 1994) as mainly consisting of a sad mood and/ or a loss of interest or

pleasure in nearly all activities. Dysphoria, on the other hand, has been defined as a pathological state of dissatisfaction (Portland House, 1989). These two terms have been used in similar contexts numerous times (e. g., Clark, Beck, & Brown, 1992; Edelman, Ahrens, & Haaga, 1994; Brown, Harris, Hepworth, & Robinson, 1994). Because no formal diagnoses were given in this thesis, participants were considered to be dysphoric – not depressed – implying a less specific type of negative mood (Dozois, Dobson, & Ahnberg, 1997; Edelman, et al., 1994; Kendall, Hollon, Beck, Hammen, & Ingram, 1987).

The Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) has been one of the most widely used measures of the presence and severity of depression (Kazdin, Matson, & Senatore, 1983). The BDI has recently been revised to be more consistent with DSM-IV criteria for a Major Depressive Episode (BDI-II; Beck, Steer, & Brown, 1996) (for a review of comparisons between the BDI and BDI-II, see Beck, et al., 1996; Dozois, et al., 1997). Among various wording changes and changes in item content, the BDI-II asks about depressive symptomatology which has occurred in the past two weeks (consistent with DSM-IV criteria), unlike the BDI, which asked about symptoms in the past week only.

Life Events

Researchers have often looked at life events as possible causal factors for depression (e. g., Benson & Deeter, 1992; Clarke, Hops, Lewinsohn, Andrews, Seeley, & Williams, 1992; Hammen, Ellicott, & Gitlin, 1989). Most of the work in this area has been done regarding major life events (Needles & Abramson, 1990), generally of a negative nature, such as loosing a pet, loosing one's job, or having a loved one die. If negative events are implicated in the onset of depression or dysphoria, it seems reasonable that the occurrence of positive events, or the lack of occurrence of negative events would have an impact on recovery.

Brown and colleagues (1992) found that improvement in, or recovery from an episode of depression or anxiety was related to a positive event occurring in the women's lives. Cohen, McGowan, Fooskas, and Rose (1984) found that negative life events were predictive of having some psychological disorder, even when previous disorder was controlled for.

An indirect, or interactional model between life events and other constructs may also be hypothesised. This model involves the occurrence of positive or negative life events interacting with another variable, such as attributional style; neither the occurrence of life events nor attributional style would be adequate to cause a person to become dysphoric or to recover, whereas their interaction may be. Needles and Abramson (1990) found that the occurrence of positive life events, in

interaction with a positive attributional style, was predictive of recovery in a group of university students.

Life events can be measured with their positive and negative forms separated (as in Needles & Abramson, 1990) or mixed together (as in Saxe & Abramson, 1987; as cited in Needles & Abramson, 1990). Splitting the two types of life events into their positive and negative counterparts may help to focus subjects on each type of event, and may prevent biased answering sets (saying no to all negative items, yes to all positive ones) in some participants.

Attitudes

Dysfunctional attitudes have been implicated in the onset and continuation of depressive symptoms (Beck, Rush, Shaw, & Emery, 1979; as cited in Sacco & Beck, 1995). Dysfunctional attitudes consist of interpreting events in a personal and maladaptive manner. Examples of dysfunctional attitudes include "I should be able to please everybody," and "If a person is not a success, then his/ her life is meaningless." These types of attitudes set up unrealistic expectations for a person to live up to; because a person is unable to meet even his/ her own expectations, they may feel inadequate and subsequently depressed. Measurement of dysfunctional attitudes was operationalised by Weissman and Beck (1978; as cited in Sacco & Beck, 1995) in the form of the Dysfunctional Attitudes Scale.

Zuroff, Igreja, and Mongrain (1990) found that scores on the Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978; as cited in Zuroff, et al., 1990; and Lewinsohn, et al., 1994) predicted scores on a retrospective version of the BDI, showing that dysfunctional attitudes were related to depressive symptomatology over time. Wong and Whitaker (1994) found that DAS scores were predictive of concurrent levels of depressive symptoms, but not future levels. They hypothesised that the DAS was unable to predict levels of depression over a 12 week period due to the high amount of variance accounted for at Time 2 by Time 1 depression scores. They further predicted that, as a stable construct, DAS scores might be better at predicting depressive symptoms over longer periods of time. Simons, Gordon, Monroe, and Thase (1995) found that the DAS was able to predict later Hamilton Rating Scale for Depression scores or BDI scores only when the person had not experienced a severe negative life event. Gillis (1992) found no interaction between the DAS and life stress measures, but instead found that DAS and life stresses were able to predict distress on their own, and in an additive fashion.

Sociotropy & Autonomy

Beck's (1983) constructs of sociotropic and autonomous personality dimensions may also play a role in recovery from depressive feelings. People with strong sociotropic personality traits are theoretically more dependent on others, and concerned with disapproval and/ or rejection by others. Those people who are

strongly autonomous are thought to be more independent, concerned with failure, and be achievement oriented. Beck theorised that people may become more dysphoric when the stressors they face are syntonic with their personality traits. Thus, when a highly sociotropic person experiences negative sociotropic events (e.g., getting into an argument with friends or family) s/he may be more likely to become dysphoric, than if the person experienced a negative autonomous event (e.g., getting a low mark on a test). In a similar vein, it is hypothesized that when a dysphoric person experiences a positive event syntonic with his/ her personality, s/he will be more likely to recover than if the positive event(s) occurs outside the relevant dimension.

Clark and his colleagues (1992) found that sociotropy significantly interacted with negative social life events in the prediction of dysphoria. Beck, Epstein, Harrison, and Emery (1983) developed the Sociotropy – Autonomy Scale (SAS) for the purpose of measuring the constructs of sociotropy and autonomy. These constructs can be thought of as occupying opposite ends of a continuum, or the two may be considered as linear constructs in their own right, varying independently of one another.

Social Support

Benson and Deeter (1992) quote an early definition of social support as "information [that leads] the subject to believe that [s/he] is cared for and loved,

esteemed, and a member of a network of mutual obligations" (Cobb, 1976; as cited in Benson & Deeter, 1992). Social support has been thought to promote mental health and well-being directly (Veiel & Kühner, 1990). Clark, et al. (1992) found that dysphoria was related to ratings of increased loss of social resources, due to negative interpersonal events.

Veiel & Kühner (1990) have also hypothesised that social support may provide a "buffering" effect against those life stresses that do come along. Veiel and Kühner (1990) also report that low social support is associated with poor mental health, and particularly with depressive symptomatology. Murphy (1984) found that reported social support did reduce the effects of stress on illness in friends and relatives of disaster victims, and those who lost property.

Social support has been measured in a number of ways. The more traditional form of assessment provides information about how much support a person is getting, and how much perceived support a person receives. Many measures have been developed to look at these two constructs (Prinz, Foster, Kent, & O'Leary, 1979; Schaefer, 1965; Moos, 1974; Barrera, 1986; Achenback & Edelbrock, 1987; Harter, 1982; Russell, Peplau, & Cutrona, 1980; all as cited in Lewinsohn, et al., 1994). Another aspect of social support may be called emotional reliance (Lewinsohn, et al., 1994), which involves how much support a person feels s/he needs, regardless of how much is actually being received. Measures have been

developed and used to measure the construct of emotional reliance (Hirschfeld, et al., 1976, as cited in Lewinsohn, et al., 1994; Lewinsohn, et al., 1995).

Treatment

It seems quite reasonable to assume that treatment would have an impact on depressive symptoms. Often clinicians assume that entry into some type of therapeutic course will attenuate or shorten the course of a depressive episode. The very point of treatment outcome studies is to test which therapy course or which theory will help speed along recovery faster than another course or no treatment at all. A common finding is that of Clarke and his colleagues (1992): they found that those subjects who received treatment were more likely to recover from depression than those on a wait-list control group.

In their test of recovery from dysphoria, Needles and Abramson (1990) reported that they selected an untreated sample of dysphoric college students to avoid the confounding effects that treatment would create in their testing of various models of recovery. Unfortunately, the approach Needles and Abramson (1990) used opens the possibility of a selection bias: untreated dysphoric samples may have been less distressed to begin with. Therefore, a sample that is in some form of treatment may represent a more "disturbed" population than those persons who do not seek treatment. Testing models of recovery which record the use of formal

treatment – but do not require or prohibit it – may prove to be a more "realistic" test of the recovery process.

Coping

Although active, or "formal" treatment may not often be sought out by dysphoric individuals, this does not necessarily mean that people do not engage in coping processes. It is generally accepted that episodes of depression can be expected to remit on their own; however, reported times to recovery have been variable. The DSM-IV (APA, 1994) reports that symptoms may last as long as six months when left untreated, while other researchers (Needles & Abramson, 1990; Oliver & Burkham, 1979) have reported that college populations can be expected to remit in about six weeks. Billings and Moos (1984) found that coping responses directed at problem solving or affective regulation were associated with less severe dysfunction in a group of adults entering treatment for depression than coping responses directed at emotional discharge. It is hypothesised that this recovery without formal treatment is related to coping measures people take on their own, or on the advise of friends.

No commonly accepted measure of coping with negative affect has been developed as yet; however, Rippere (1977a, 1977b, 1981) has done some work with community samples in the area of finding out what types of activities people believe would be good ideas to engage in when feeling down. What she came up with was a

group of ideas given by participants in her study describing what they thought would be "the thing to do" when feeling depressed, with some consensus. Rippere stated that the ideas may be understood best as "recipes" for behaviour, which people may or may not follow, with varying degrees of success.

