

DEPRESSION: A TEST OF THE  
HELPLESSNESS MODEL

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## Chapter 1

### INTRODUCTION

Depression, which has been described as the single most widespread emotional problem in the nation,<sup>1</sup> has inspired a number of theories which attempt to explain its etiology. Major elements in the development of depression as outlined in some of the theories have been loss or separation, guilt, perception, control and rate of reinforcement. The study to be presented focused on the helplessness theory, in which lack of experienced personal control was equated with helplessness.

The first chapter presents the theoretical formulation, the problem for investigation, the hypotheses, and the purpose of the study. It also discusses the significance of the study.

### THEORETICAL FORMULATION

Seligman has proposed a theory of depression which focuses on learned helplessness, the idea that individuals learn that their responses and reinforcement are independent. Dogs that were given electrical shocks while in a Pavlovian restraining hammock, making the shocks inescapable, were later unable to learn how to escape from a shuttle box, whereas dogs that did not receive inescapable shock escaped

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<sup>1</sup>Philip G. Zimbardo and Floyd L. Ruch, Psychology and Life, (9th ed., Glenview: Scott, Foresman, 1975) p. 460.



easily from a shuttle box.<sup>2</sup> Induced helplessness in other animals, including rats, pigeons and cats, has been observed in many experiments. Helplessness has been induced in humans as well. Subjected to inescapable loud noise instead of shock, humans showed an inability similar to that of the animals to solve problems.<sup>3</sup>

The individual who believes his responses to events are futile, that he has no control over his own life, may feel totally unable to cope with threatening events. It is this lack of control, or helplessness, which Seligman saw as the cause of depression. If one can no longer control his world, or believes that his control has diminished, he may experience symptoms of depression, despair, hopelessness, and helplessness.

Among a group of alcoholic patients, the sense of a lack of control was more pronounced where depression was evident. O'Leary, Cysewski, Donovan and Chaney noted, "The depressed individual appears to perceive himself as relatively ineffective in exerting control over significant life events and their outcomes."<sup>4</sup>

To support his theoretical position, Seligman looked for evidence of similar symptoms, both behavioral and physiological, in depression and helplessness. He pointed to "loss of appetite, negative cognitive set, lowered aggression and lowered initiation of voluntary

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<sup>2</sup>Martin E. P. Seligman, Helplessness: On Depression, Development, and Death (San Francisco: Freeman, 1975).

<sup>3</sup>Donald S. Hiroto, "Locus of Control and Learned Helplessness," Journal of Experimental Psychology 102 (1974) pp. 187-193.

<sup>4</sup>Michael R. O'Leary, Brian Cysewski, Dennis M. Donovan and Edmund F. Chaney, "Perceived Locus of Control, Experienced Control, and Depression: A Trait Model of Depression," Journal of Clinical Psychology, 33 (1974) pp. 164-168.

response" as some of the behavioral symptoms they have in common.<sup>5</sup> On the physiological level, the catecholamine hypothesis claims that the central nervous systems of depressives show a depletion of norepinephrine.<sup>6</sup> Evidence to support the catecholamine hypothesis is indirect, but is based on the knowledge that the enzyme, monoamine oxidase (MAO), can be inhibited by drugs, among which is iproniazid, and thus keep norepinephrine available in the brain.<sup>7</sup> Norepinephrine was found to be depleted in rats tested in helpless situations.<sup>8</sup>

Although Seligman felt his theory would explain that all depression had a common cause, learned helplessness, there is danger in embracing an approach to the malady which is too simplistic. Evidence that depression, particularly psychotic depression is biochemical in origin is too strong to refute on the basis of Seligman's argument for a similarity of symptoms.

Studies of a social nature which point out the higher incidence of depression among lower socio-economic groups and women further implicate a feeling of being at the mercy of one's environment in the etiology of depression. Although Calhoun, Cheney and Dawes attributed the greater degrees of depression in women to their feelings of

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<sup>5</sup>Martin E. P. Seligman, Helplessness: On Depression, Development, and Death (San Francisco: Freeman, 1975) p. 82.

<sup>6</sup>Ibid. p. 91.

<sup>7</sup>George W. Kisker, The Disorganized Personality, 2nd ed. (New York: McGraw-Hill, 1972) p. 464.

<sup>8</sup>Seligman, Op. cit. p. 92.

responsibility for their unsatisfactory life situations,<sup>9</sup> a view which agrees with Beck's cognitive theory, investigators continue to link depression to perceptions of external control.