Present Study

Depressive or dysphoric episodes may be the most common disorder that psychologists are likely to come across (Gotlib, 1993). Much of the research in the field of depression has focused on the cause(s) of the disorder. However, researchers are now looking at the correlates and causes of recovery, hoping to inform a theory of depressive episodes that will not only help explain the recovery process, but also inform therapeutic interventions as well. Many of the ideas of what to look at as a predictor of recovery come from the research literature of depressive onset or continuation. Concepts covered in this thesis were Life Events, Attitudes, Sociotropic and Autonomous personality styles, Social Support, Treatment, and Coping methods. These constructs have shown some relation to current or future depression or dysphoria in the past; some have shown relationships to recovery as well.

The purpose of the present study was to examine possible predictors of recovery in a dysphoric university population. A longitudinal design was used in this thesis to address the ability of the above constructs to predict recovery in a

dysphoric sample of university students. Subjects were screened for entry into the study based on the presence of dysphoric symptoms. Once subjects were identified, the study became longitudinal in nature, with subjects filling out Time 1 measures and then about two months later, filling out the Time 2 measures. Subjects were classified in to Recovered or Stable Dysphoric groups based on their BDI-II score at Time 2.

Hypotheses

Based on the literature review, hypotheses for this study were:

1. Persons who recovered from their dysphoric feelings would have experienced more positive life events and fewer negative life events than those persons who remained dysphoric.

2. Those persons in the Recovered group at Time 2 would have lower dysfunctional scores on the Dysfunctional Attitudes Scale than those in the Stable Dysphoric group.

3. Participants who received formal treatment would be more likely to recover than those who did not.

4. Those participants who used a greater number of informal coping methods would be more likely to be in the Recovered group at Time 2 than those people who used a fewer number of coping methods.

5. Persons in the Recovered group would have experienced more positive life events syntonic with their scores on the SAS than would the Stable Dysphoric group. For example, a Recovered person who scored high on sociotropy on the SAS would have experienced more positive socially relevant events on the Life Events Questionnaire than achievement oriented ones. Similarly, a Recovered person who scored high on autonomy on the SAS would have experienced more positive autonomously relevant events on the Life Events Questionnaire than socially relevant ones.

Method

Subjects

Subjects were recruited from introductory psychology courses at the University of Calgary, as well as a registry of students willing to be called about a research project, kept by the Department of Psychology. Students screened in class were called back based on their score of 20 or above on the Beck Depression Inventory, version Two (Beck, et al., 1996). This cut-off was chosen as it represents people with moderate to severe depression. Selection was based on this criterion alone, and no person was disqualified from the study based on sex, age, ethnicity, or any other variable. The screening process was two-stage: participants were first preselected on the basis of the BDI-II scores, and scores were reassessed at Time 1. Only persons with a BDI-II score of 20 or higher at Time 1 were included further in

the study. Those students recruited by the registry system were contacted by phone, and an appointment was made to participate in a small group screening. Female subjects who did not meet criteria for this study were offered the chance to participate in another study. All subjects with a BDI-II score of 20 or higher were given a consent form (see Appendix A) explaining the study, as well as a verbal explanation. If they agreed, subjects filled out Time 1 measures at that time.

Measures

Time 1

Dysphoria

The BDI-II was completed at the screening, Time 1, and Time 2. The BDI-II (Beck, et al., 1996) is a 21-item measure of the severity of depressive symptoms. It is a revision of the popular BDI (Beck et al., 1961), which has been in general use for many years, and has been called one of the most useful measures of depression (Kazdin, et al., 1983). Scores on the BDI-II can range from a low of zero to a possible high of 63. The manual states that the test-retest reliability (in an outpatient sample) over one week is .93, $p < .001$, while internal consistency is high with $\alpha = .93$ (in a college student sample) (Beck, et al., 1996).

Attitudes

Dysfunctional attitudes were measured with a shortened form of the Dysfunctional Attitudes Scale (DAS; Weissman and Beck, 1978; as cited in

Lewinsohn et al., 1994), a nine-item questionnaire assessing cognitive distortions thought to make individuals vulnerable to depression. The full DAS has a test-retest reliability in a normal adult population of .73 (Oliver & Baumgart, 1985; as cited in Zuroff, et al., 1990). Scores on the short form range from 9 to 45, with lower scores indicating greater distortions. Scoring was reversed so that greater scores indicated greater dysfunction, allowing the measure to be more easily compared to other measures used in the study. The measure was also divided into two subscales reflecting achievement and social or affliative domains, again with higher scores indicating more dysfunctional attitudes in that area. This division was completed by giving a copy of the DAS to two raters. Decision rules for this division were as follows: social or affiliative domains were said to have an underlying sociotropic content, while achievement domains were said to have an underlying autonomous content, rules for sociotropic and autonomous content were the same as those used in the subscaling of the Life Events Questionnaires (see Appendix B for a list of the items on each subscale). Agreement between the two raters was 100%.

Sociotropy / Autonomy

The constructs of sociotropy and autonomy were measured with the Sociotropy – Autonomy Scale (SAS; Beck et al., 1983), a 60-item questionnaire. The SAS consists of 30 items to measure each construct. Each item is rated on a five-point scale, describing the percentage of time the subject feels the item

describes him or her; scores range from 0 to 120. Sociotropic items are those that describe feelings of concern over disapproval from others, and efforts to be attached to others. Autonomous items reflect more achievement domains, a need to control the environment, and a need to be independent of others. Subjects may be categorised as predominantly sociotropic or autonomous based on their answers to these items. Scores may also be used as simple dimensional ratings of how sociotropic or autonomous each subject is. Hammen and her colleagues (1989) report a test – retest reliability of .82 for sociotropy and .59 for autonomy over a period of six months (23 patients at the UCLA Affective Disorders Clinic).

Social Support – Emotional Reliance

The Emotional Reliance measure was developed by Lewinsohn and his colleagues (Andrews et al., 1993, Lewinsohn et al., 1994, as cited in Lewinsohn et al., 1995) to assess interpersonal sensitivity, anxiousness about being alone or abandoned by others, and the extent to which the person desires or needs more support and/ or approval than she or he is currently receiving. There are ten items on this scale, with scores ranging from 10 to 40. The Emotional Reliance measure has been reported to have an internal consistency with $\alpha = .83$ in a sample of senior high school students (Lewinsohn, et al., 1994). In the same sample, test – retest reliability over a mean of 13 months was .54.

Time 2

Dysphoria

The BDI-II was used again at Time 2 as the measure of dysphoria.

Life Events

The occurrence of episodic and ongoing life events was assessed with the Life Events Questionnaire (LEQ; Saxe & Abramson, 1987, as cited in Needles & Abramson, 1990). Test – retest reliability over two to three weeks is reported as .82 (Needles & Abramson, 1990) in a sample of college students. The 254-item questionnaire was divided into its positive and negative event subtests, and was presented to subjects in this fashion. Subjects were asked to indicate if each event had occurred between Time 1 and Time 2. The subtests were further divided into items which assessed social or achievement domains (see Appendix C for the final items).

Decision rules used in this process were as follows: an event was coded as social if it involved friends, family, significant others, pets, or was a personal comment by one of the aforementioned persons; an event was coded as autonomous or achievement-oriented if it had to do with work/ school functioning, personal projects, or was a comment by a Teacher Assistant, Professor, or boss about performance; an event was coded as both if the event met both criteria (e.g., was a comment by persons in the social category about an autonomous area), and neither if

it did not meet any criteria (e.g., had to do with one's standard of living, finances, food, sleep, or inanimate objects). Three raters used the decision rules to classify items; total agreement between pairs of raters on each type of subscale (e.g., positive life events of an autonomous nature) ranged from 81% to 100%. For items where one rater did not agree with the other two, a "majority rules" decision was made. No rater was alone in his or her decision more often than the other two (raters were "voted out" 5% to 11% of the time). For items where a three-way tie occurred, a conference was held between two raters, who discussed the item and re-rated it. This method resolved all three-way ties.

Social Support

Perceived social support was assessed with two measures developed by Lewinsohn and his colleagues (Andrews et al., 1993, Lewinsohn et al., 1994, as cited in Lewinsohn et al., 1995). Internal consistency with the two measures collapsed into one was reported with $\alpha = .72$, and a test – retest reliability over an average of 13 months of .60 (Lewinsohn, et al., 1994) Social Support Scale A measures the availability of a social support network, with subscales of the number of people named, and the quality of the support they provide. Social Support Scale A is scored so that higher scores reflect increasing levels of available social supports. Social Support Scale B measures the perception of being supported by a

social network. Social Support Scale B is scored such that higher scores reflect less perceived social support.

Treatment

Because all participants were given information regarding treatment options on campus as well as phone numbers to call in the community, and because treatment may have affected the predictability of recovery from dysphoria, it was felt that the assessment of treatment received was important. A simple self-report form was created to assess whether or not subjects received treatment during the time of the study, and of what type (psychological, pharmacological, or both) See Appendix D for the Treatment record completed by subjects.

Coping

In addition to, or often instead of formal treatment, many people experiencing a negative mood use coping measures they have come up with themselves, or have heard about elsewhere (e.g., magazines, television, friends). Rippere (1976, 1977, 1981) developed a list of coping methods commonly used when people are feeling down. Subjects were given this list and asked to mark a "yes" or "no" if they had engaged in each coping behaviour during the time between Time 1 and Time 2. See Appendix E for a copy of the list presented to subjects.

Procedure

Subjects completed the relevant set of measures at Time 1 and Time 2. The time between the two testings was set conservatively at about two months based on previous research (Oliver and Burkham, 1979; Needles and Abramson, 1990) which reported that approximately half of all college students experiencing dysphoria could be expected to recover within a six week time period. Incentive to complete the study was encouraged with a raffle drawn from all subjects who completed all measures at both time intervals. To avoid academic or seasonal time of year effects, participants were recruited and tested beginning October 1996 through April 1997. Subjects completed all measures in the presence of a graduate student who could answer any questions they might have. All participants who scored high on the BDI-II item assessing suicidal thoughts were queried, and encouraged to seek help at the University Counseling Centre. All potential subjects were given information about receiving treatment for their dysphoric symptoms; however, subjects in the study were not required to participate in a formal treatment process to participate in the study. The researcher felt it was important to give participants the option of seeking treatment, while at the same time realising that most people suffering from depressive feelings do not seek treatment (Rippere, 1977b; Vredenburg, et al., 1993).

Results

Subjects

Subjects were recruited from undergraduate psychology courses and a registry of possible research participants kept by the Department of Psychology at the University of Calgary. The total number of subjects screened was 1,523, of whom eleven percent (n = 169) were eligible at that time for the study. Some of those 169 were unable to return, either because they no longer wished to participate, or they did not fill out the consent form properly. In all, 116 (69%) returned to be re-assessed and fill out Time 1 measures. Eighty-eight students (76%) still met inclusion criteria and filled out measures at Time 1, thus entering the study. Seven participants were lost during follow-up due to an inability to locate them, or to their not wishing to participate further, resulting in a final N of 81 (92% of all subjects entering the study).

The time lapse between Screening, Time 1, and Time 2 were available for most participants (dates were not recorded on some forms). The mean number of days between Screening and Time 1 were 6.23. Time 1 to Time 2 lapses were available for 78 subjects, with a mean of 43.97 days, or 6.28 weeks.

The final sample consisted of 6 men and 68 women (7 participants did not mark down their gender). Reported ages ranged from 17 to 44, with a mean of 21.29. For those subjects who reported their ethnicity, 46% reported white,

Caucasian, or other European descent; 14% reported Asian or Pacific island descent; 29% reported being Canadian only (no other ethnic origin given); and 11% reported being an ethnicity other than black, Hispanic, native, or any of the above. Years completed at university ranged from one to more than five, with a mean of 1.98.

Descriptive Statistics

All statistical analyses were done using SPSS for Windows, version 6.0. As a first step in examining the data, correlations were computed among all non-demographic variables (see Appendix F for the complete matrix). Scores on the BDI-II at Time 1 were correlated significantly with a number of variables, including the BDI-II score at Time 2 ($r = .54$, $p < .01$).

Based upon the correlation matrix, decisions were made about the further use of several measures. The variables Emotional Reliance, Treatment, Treatment Type, and Coping were not used in further analyses as they did not significantly correlate with the outcome depressive measure (see Appendix F), and therefore could not have been predictors of recovery. The two subscales of Social Support Scale A (SSSA-number and SSSA-quality) were not used due to their extremely high correlations with each other and the main scale, a cause of redundancy. Therefore, only the total SSSA was used in further analyses. Finally, the total DAS score was dropped from analyses, while its two subscales (DAS-affiliation and DAS-

achievement) were retained as they were both highly correlated with the DAS, but only moderately correlated with each other.

Subjects were divided based on their BDI-II at Time 2 scores into groups of Stable Dysphoric or Recovered. Thirteen students recovered between Time 1 and Time 2, whereas 68 remained dysphoric. Chi-square or one-way analyses of variance, as appropriate, showed no significant differences at Time 1 between these two groups on the variables Sex, Age, Ethnicity, and Year in University (see Table 1). As a result, all demographic variables were dropped from further analyses. The variables used in further analyses, then, were the BDI-II at Time 1, DAS-affiliation, DAS-achievement, Sociotropy, Autonomy, Positive Life Events, PLE-social, PLE-autonomous, Negative Life Events, NLE-social, NLE-autonomous, Social Support Scale A, Social Support Scale B, and Recovery Status. See Table 2 for a listing of means and standard deviations for all variables. Differences between the Recovery Status groups were tested using the F test.

Main Analyses

Analyses were carried out using logistic regression analysis, first in a hierarchical, or theoretically-driven fashion, and then in a stepwise, statistically-driven fashion. The Wald statistic was used to evaluate the contribution of individual predictors to each regression equation. The Wald statistic is the simplest method of evaluating predictors, although some concern has been expressed

Table 1.

Means and/ or Ns for demographic variables used in this study.

	Recovered	Not Recovered
Age	23.36 (n = 11)	20.78 (n = 63)
Year in University	1.55 (n = 11)	2.11 (n = 62)
Sex		
male	0	6
female	11	57
Ethnicity		
White	3	27
Asian	2	7
Canadian	4	15
Other	1	6
Living With Parents		
Yes	6	37
No	5	25

Table 2.

Means and standard deviations for variables measured in this study, by recovery status.

	Recovered (n = 13)	Not Recovered (n = 68)
BDI-II, Time 1 Range = 20 - 54	22.77 (2.20)	27.12 (6.96)
Emotional Reliance	28.38 (6.55)	27.99 (5.93)
Dysfunctional Attitudes	24.69 (5.20)	26.12 (6.13)
DAS - affiliation	13.85 (3.29)	14.99 (3.78)
DAS - achievement	10.85 (2.82)	11.18 (3.55)
Sociotropy	76.62 (13.30)	80.21 (17.12)
Autonomy	72.62 (10.66)	68.47 (15.91)
BDI-II, Time 2 Range = 5 - 52	9.23 (2.55)	26.49 (7.75)
Positive Life Events	76.08 (15.68)	64.82 (17.38)
PLE - sociotropic	49.54 (12.88)	44.19 (13.74)
PLE - autonomous **	50.08 (14.17)	36.06 (16.07)
Negative Life Events *	25.15 (10.65)	36.88 (14.56)
NLE - sociotropic *	15.31 (9.22)	23.76 (11.43)
NLE - autonomous *	25.54 (10.01)	37.29 (15.12)

(table continues)

Table 2. Continued

	Recovered (n = 13)	Not Recovered (n = 68)
Social Support Scale - A	68.08 (29.52)	61.91 (28.38)
SSS -A - number	9.62 (3.97)	9.43 (4.33)
SSS -A - quality	58.46 (25.64)	52.49 (24.39)
Social Support Scale - B	9.69 (4.97)	11.21 (4.38)
Coping	45.92 (11.85)	41.53 (11.85)
Treatment Type (Ns only)		
None	13	58
Pharmacotherapy	0	2
Psychotherapy	0	4
Both	0	4

Note: comparisons made using F tests, * = $p < .05$, ** = $p < .01$

DAS - affiliation = Dysfunctional Attitudes Scale, affiliative items
DAS - achievement = Dysfunctional Attitudes Scale, achievement itmes
PLE - sociotropic = Positive Life Events of a sociotropic nature
PLE - autonomous = Positive Life Events of an autonomous nature
NLE - sociotropic = Negative Life Events of a sociotropic nature
NLE - autonomous = Negative Life Events of an autonomous nature
SSS - A - number = Social Support Scale A, number of supports listed
SSS - A - quality = Social Support Scale A, quality of supports listed

regarding its tendency to be conservative when the absolute value of regression coefficients are large (Tabachnick and Fidell, 1996).

Hierarchical logistic regression was performed with recovery status as the outcome and 13 predictor variables: BDI-II score at Time 1, DAS-affiliation, DAS-achievement, Sociotropy, Autonomy, Positive Life Events, PLE-social, PLE-autonomous, Negative Life Events, NLE-social, NLE-autonomous, Social Support Scale A, and Social Support Scale B. BDI-II at Time 1 was entered on the first step, and the remaining variables were entered on the second. A test of the research model against the constant-only model was significant at the first step (with BDI-II at Time 1), χ^2 (1, n = 81) = 7.43, p <.01, with correct classification of 84% of cases. The regression coefficient for the BDI-II at Time 1 was .21 (p < .05), and the Wald statistic was 4.35. With all remaining variables entered in the equation at step two, the test between the full model and the constant-only model remained significant χ^2 (12, n = 81) = 20.86, p = .05, even though no smaller set of predicting variables was able to be identified. Indeed, even the regression coefficient for the BDI-II at Time 1 was no longer significant (.35, p > .05). Correct classification of cases rose to 86%, with 38% of recovered cases being classified correctly, and 96% of stable dysphoric cases receiving correct classification. See Table 3 for a listing of regression coefficients and Wald statistics for these variables.

Table 3.

Hierarchical logistic regression analysis of recovery status as a function of 13 main variables.

Predictor	*B*	Wald test
BDI-II, Time 1	0.35	3.53
DAS - affiliation	0.4	3.45
DAS - achievement	-0.17	0.71
Sociotropy	-0.06	1.68
Autonomy	-0.03	0.67
Positive Life Events	-0.16	2.42
PLE - sociotropic	0.21	3.19
PLE - autonomous	-0.01	0.02
Negative Life Events	0.16	1.28
NLE - sociotropic	-0.07	0.22
NLE - autonomous	0.02	0.13
Social Support Scale - A	-0.03	1.29
Social Support Scale - B	0.08	0.43
(constant)	-5.28	0.55

Note:
DAS-affiliation = Dysfucntional Attitudes Scale, affiliative items
DAS-achievement = Dysfunctional Attitudes Scale, achievement items
PLE-sociotropic = Positive Life Events of a sociotropic nature

(note continues)

PLE-autonomous = Positive Life Events of an autonomous nature
NLE-sociotropic = Negative Life Events of a sociotropic nature
NLE-autonomous = Negative Life Events of an autonomous nature

A second hierarchical logistic regression was performed with recovery status as the outcome and the BDI-II at Time 1 and four interaction variables as predictors: Sociotropy by Positive Sociotropic Events, Sociotropy by Negative Sociotropic Events, Autonomy by Positive Autonomous Events, and Autonomy by Negative Autonomous Events. Step one yielded the same results as step one in the first analysis. The test at step two between the full model and the constant-only model was no longer significant, χ^2 (4, n = 81) = 7.49, $p > .05$, and classification worsened to 83% of cases being correctly classified. See Table 4 for the regression coefficients and Wald statistics for these variables.