The acquisition of an attitude of helplessness during a child's development can become a personality trait, according to Seligman. A child who has had early experiences with events which were totally beyond his control and a lack of experiences which allowed him to attain a sense of mastery over events in his life may be predisposed toward depression.<sup>10</sup>

Consistent with Seligman's developmental hypothesis, Rotter postulated that attitudes of internal or external control would generalize to all areas of a person's life. Locus of control would become a measurable personality variable.<sup>11</sup>

The relation of locus of control to depression has been assessed among college students a number of times. Blaney deplored the fact that most of the studies had utilized a college population and called for more thorough investigations.<sup>12</sup> Evans and Dimming attended to the

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<sup>9</sup>Lawrence G. Calhoun, Thomas Cheney and Stephen A. Dawes, "locus of Control, Self-Reported Depression, and Perceived Causes of Depression," Journal of Consulting and Clinical Psychology, 42 (1974) p. 736.

<sup>10</sup>Martin E. P. Seligman, Helplessness: On Depression, Development, and Death, (San Francisco: Freeman, 1975) p. 105.

<sup>11</sup>Julian B. Rotter, "Generalized Expectancies for Internal Versus External Control of Reinforcement," Psychological Monographs, 80 (1966) Whole No. 609.

<sup>12</sup>Paul H. Blaney, "Contemporary Theories of Depression: Critique and Comparison," Journal of Abnormal Psychology, 86 (1977) pp. 203-223.

specificity of helplessness to depression among mental patients in various diagnostic categories;<sup>13</sup> otherwise Balney's plea has gone largely unanswered.

Perhaps because of the limitations put on most studies by the populations tested, the relationship of depression to helplessness remains unclear. A study was needed which compared attitudes of internal and external control between clinically diagnosed depressed persons and nondepressed individuals.

#### THE PROBLEM

People whose exposure to a dominating or passively controlling environment, and who tend to be non-assertive and self conscious, may have acquired a belief that they are ineffective in overcoming obstacles which thwart them in reaching their goals.<sup>14</sup> Their belief can become so strong that they feel, "What's the use of trying," and may tend to leave the outcome of the events in their lives to "luck", the government, their families, or the whims of others. The feelings that they are not in control then may generalize until their entire outlook on life is rooted in a perception of external control. When that feeling of helplessness becomes an integral part of a person's personality, he

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<sup>13</sup>Ronald G. Evans and David W. Binning, "Reductions in Experienced Control and Depression in Psychiatric Inpatients: A Test of the Learned Helplessness Model," (1977) Unpublished Journal Article (Accepted by Journal of Clinical Psychology).

<sup>14</sup>Arnold Lazarus, In the Mind's Eye: The Power of Imagery Therapy to Give You Control Over Your Life, (New York: Rawson, 1978) p. 141.

would be expected to score high on Rotter's Locus of Control measurement, the Internal-External (I-E) Scale.<sup>15</sup>

Are depressed people more apt to experience events in their lives as being at the mercy of their environment? Certain events, such as the loss of a valued person, the birth of a child or the onset of a physical impairment are often followed by depression. Perhaps that depression can be understood in terms of feelings of helplessness, of a loss of control or personal mastery over those events.

The perception of recent loss, or increase, in control of life events can be measured by the EDS-II Scale. Subjects report the degree of loss or increase in control experienced in the last six months.<sup>16</sup>

Is it, further, possible that perception of control, or lack of it, may be a function of gender? Traditionally, in our society, women have experienced less control over their lives than men. They may have a generalized attitude of external control whether or not they are depressed.

#### Statement of the Problem

Will the scores on Rotter's I-E Scale show a significant difference in locus of control between a group of subjects who are depressed, as measured by Beck's Depression Inventory, and a group of nondepressed subjects?

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<sup>15</sup>Julian B. Rotter, "Generalized Expectancies for Internal Versus External Control of Reinforcement," Psychological Monographs, 80 (1966) Whole No. 609.

<sup>16</sup>Ronald G. Evans and W. David Dinning, "Reductions in Experienced Control and Depression in Psychiatric Inpatients: A Test of the Learned Helplessness Model," (1977) Unpublished Journal Article (Accepted by Journal of Clinical Psychology).

Will the scores of male subjects differ significantly from the scores of female subjects on Rotter's I-E Scale?

Will depressed subjects show significantly higher loss of control scores, as measured by the EDS-II than nondepressed subjects?

### Statement of the Hypotheses (Null Form)

The scores on Rotter's I-E Scale will not show a significant difference in locus of control between a group of subjects who are depressed, as measured by Beck's Depression Inventory, and a group of nondepressed subjects.

The scores of male subjects will not differ significantly from the scores of female subjects on Rotter's I-E Scale.

Depressed subjects will not show higher loss of control scores, as measured by the EDS-II than nondepressed subjects.