Although no hypotheses were made about the following eight interaction variables, it was felt important to analyse the data available. Therefore, a third hierarchical logistic regression was performed with recovery status as the outcome and the BDI-II at Time 1 and four interaction terms as predictors: Negative Life Events by Social Support Scale A, Negative Life Events by Social Support Scale B, Positive Autonomous Life Events by Social Support Scale A, and Positive Autonomous Life Events by Social Support Scale B. Step one gave the same results as found in the previous two analyses. Step two showed that the test between the constant-only and the full model was still significant, χ^2 (4, n = 81) = 11.39, $p < .05$, with correct classification increasing to 85%. However, no smaller set of predictors was able to be classified; even the BDI-II at Time 1 was no longer significant (B =

Table 4.

Hierarchical logistic regression analysis of recovery status as a function of BDI-II score and four interaction variables.

Predictor	*B*	Wald test
BDI-II, Time 1	0.19	2.56
PLE-soc. by Sociotropy	0.01	0.03
NLE-soc by Sociotropy	0.06	1.24
PLE-ach by Autonomy	-0.03	0.62
NLE-ach by Autonomy	0.05	1.16
(constant)	-4.25	1.58

Note:

PLE-soc by Sociotropy = Positive sociotropic life events by sociotropy
NLE-soc by Sociotropy = Negative sociotropic life events by sociotropy
PLE-ach by Autonomy = Positive autonomous life events by autonomy
NLE-ach by Autonomy = Negative autonomous life events by autonomy

Table 5.

Hierarchical logistic regression analysis of recovery status as a function of BDI-II score and four social support interaction variables.

Predictor	*B*	Wald test
BDI-II, Time 1	0.23	3.52
NLE by SSS-A	0.01	0.01
NLE by SSS-B	0.67	1.28
PLE-aut by SSS-A	-0.01	0.13
PLE-aut by SSS-B	-0.31	1.42
(constant)	-3.33	1.22

Note:

NLE by SSS-A = Negative life events by social support scale A
NLE by SSS-B = Negative life events by social support scale B
PLE-aut by SSS-A = Positive autonomous life events by social support scale A
PLE-aut by SSS-B = Positive autonomous life events by social support scale B

.23, $p > .05$). See Table 5 for regression coefficients and Wald statistics for these variables.

In order to more fully address the impact personality variables might have in the prediction of recovery, a last hierarchical logistic regression was performed with recovery status as the outcome, and the BDI-II at Time 1, and four interaction variables as predictors: Dysfunctional Attitudes Scale, affiliative items by Positive sociotropic Life Events, Dysfunctional Attitudes Scale, affiliative items by Negative sociotropic Life Events, Dysfunctional Attitudes Scale, achievement items by Positive autonomous Life Events, and Dysfunctional Attitudes Scale, achievement items by Negative autonomous Life Events. Again, the results at step one were the same as in previous analyses. At step two, the test of the constant-only model against the full model remained significant, χ^2 (4, n = 81) = 13.76, $p < .01$, with correct classification increasing to 85%. Only one predictor remained significant at step two, the DAS achievement items by Positive autonomous Life Events, $B = -.48$, $p < .05$. For a listing of the regression coefficients and Wald statistics for the variables in this analysis, see Table 6.

To allow the variables mentioned above to compete equally with the BDI-II at Time 1 for prediction, analyses were run again using forward stepwise logistic regression with recovery status as the outcome and the same 13 predictor variables listed in the first analysis, including the BDI-II at Time 1. PLE-autonomous was

Table 6.

Hierarchical logistic regression analysis of recovery status as a function of BDI-II score and four dysfunctional attitude interaction variables.

Predictor	*B*	Wald test
BDI-II, Time 1	0.23	3.24
PLE-soc by DAS-aff	0.15	0.75
NLE-soc by DAS-aff	0.61	2.68
PLE-aut by DAS-ach *	-0.48	5.34
NLE-aut by DAS-ach	0.19	0.55
(constant)	-5.03	2.06

Note: * = $p < .05$

PLE-soc by DAS-aff = Positive sociotropic life events by affiliative dysfunctional attitudes

NLE-soc by DAS-aff = Negative sociotropic life events by affiliative dysfunctional attitudes

PLE-aut by DAS-ach = Positive autonomous life events by achievement dysfunctional attitudes

NLE-aut by DAS-ach = Negative autonomous life events by achievement dysfunctional attitudes

entered on the first step, and Negative Life Events was entered on the second step. Comparison of the statistical two-variable model against the constant-only model was significant, χ^2 (2, n = 81) = 15.65, p <.01, with 86% of cases being correctly classified. Ninety-nine and 23% of stable dysphoric and recovered cases were correctly classified, respectively. Regression coefficients for PLE-autonomous and Negative Life Events are -.06, and .08, respectively. Wald statistics are 5.49, and 5.14 for PLE-autonomous and Negative Life Events, respectively.

A second forward stepwise logistic regression was run with recovery status as the outcome, and the BDI-II at Time 1, and the twelve interactions described above as predictors. On step one, the interaction between Negative Life Events and Social Support Scale B was entered, and Positive autonomous Life Events by Social Support Scale B was entered on step number two. The two-variable model was significantly better at prediction than the constant-only model, χ^2 (2, n = 81) = 12.98, p < .01. Regression coefficients for NLE by SSSB and PLE by SSSB are .83, and -.30, respectively. Wald statistics are 7.51, and 3.82 for NLE by SSSB and PLE by SSSB, respectively. Fifteen percent of recovered cases were correctly classified, and 99% of stable dysphoric cases received correct classification, for a total correct classification of 85%.

The last forward stepwise logistic regression was run with recovery status as the outcome, and a "best set" of predictors, as indicated from previous analyses.

This set of predictors consisted of the BDI-II at Time 1, PLE-autonomous, Negative Life Events, and the interactions for Negative Life Events by Social Support Scale B, and Positive Live Events by Social Support Scale B. PLE-autonomous was entered on the first step of analysis, and Negative Life Events was entered on the second. This two-variable model was again better at classification than the constant-only model, χ^2 (2, n = 81) = 15.65, p <.01. Twenty-three percent of recovered and 99% of stable dysphoric cases were correctly classified, yielding a total classification of 86%. Regression coefficients for PLE-autonomous and Negative Life Events are -.06, and .08, respectively. Wald statistics are 5.49, and 5.14, respectively.

In summary, seven logistic regressions were carried out in an effort to find the best set of predictors of recovery in this university sample. The first analysis, with the BDI-II at Time 1 being allowed to account for as much variance as possible, showed that when all the other variables were entered into the equation, prediction did improve, but could not be singled to any one, or any small set, of predictors. In the second analysis, the BDI-II at Time 1 was again given the chance to account for as much variance in the equation as possible, and life event by sociotropy/ autonomy interaction variables were entered into the equation. In this case, the predictive power decreased between the two steps, becoming non-significant. The third analysis also gave the BDI-II the chance to account for as

much variance as possible, with social support by life event interactions entered into the equation. Although the equation remained significant after the second step, prediction could not be singled to any one, or small set of predictors. The last hierarchical analysis included the BDI-II and life event by dysfunctional attitude interactions. This analysis also remained significant after both steps; however, the single significant predictor of recovery status was the positive autonomous life events by dysfunctional achievement attitudes interaction.

At this point, analyses became step-wise in nature: statistically-driven instead of theoretically-driven. The fifth analysis showed that of the "main effect" variables, Positive Life Events-autonomous, and Negative Life Events were best able to predict recovery status. The sixth analysis included the BDI-II at Time 1 and twelve interaction variables; the variables best able to predict recovery status of this set were Negative Life Events by Social Support Scale B, and Positive Life Events-autonomous by Social Support Scale B. The final analysis included only those variables that were indicated from the previous four analyses. This last step-wise logistic regression yielded a two-variable solution, consisting of Positive Life Events-autonomous, and Negative Life Events. In essence, it was found that life events, of a negative and of a positive autonomous nature were best able to predict recovery status in this sample.

Discussion

The purpose of this thesis was to discover possible predictors of recovery in a dysphoric university population using a variety of measures, including measures of the severity of dysphoria, life events, attitudes, social support, treatment, and coping responses. Each hypothesis of the thesis will be discussed in turn, and related to current literature. Next, methodological limitations of the thesis will be reviewed, and suggestions for future research in the area of prediction of recovery from dysphoria will be made.

Hypotheses

The first hypothesis stated that persons who recovered from their dysphoric state would have had more positive and fewer negative life events occur than did those persons who remained dysphoric at Time 2. Conversely, those who remained dysphoric could be said to have experienced more negative and fewer positive life events than their recovered counterparts. Results from this thesis partially support these ideas. While the overall number of positive life events did not predict the two groups, there was a significant prediction for negative life events. Those persons who did recover from their dysphoric feelings experienced significantly fewer negative life events than those who remained dysphoric.

Partial support for the first hypothesis is similar to data reported by Needles and Abramson (1990), in that they also found no support for a direct effect of positive life events on mood. They theorised that:

> The similarity between the role played by increases in positive episodic events and the role played by decreases in negative situations seems reasonable, in that both occurrences may be thought of as improvements in life circumstances. (p. 163)

Although this present research did not address the issue of episodic events versus situations in life events, the idea that increases in positive life events may work in the same fashion as decreases in negative life events still seems to apply. Wong and Whitaker (1994) also found that higher levels of negative life events contributed to depressed mood states.

Although Positive Life Events as a whole did not emerge as a predictor of recovery status, analysis did show that there was a significant difference between the Stable Dysphoric and Recovered groups on positive autonomous life event scores. This finding is contrary to results obtained by Clark and his colleagues (1992), who found that the trait of autonomy did not have a relation with dysphoria or any type of life event. Instead, Clark, et al. (1992) found that sociotropy interacted with negative life events to predict later dysphoria. A possible reason for these disparities may be the method of measurement of life events. Clark, et al. (1992)

measured only negative life events, while this thesis measured both negative and positive life events. A difference between the two Recovery status groups was found for autonomy only in relation to positive life events.

Dalgard, Bjørk, and Tambs (1995) stated that "social support or negative life events alone exert little influence upon the course of mental health." Results from this thesis clearly do not support such a statement. While this thesis utilised a subject pool of already dysphoric individuals, the study carried out by Dalgard and his colleagues (1995) was predicting onset of mental health difficulties in a sample of individuals who were relatively healthy at the beginning of their observation period. Therefore, it may be that for relatively healthy individuals social support or negative life events alone may not have a discernible impact on their mental health; however, in an already dysphoric population, the occurrence of negative life events does seem to affect the course of recovery.

Hypothesis 2 stated that persons who recovered from their dysphoric feelings would have less dysfunctional scores on the short form of the DAS than those who did not recover. Data analysis showed that there were no significant differences of the score on the short form of the DAS, across recovery status. Therefore, hypothesis 2 was not supported. This finding is similar to the results of Wong and Whitaker (1994), who found that DAS scores were not able to contribute to the prediction of depression at their second data collection point. One reason for the

results found in this thesis may be that because all subjects were preselected into the study based on their dysphoric state, they may all have dysfunctional attitudes in a similar range. Whether or not subjects recovered may not be related to a construct thought to be fairly stable (Wong & Whitaker, 1994).

The third hypothesis argued that persons who received some type of formal treatment (from a mental health professional) would be more likely to be in the Recovered group at Time 2 than those who did not receive treatment. This hypothesis was clearly not supported; all subjects who were involved in formal treatment were classified in the Stable Dysphoric group at Time 2. This result may, however, be due to a confound of severity. It may be that only those dysphoric college students who were significantly more depressed than their dysphoric peers sought treatment. Indeed, a post-hoc analysis indicated that there was a difference in BDI-II scores between students who sought treatment and those who did not. Subjects who entered into some type of formal treatment ($n = 10$) had higher scores on the BDI-II at Time 1 than those who did not enter into treatment ($n = 71$) ($F = 8.54$, $df = 1/80$, $p < .01$).

The fourth hypothesis stated that persons who used greater numbers of informal coping measures would be more likely to be in the Recovered group at Time 2 than those who did not use as many coping methods. Analysis showed that there were no significant differences between the Recovered and Stable Dysphoric

groups on number of coping methods used. Therefore, hypothesis 4 was not supported. Little research has been carried out in the area of what coping methods people may use on their own to recover from a dysphoric state. Rippere's (1977a, 1977b) research involved asking people what they thought were good things to do when feeling down. The list of answers, subsequently used in this thesis, contains some items that may not be considered therapeutic. For example, there are a number of possible responses that run counter to the currently popular cognitive-behavioural ideas of increasing one's positive events and spending time with others (e.g., sleep, crawl away on one's own, keep to oneself, wallow in it).

Future research may want to address the assessment of informal coping methods more fully. The measure used in this study was chosen because it seemed the most representative of the types of coping methods ordinary people would use to cope with a dysphoric mood. Indeed, the list was developed specifically for that purpose (Rippere, 1977a). The list has been divided into a number of categories, including "avoidance, pharmacological, and cognitive and affective experience" (Rippere, 1977a). Unfortunately, the items which make up each category has not been published, and the number of categories was too great as compared to the number of items for this researcher to attempt her own classification of items. Further study in the area of coping responses that ordinary people make to dysphoric states is sorely needed.

The last hypothesis stated that persons who experienced more positive life events syntonic with their scores on the SAS would be more likely to be classified in the Recovered group at Time 2 than those who experienced positive life events not syntonic with their SAS scores. This hypothesis posited an interaction between a persons' personality style of being more sociotropic or autonomous, and life events. Analyses showed that when an interaction term was created and given the opportunity to discriminate between the two groups, the term was not entered into an equation. Therefore, the interaction term was not different between the two recovery status groups, and the last hypothesis was not supported.

The finding that an interaction term between life events and sociotropy did not emerge as a significant predictor of recovery is counter to the results of Clark and his colleagues (1992), who found that sociotropy interacted significantly with negative social events to predict later dysphoria. The results of this thesis are also inconsistent with Beck et al.'s (1983) diathesis – stress model of depression. One reason for these disparate findings may be that there were not enough subjects in the current thesis to detect a significant interaction such as the one found by Clark et al. (1992). Another possibility for the lack of a significant interaction may be that while Clark et al.'s (1992) study was predicting later dysphoria from life events and sociotropy/ autonomy scores, this thesis was working at the other end of the depressive cycle, predicting recovery from dysphoria, including the same variables.

It may be that while negative life events interact with personality style in non-dysphoric individuals at the onset of dysphoria, the interaction of the same two variables does not influence the course of recovery in dysphoric samples.

Hammen and her colleagues (1989) found that patients in their sample had their most severe symptoms after a period where life stressors matched their personally relevant domain. Also, for those patients who had a period of no symptoms, the severity of their subsequent episode was predicted by an interaction of their autonomy score and achievement events. They did not find an interaction effect for sociotropy score and social events, however. This thesis may not have found this interaction effect due to the different populations studied (undergraduates versus outpatient clinic sample). A second possible reason may be the relatively small numbers in the Recovered versus the Stable Dysphoric group.

A recent study by Spangler, Simons, Monroe, and Thase (1997) failed to find support for a stress – diathesis matching model of recovery. Subjects were patients in an outpatient clinic, receiving cognitive – behavioural therapy. Drops in depression level were evidenced for all groups, regardless of whether subjects could be classified into groups whose life stress matched an area of cognitive vulnerability. More specifically, results of this thesis match those reported by Spangler, et al. (1997), in that the DAS was not found to interact with life events in a significant way, to predict treatment outcome. Spangler, et al. (1997) found that

attributional style was able to interact with life events in the prediction of treatment response, implicating attributional style as a construct that should be researched further.

A word or two is in order regarding the findings on social support. As mentioned earlier, social support in various forms has been implicated in the onset and maintenance of dysphoria or depression (e.g., Veiel & Kühner, 1990; Clark et al., 1992). Neither measure of social support used in this thesis proved to be a significant factor in predicting recovery from dysphoria as a main effect. When social support was tested in interaction with life events, and these interactions competed against other interactions of life events with sociotropy/ autonomy and life events with dysfunctional attitudes, a buffering effect of social support was found. However, when the two significant social support interactions were entered into a "best set" of predictors, they failed to maintain their significance. The failure to find a predictive role for social support is in direct contrast to the results reported by Cohen, Sherrod, and Clark (1986) who found a buffering effect for social support in college students. More specifically, Cohen and colleagues (1986) found an effect for the perceived availability of social support, an interaction effect that did show up in the analysis of this data, but was unable to compete against life events. Johnson, Monroe, Simons, and Thase (1994) commented that at that time, studies using clinical samples were "more successful in documenting the impact of life events on

symptom exacerbation or relapse" than finding relationships with personality or social variables. Dalgard and his colleagues (1995) stated that social support or negative life events alone were not able to influence the course of mental health. Dalgard et al.'s (1995) finding is partly in keeping with these results, regarding social support, but contradicts the findings of this study, that a decrease in negative life events may influence recovery.

Lewinsohn, et al. (1994) reported that depressed older adolescents were excessively emotionally dependent on others, and reported less social support from their friends. Results from this study may differ due to the different populations studied, or that those constructs which are implicated in the continuance of depression or dysphoria may act more as concomitants of the two states, rather than having predictive value. Flannery and Wieman (1989) note that social support is a construct that may be more complex than researchers commonly make it out to be, and that it "needs to be understood as a normal process before inferences are drawn... in impaired persons."

In summary, partial support was found for the first of five hypotheses, and no support was found for the latter ones. Life events played a role in recovery in this sample only when they were negative in nature. Positive events as a whole were not implicated in the recovery from dysphoria; however, autonomous positive life events did have some predictive value. These findings are similar to those of other

researchers (Needles & Abramson, 1990; Wong & Whitatker, 1994). There were no significant differences between the Recovered and Stable Dysphoric groups on DAS scores, coping measures, or an interaction between a persons life events and personality domain of sociotropy or autonomy. Results for treatment seeking of subjects did not turn out as expected: of all persons who sought treatment during the time of the study, none recovered. It is thought that this may be due to a confound of severity, in that subjects who later sought treatment scored significantly higher on the BDI-II at Time 1 than others.

Some of the failure to find significant findings may be accounted for by selection procedures. For example, dysfunctional attitudes may be able to discriminate between persons who will later become depressed or dysphoric, but not be able to predict recovery. The failure to predict recovery may be due to the idea that, if people who become dysphoric already engage in dysfunctional thought, there will not be enough variation in scores to detect differences between those who eventually recover and those who do not. The situation with coping measures may be similar. It is possible that people who become depressed already have difficulty utilising adequate methods of coping. Persons who are already dysphoric (as was true for the entire sample in this study) may have coping repertoires in a limited range, and it becomes difficult to find differences between those who recover and those who do not.

The findings regarding general life events make some theoretical sense. Although a higher number of positive life events did not predict recovery from dysphoria, a lower number of negative life events did. As Needles and Abramson (1990) noted, either situation (increased positive or decreased negative life events) may act as an improvement in life circumstances. The result that positive autonomous life events (but not sociotropic ones) also predicted recovery may be explained by the college sample being used. It is possible that in the absence of negative life events, positive achievement oriented events in a college atmosphere may be sufficient to bring someone out of a dysphoric state. In a competitive atmosphere such as a college, socially positive events may simply not be sufficient.

Methodological Limitations

There are several limitations to this study. One aspect of this research that may have affected its ability to generalise or replicate the findings of other authors is the use of the BDI-II. At the time this thesis was being organised, the BDI-II was just being released. Therefore, the only research that had been published regarding the BDI-II's normative properties and use was contained in the manual. At that time, very little research existed studying the properties of the BDI-II (see Dozois, et al., 1997). One of the major differences between the BDI-II and the BDI is the time frame for respondents to use in answering questions. The BDI asks respondents to think about how they have felt in the past week, while the BDI-II elicits responses

over the past two weeks. This temporal shift was made to allow the BDI-II a greater ability to address the criteria for a Major Depressive Episode, as outlined by the DSM-IV (APA, 1994). Consequently, the BDI-II is measuring a more stable construct of dysphoria than did the BDI. This stability of measurement has implications for the current research because of the small numbers of people found to recover between Time 1 and Time 2. If the time of reference for subjects is increased from one week to two weeks, fewer subjects will be able to report recovery, especially if it has occurred in the past week. Longer time frames for studies may be needed when the BDI-II is used as a measure of change. Therefore, the time between testing with the BDI-II used in this study may be too short to detect change with this instrument.

Another limitation related to the time frame is that of the span between Time 1 and Time 2. Although the thesis set out to have a lapse of about two months between Time 1 and Time 2, an average of just over six weeks between measurements was obtained. Two months was selected as a conservative time lapse based on the research of Needles and Abramson (1990), and Oliver and Burkham (1979). These two studies reported that about half of college students in a dysphoric sample could be expected to recover within six weeks. Although six weeks was the average time between testings in this study, the numbers of recovered individuals came no where close to half of the sample. The reason for this result could be due to

the different measures used (BDI-II in this study, versus the BDI in previous research).

A third limitation of this study may be the use of abbreviated measures. While shorter measures decrease the work load each subject has, some of the precision of the original measure may be lost. Several measures in this thesis were taken from a larger set of measures (Lewinsohn, et al., 1995; Lewinsohn et al., 1994) which have been used in previous research. These measures, while abbreviated, may actually represent the core concept(s) the measure is attempting to assess. Therefore, the use of abbreviated measures that have proven their reliability in previous research may offer an opportunity for researchers to assess subjects with a greater number of instruments than would be possible using the original full-length versions. The ability to look at a large number of concepts in a short period of time may be especially important for researchers looking into a relatively new area, such as the prediction of natural recovery from dysphoria.

Recommendations for Future Research

Research in the area of prediction of recovery from dysphoria or depression is important for several reasons. Research looking at natural predictors helps to clarify those factors that can be incorporated into a theoretical model of recovery, and does so in a way that treatment studies can not. Treatment outcome studies will not be able to test models in which persons recover from their dysphoric or depressed state

on their own, the way that many depressed and dysphoric individuals do (Vredenburg, et al., 1993). Studies of recovery may also help clinicians later tailor their treatments to particular types of clients. This study looked at several possible predictors of recovery in a group of university students. Results suggest some predictors – as they were measured here – should not be used in future research, including the short forms of the DAS and emotional reliance, and sociotropy/ autonomy scales. Other concepts that need further clarification include social support, types of life events, and coping methods which do not include treatment; however, both previous level of dysphoria and treatment should be assessed in future studies of recovery.

Future research should address the issue of what sort of life events should be looked at in recovery studies. Clark et al. (1992) measured only negative life events, and were therefore unable to conduct analyses of the relationship between autonomy and positive life events, or autonomous life events in general, positive or negative. This thesis, however, measured both negative and positive life events. The occurrence of both negative or positive events seem to have an impact on whether persons recover from their sad, dysphoric, or depressed states. So far, attempts to match life events to personality type have given mixed results. Clearly, research needs to address these two concepts singly and jointly to determine if their impact differs across personality or depression types.

Future research in the area of prediction of recovery should seriously consider the measure of dysphoria used when determining the length of time between testing periods. While the BDI may be a better predictor of change scores within a weeks time, the BDI-II should provide results more in keeping with a DSM-IV diagnosis of a major depressive episode. It will be important for future researchers to consider what type of information they are looking for when they design their research. Future research may also want to look at the significant constructs of the present research as they relate to a clinical population. While college populations are often the source of preliminary data regarding constructs thought to play a role in mental health areas, more definitive research on clinical populations is needed to be sure the constructs apply to more disturbed populations (Coyne, 1994; Vredenburg, et al., 1993).

The low recovery rate (16%) found in this thesis needs to be considered in light of past research and the current use of the BDI-II. Previous studies (Needles & Abramson, 1990; Oliver & Burkham, 1979) found that about half of a college sample of dysphoric individuals recovered within three to six weeks. The different results regarding the recovery rate could mean a number of things. One potential cause of the differences in recovery rate may be the use of the BDI-II, as mentioned previously. Additionally, though, the low recovery rate found in this undergraduate population may indicate that dysphoria and depressive symptoms are longer lasting

than they once were in a general college population. Depressive symptoms, once they appear, may be particularly difficult for college students to recover from, especially in light of the heavy course loads that have become common. Indeed, it was noted almost two decades ago (Beck & Young, 1978; as cited in Vredenburg, et al., 1993) that suicide is 50% more common in college students than in their non-student peers. More research is needed into the phenomenon of college student dysphoria and depression in its' own right, so that researchers and clinicians alike may learn how to better serve this population.

Much research has been carried out on depression, dysphoria, and other sad states. There are many areas to look at; broadly, these are the onset, course or maintenance, and recovery from depressive symptoms or disorders. All areas have theoretical importance and much information to offer. Comparatively, however, the area of recovery from depressive symptoms – especially natural recovery – has been overlooked. Many outcome studies are based on treatment outcome, a process that may not be a valid model for many suffering from dysphoria or depression. Research that looks at recovery from a more natural point of view, including coping responses that people make on their own, may offer clinicians another way to look at the recovery process (i.e., that formal treatment is not the only way people can and do recover). While the area of prediction of recovery is still in its early stages, researchers will have to continue looking at those constructs implicated in the onset

and maintenance of dysphoria and depression. Through this process, hopefully researchers and clinicians will be able to identify a unified theory of the course of depression and dysphoria in some populations, which includes onset, symptom exacerbation and maintenance, and eventually, recovery.

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you have further questions concerning matters related to this research, please contact:

Jamie L. Ahnberg, B.A. Phone: 220-3697	or	Keith S. Dobson, Ph.D. Phone: 220-5096

If you have any questions concerning your participation in this project, you may also contact the Office of the Vice-President (Research) and ask for Karen McDermid, 220-3381.

Subject Name	Signature	Date
Witness Name	Signature	Date

A copy of this consent form has been given to you to keep for your records and reference.

Appendix B: Items on the Affiliation and Achievement sub-scales of the short form of the Dysfunctional Attitudes Scale

Affiliation Items:

I should be able to please everybody

My value as a person depends greatly on what others think of me

If a person has to be alone for a long period of time, it follows that she/he has to feel lonely

If someone performs a selfish act, this means she/he is a selfish person

I should be happy all the time

Achievement Items:

My life is wasted unless I am a success

If a person is not a success, then his/her life is meaningless

If I do well, it is probably due to chance; if I do badly, it is probably my own fault

Turning to someone else for advice or help is an admission of weakness

Appendix C: Life Events Questionnaire items on the

Sociotropic and Autonomous sub-scales

Positive Sociotropic Life Events:

Received a positive reaction from family or friends about doing well in school
Told by someone important that you will live up to career or school goals
Good social life due to manageable school-related demands
Doing better in school than a key family member or friend
Pleasant, encouraging, or comforting conversation with family member
Reconciliation among family members other than self which had significant positive consequences for self
Parents gave praise or showed approval
Confided in a family member
Received a gift from a family member
Expression of love, respect, or interest by parent
Spent enjoyable time with parents
Did something to be proud of in the presence of a family member
Had ideas or thoughts understood by a family member
Consistently good relations with all close family members
Feel able to confide in family members if you want to
Treated fairly by parents with respect to siblings
No problems associated with living at home
Parents' expectations are manageable and realistic
Parents accept you views or your right to them
Trusted by parents
High level of freedom and privacy granted by family members
Consistently good relations with parents
Resolution of significant fight or argument with roommate that had previously serious consequences
Successfully found new roommate after searching
Consistently good relations with roommate
Resolution of significant fight or argument with friend other than roommate that previously had serious consequences
Re-established contact with a friend or family member you have not seen or heard from in some time ($\geq$ 6 months)
Had a pleasant conversation with a friend
Laughed with friends

Special favour or kindness performed by a friend
Helped a friend who was appreciative
Initiation of a significant new friendship
Received a gift from a friend
Acquisition of a new pet
Recovery of friend from serious injury or threatening illness
Confided in a supportive friend
Included in athletic, social, or other fun activities by friends
Expression of affection, respect, or interest by one or more friends
Did something to be proud of in the presence of a friend
Had ideas or thoughts understood by a friend
Spent time with people who share your interests
Did something interesting with a friend
Have a sufficient number of friends
Feel able to confide in a friend(s) if you want to
Saw friends more frequently than normal
Consistently good relations with all important friends
Friends are supportive of your ideas or goals
Friends frequently express affection, respect, or interest in you
Resolution of significant fight with significant other than had previously had serious consequences
Began a relationship with new significant other
Received positive reaction about significant other from an important person other than a parent
Received a gift from significant other
Recovery of significant other from serious injury or threatening illness
Reunited with significant other after a physical separation of at least two months
Reunited with significant other after separation due to conflict
Recovery of significant other from emotional problem that lasted at least one month
Expression of love, respect, or interest from significant other
Spent time with significant other in athletic, social, or other fun activity
Successfully terminated an abusive relationship
Became engaged to be married
Got married
Did something to be proud of in the presence of significant other
Had ideas or thoughts understood by significant other
Significant other accepts your wish to date other people
Receive peer support for your dating decisions
Consistently good relations with significant other

Spent a satisfactory amount of time with significant other
Significant other is supportive or your ideas and goals
Significant other is faithful to you
Frequently receive love, respect, or interest from significant other
Frequently spend time with significant other in fun activities
Received compliments or praise about physical or sexual attractiveness or sexual performance
Complimented on clothing or appearance
Received praise about reduction in cigarette, alcohol, or drug use
Found out you (or your significant other) did not have an unwanted pregnancy after fearing you (she) did
Engaged in satisfying sexual activities
Satisfactory level of sexual activity
Friends are supportive in efforts to modify cigarette, alcohol, or drug use
Have a desired pregnancy
Received peer support for your sexual choices
Frequently receive compliments on your appearance
Went out with friends

Positive Autonomous Life Events:

Did well on an exam or major project for an important course
Received a positive reaction from family or friends about doing well in school
Told by someone important that you will live up to career or school goals
Achieved an important school-related goal that does not involve a grade or affect your GPA
Was accepted into major, department, university, or graduate school due to strong academic performance
Praised by a professor or Teaching Assistant
Worked on something for school which you found very enjoyable
Successfully completed a project or assignment for a class on time
Performed will on a minor school or school-related project or assignment
Started a new, enjoyable job
Found a job which was very much wanted for financial or career reasons
Worked on something on the job which you found very enjoyable
Received praise or positive evaluation on the job
Completed a project or assignment for your job on time
Performed well on a task at home

Got a good final grade (≥B) in one or two courses, although overall GPA was not as strong (≤ C) in the most recent semester
Earned an overall GPA greater than or equal to 3.00 in the most recent semester
Doing better academically than usually did in previous terms or in high school
Keeping up in all courses
Good health due to manageable school-related demands
Have one or more classes with extremely desirable features
Understand the material very well in one or more important courses
Enjoy your major or school very much
Doing better in school than a key family member or friend
Job has one or more very desirable features
Did something to be proud of in the presence of a family member
Did something to be proud of in the presence of a friend
Did something to be proud of in the presence of significant other
Received praise about reduction in cigarette, alcohol, or drug use

Negative Sociotropic Life Events:

Received negative reaction from family or friends about not doing well in school
Told by someone important that you will not live up to career or school goals
Negative social consequences from school and job-related demands
Not doing as well in school as another key family member or friend
Significant fight or argument with parents that led to a serious consequence
Significant fight or argument with family member other than a parent that led to a serious consequence
Significant fight or argument among family members other than self that led to serious consequences
Got caught doing something disapproved of by parents, or parents found evidence of something they disapproved of
Death of a close family member
Put down by parents or parents expressed dislike
Spent time with parents that was not enjoyable
Did something embarrassing in presence of a family member
Family member did something that you are ashamed of
Was misunderstood or misquoted by a family member
Unable to confide in family members even though you want to
Frequent problems associated with living at home
Rarely receive love, respect, or interest from parents
Parents have unrealistic or unmanageable expectations or make excessive demands

Frequent fights or disagreements among family members other than self
Parents often play favourites or make unfavourable comparisons between self and siblings
Frequent fights or disagreements with one or more family members
Frequent pressure and/or manipulation to agree with parents
Lack of trust by parents
Lack of freedom or privacy due to family members
Significant fight or argument with roommate that led to a serious consequence
Unable to find a roommate even though you need one for financial or companionship reasons
Frequent fights or disagreements with one or more roommates
Significant fight or argument with friend other than roommate that led to a serious consequence
Hurt by a friend (not physically)
Hurt a friend (not physically)
Break-up of a relationship with a friend
Death of a pet
Death of a friend
Did something embarrassing in presence of a friend
Friend borrowed money or personal belongings
Was misunderstood or misquoted by a friend
Spent time with people who do not share your interests
Did something uninteresting or unpleasant with a friend
Excluded from an athletic, social, or other fun activity by friends
Close friend moved away
Received blame for problems between self and friends, or friends' personal problems
Have fewer friends than you would like
Have no one to confide in
Rarely sought out by others for activities or friendship
Relationships with friends or family have changed for the worse since you left home
Rarely receive affection, respect
Saw friends less often than you would like
Frequent fights or disagreements with one or more friends
Often not taken seriously by friends
Significant fight or argument with significant other that led to a serious consequence
Final break-up of relationship with significant other
Significant other was unfaithful to you
Received negative reaction about significant other from an important person

Death of significant other
Excluded from fun activities or ignored by significant other
Spent time that was uninteresting or unpleasant with significant other
Hurt by significant other (not physically)
Hurt significant other (not physically)
Broke off engagement to be married
Got divorced
Did something embarrassing in presence of significant other
Significant other borrowed money or personal belongings which you were reluctant to lend
Was misquoted or misunderstood by significant other
Frequent fights or disagreements with significant other
Separated from significant other for school or career reasons
Separated from significant other because of conflict, but not yet broken-up
Want to date others, but significant other does not approve
Rarely receive love, respect, or interest from significant other
Rarely spend time with significant other in fun activities
Are in an abuse relationship (physical or verbal)
Receive peer pressure to change your dating behaviour
Often not taken seriously by significant other
Spent less time with significant other than you would like
Received negative comments about physical or sexual attractiveness or sexual performance
Received negative comments about clothing or appearance
Physically beaten
Pressured or forced into unwanted sexual activity
Frequently teased or ridiculed about appearance
Consistent sexual difficulties for self or partner
Receive frequent peer pressure to use drugs, alcohol, or cigarettes
Receive peer pressure to change your sexual behaviour or choices

Negative Autonomous Life Events:

Did poorly on an exam or major project for an important course
Received negative reaction from family or friends about not doing well in school
Told by someone important that you will not live up to career or school goals
Failed to achieve an important school-related goal that does not involve GPA
Not accepted into major, department, university, or graduate school because grades were too low

Put down by a teacher or TA
Worked on something for school which you did not enjoy or did not care about
Had a project or assignment for a class overdue
Performed poorly on a minor school or school-related project or assignment
Laid off or fired from job
Worked on something on the job which you did not enjoy or did not care about
Was criticised or negatively evaluated about work on the job
Had a project or assignment for your job overdue
Performed poorly on a task at work or home
Got a poor final grade ($\leq$ C) in one or two classes, but overall GPA was good ($\geq$2.00) the most recent semester
Earned an overall GPA less than or equal to 2.00 the most recent semester
Doing worse academically than usually did in previous semesters or than in high school
Very much behind in one or more important classes
Negative health consequences from studying for long periods of time
Have one or more classes with extremely undesirable features
Do not understand the material in one or more important courses
Dislike major or school in general, but have to stay
Not doing as well in school as another key family member or friend
Job has one or more undesirable features
Unable to find work and want a job very much for financial or career reasons

Treatment Record

Name_____ Date_____ Code_____

Please answer the following questions as best you can, for the past two months only.

1. Did you receive any type of treatment for your depressive symptoms?
___No ___Yes

2. If yes above, did you receive:
___Pharmacotherapy (e.g., antidepressant drugs, sleeping pills)
___Psychotherapy (i.e., counselling, talking to someone in the mental health profession)
___Both
___Other (please explain) :_____

_____

3. If you did have some sort of treatment in the past two months, when did you start it, and is it still going on?

Type of Treatment	Date Started	Is it ongoing?
_____	_____	Yes No
_____	_____	Yes No
_____	_____	Yes No
_____	_____	Yes No
_____	_____	Yes No
_____	_____	Yes No
_____	_____	Yes No
_____	_____	Yes No
_____	_____	Yes No

Appendix E: Coping Measures List

Below are some activities that some people do when they are feeling down. Please read each statement and mark if you did (Yes) or did not (No) engage in that activity in the past two months when feeling down.

Go for a walk
Sit down
Avoid thinking about it
Ring someone up
Look at plants, trees, flowers
Avoid feeling sorry for oneself
Take tranquillisers
Do something in one's own company
Rectify the situation causing it
Do laundry
Help out or care for someone
Sleep
See people, see a friend
Think of the reason for it
Have a change of scene
Smoke (tobacco)
Crawl away on one's own
Cook or bake
Get the situation into perspective
Do something; keep busy
Talk to oneself
Get out into the countryside
Remind oneself it will pass
Do something physical
Change activities
Talk to someone about something else
Wait for it to go away
Listen to music or records
Plan something for the future
Take one's feelings out on something
Do something different
Eat something
Go out

Do something you enjoy
Talk to someone about it
Do something engrossing
Go for a drive or bicycle ride
Cleaning, polishing, tidying
Give oneself a treat
Get angry or annoyed
Read a journal or magazine
Go out with people
Play tennis or squash
Work hard
Keep to oneself
Have an alcoholic drink
Meditate
Listen to the radio
Think about something else
Go to a park
Eat something sweet
Do housework
Stick to one's normal routine
Take antidepressants
Use willpower; forget it
Do something constructive or creative
Get moral support, sympathy, reassurance
Do something vigorous
Paint or draw
Set limits on it
Do chores that want doing
Have a bath
Do something, even if it's trivial
Vent irritations, get things off your chest
See a film
Do something to take your mind off it, distraction
Buy clothes
Engage in sport
Wallow in it
Read something, a book, a light or trashy book
Watch television
Play with children or watch them playing

Go shopping
Do easy work
Write letters

Appendix F: Correlations of Numerical Variables

	BDI2.1	ER	ATTITUDE	ATT.AFF	ATT.ACH	SOC	AUT
BDI2.1	-						
ER	0.18	-					
ATTITUDE	*0.22	**0.31	-				
ATT.AFF	0.12	**0.36	**0.85	-			
ATT.ACH	*0.24	0.16	**0.83	**0.42	-		
SOC	0.18	**0.63	**0.44	**0.57	0.17	-	
AUT	0.02	**-0.30	-0.04	-0.19	0.14	**-0.50	-
BDI2.2	**0.54	-0.01	*0.25	0.16	**0.29	0.11	0.08
PLE	*-0.25	0.12	-0.10	0.01	-0.17	0.11	-0.13
PLE.SOC	-0.21	0.09	-0.14	-0.02	-0.21	0.10	-0.16
PLE.AUT	**-0.30	0.08	-0.06	0.04	-0.13	0.12	-0.06

(table continues)

	BDI2.1	ER	ATTITUDE	ATT.AFF	ATT.ACH	SOC	AUT
NLE	**0.31	0.02	0.14	0.07	0.18	0.12	0.04
NLE.SOC	**0.28	0.02	0.16	0.08	0.21	0.06	0.08
NLE.AUT	*0.26	0.01	0.12	0.03	0.17	0.10	0.00
SSS.A	0.14	0.03	-0.16	-0.19	-0.10	0.02	-0.07
SSS.A.NO	*0.22	0.06	-0.13	-0.17	-0.06	0.04	-0.04
SSS.A.QA	0.12	0.02	-0.17	-0.19	-0.10	0.02	-0.07
SSS.B	0.19	0.04	0.14	0.08	0.17	0.09	0.01
TX	**0.31	0.04	**-0.30	*-0.23	*-0.27	-0.07	-0.13
TX.TYPE	**0.42	0.06	*-0.26	-0.22	*-0.22	-0.07	-0.11
COPING	-0.01	-0.15	-0.21	-0.18	-0.16	**-0.27	0.20
DEP	0.22	-0.01	0.08	0.15	-0.02	0.12	-0.10

(table continues)

	BDI2.2	PLE	PLE.SOC	PLE.AUT	NLE	NLE.SOC	NLE.AUT
BDI2.2	-						
PLE	**-0.32	-					
PLE.SOC	**-0.27	**0.93	-				
PLE.AUT	**-0.38	**0.72	**0.53	-			
NLE	**0.55	-0.11	-0.10	-0.11	-		
NLE.SOC	**0.55	-0.15	-0.14	-0.14	**0.95	-	
NLE.AUT	**0.46	**-0.28	*-0.23	**-0.32	**0.76	**0.65	-
SSS.A	0.00	**0.38	**0.39	0.18	0.21	0.15	0.14

(table continues)

	BDI2.2	PLE	PLE.SOC	PLE.AUT	NLE	NLE.SOC	NLE.AUT
SSS.A.NO	0.08	**0.29	**0.34	0.10	*0.23	0.15	0.14
SSS.A.QA	-0.01	**0.39	**0.40	0.19	0.21	0.15	0.14
SSS.B	**0.30	**-0.52	**-0.54	**-0.32	0.16	0.19	0.15
TX	0.15	-0.07	-0.10	-0.03	-0.02	-0.05	-0.07
TX.TYPE	0.21	-0.09	-0.09	-0.07	0.05	0.03	0.02
COPING	-0.01	**0.39	**0.33	0.22	0.19	0.15	0.11
DEP	**0.60	-0.20	-0.11	**-0.30	*0.27	*0.24	*0.25

(table continues)

	SSS.A	SSS.A.NO	SSS.A.QA	SSS.B	TX	TX.TYPE
SSS.A	-					
SSS.A.NO	**0.94	-				
SSS.A.QA	**1.00	**0.91	-			
SSS.B	**-0.34	**-0.28	**-0.34	-		
TX	-0.05	0.05	-0.07	0.16	-	
TX.TYPE	-0.03	0.07	-0.05	0.21	**0.94	-
COPING	**0.42	**0.37	**0.42	-0.17	0.01	0.05
DEP	-0.01	0.04	-0.02	0.06	0.15	0.14

(table continues)

	COPING	DEP
COPING	-	
DEP	-0.09	-

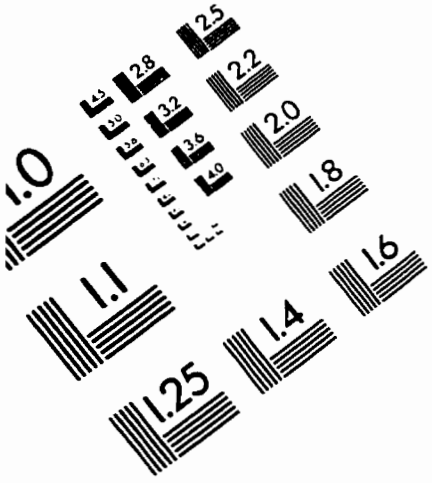
Note: * = $p < .05$, ** = $p < .01$

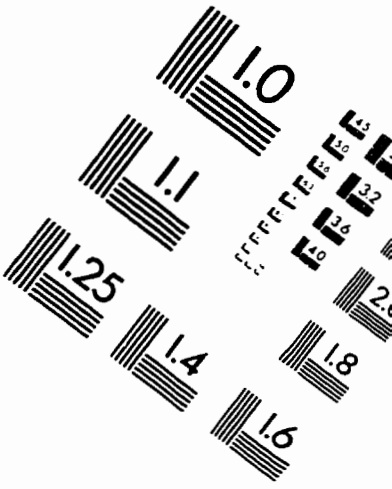
BDI2.1 = Beck Depression Inventory - II, at Time 1
ER = Emotional Reliance
ATTITUDE = Dysfunctional Attitude Scale
ATT.AFF = Dysfunctional Attitudes Scale, affiliative items
ATT.ACH = Dysfunctional Attitudes Scale, achievement itmes
SOC = Sociotropy score
AUT = Autonomy score
BDI2.2 = Beck Depression Inventory - II, at Time 2
PLE = Positive Life Events
PLE.SOC = Positive Life Events of a sociotropic nature
PLE.AUT = Positive Life Events of an autonomous nature
NLE = Negative Life Events
NLE.SOC = Negative Life Events of a sociotropic nature
NLE.AUT = Negative Life Events of an autonomous nature
SSS.A = Social Support Scale A
SSS.A.NO = Social Support Scale A, number of supports listed
SSS.A.QA = Social Support Scale A, quality of supports listed
SSS.B = Social Support Scale B

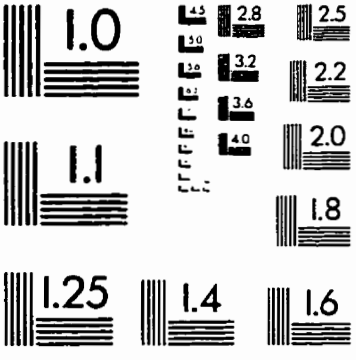
(note continues)

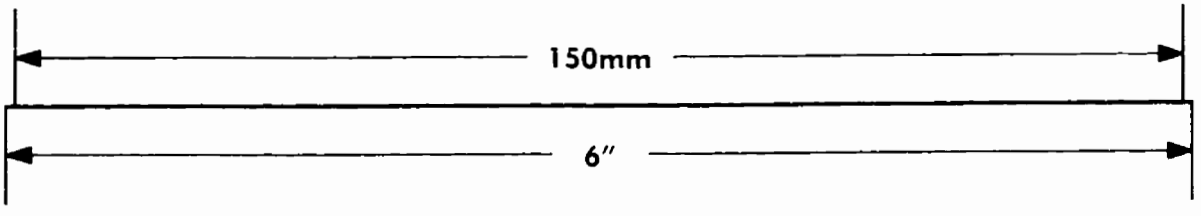
TX = treament received, yes or no
TX.TYPE = type of treatment received
COPING = Coping measures list
DEP = recovery status category

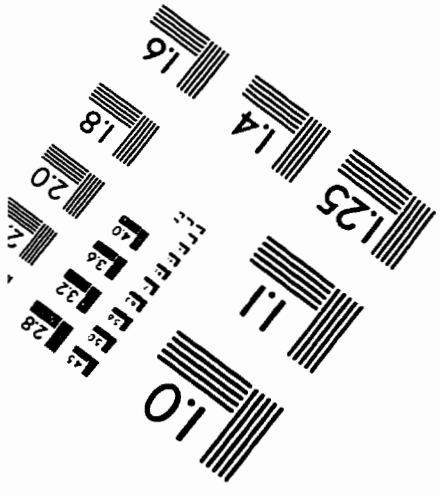
IMAGE EVALUATION
TEST TARGET (QA-3)

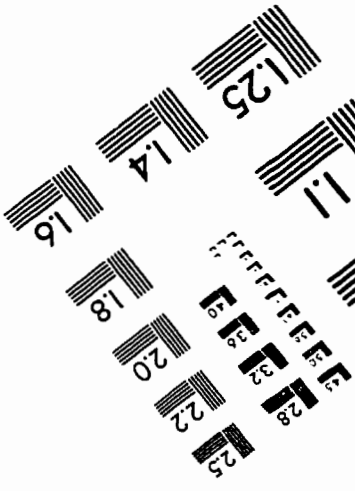












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