### Assumptions of the Study

This study assumed that attitudes of internal or external control are personality variables that can be measured. It further assumed that manic-depressive illness has biochemical components which cannot be measured by the instruments employed.

### Purpose of the Study

The purpose of this study was to test the helplessness theory of depression. Based on a belief that most of the experiments involving that theory barely touched the depression/helplessness issue because of the samples used, this study looked at depression and locus of control scores among depressed patients and nondepressed employees of an acute

care general hospital. The results were expected to clarify the relationship of helplessness to depression.

### Significance of the Study

This study contributes a much needed dimension to the study of locus of control and its impact on the development of depressive illness. Specifically, it sought to clarify the issue of helplessness in depression.

Not only is the study significant to our growing knowledge about depression and its treatment, but it helps, by pointing up developmental factors, to show where our attention can be focused in the area of public education. To know more about ourselves, to understand the needs of the human organism as it grows, is a valid quest for many.

### DEFINITION OF TERMS

For the purpose of this study, some terms have been used to express ideas in a somewhat different manner than is familiar in everyday speech. Helplessness, depression, and locus of control, for example, are not intended to imply types of observed behavior. The term, "learned helplessness," may be used occasionally; however, the issue of how the subject developed attitudes of helplessness is not pertinent to the study. It is of interest only in discussions of Seligman's developmental hypothesis of depression.

### Helplessness

In this study, helplessness was the feeling that one has little or no control over events which occur in his life as expressed by an

external score on Rotter's I-E Scale. A score greater than eight was considered to be an external score.

### Depression

Depression was considered to be present in any subject who scored above seven on Beck's Depression Inventory.

### Locus of Control

Locus of control was regarded as a generalized personality variable as measured by Rotter's I-E Scale. A score over the median indicated an external locus of control, and a score below the median indicated an internal locus of control.

### Internal Locus of Control

A person has an internal locus of control when his attitudes reflect that he perceives himself to be in charge of and responsible for his own life.

## LIMITATIONS OF THE STUDY

Because a nondepressed group has been compared with a group having a higher baseline of depression, a minor problem may be seen. The possibility exists that some of the depressed subjects have responded to the statements on the I-E Scale in ways that reflect their reaction to the mood level of the items, as Lamont suggested.<sup>17</sup> However, that possibility is unlikely to be of critical importance in this study. Even though it is acknowledged that depressives may have

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<sup>17</sup>John Lamont, "Locus of Control and Mood Response Set", Journal of Clinical Psychology, 28 (1972) pp. 342-345.



selected I-E items that reflect a lower mood level, rather than for content of the items, there is little chance that possibility invalidated the study.

## Chapter 2

### REVIEW OF RELATED LITERATURE

Seligman said, "Depression is the common cold of mental illness."<sup>1</sup> It has, apparently, been so for most of man's history. Sinesius claimed that only fools and Stoics were never troubled with problems of passion, but Burton was more specific and identified the individuals most likely to fall victim to melancholia as "those of high sanguine complexion, that have little heads, a hot heart, moist brain, hot liver, cold stomach, and solitary by nature." The humor, he said, "is cold and dry."<sup>2</sup>

Admitting that depression is part of the human condition, it remains something of a mystery. As one writer put it, "It is not easy to understand why a person will opt out of life."<sup>3</sup>

Writers and investigators who have dealt with the subject of depression have usually evaluated the illness in terms of stress, of loss, of inner anger, or of biochemical imbalance. Seligman attempted to tie all the possible precipitors of depression into one underlying "cause", and has produced one of the most comprehensive theories of

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<sup>1</sup>Martin E. P. Seligman, "Fall Into Helplessness," Psychology Today, 7 (1973) pp. 43-48.

<sup>2</sup>Robert Burton, The Anatomy of Melancholy, (Oxford: Lichfield and Short, 1621).

<sup>3</sup>Ernest Becker, "Toward a Comprehensive Theory of Depression: A Cross-disciplinary Appraisal of Objects, Games and Meaning," Journal of Nervous and Mental Disease, 135 (1962) pp. 26-35.

depression to date. How that theory developed and experimental studies relating to its development make up the substance of this chapter. The issues explored are 1) locus of control and depression, 2) locus of control and learned helplessness, 3) helplessness and depression in loss, 4) helplessness and depression in social stress, 5) helplessness and depression in physical illness and 6) a review of Seligman's work.

### Locus of Control and Depression

Since Rotter first proposed his theory of a generalized expectancy, based on a cultural attitude that one can affect the environment through his own behavior,<sup>5</sup> experimenters have sought to test the association of locus of control with a wide variety of experiences, traits, attitudes and learning processes. However, the literature contains strangely few studies which relate depression to control. Seligman is one of the investigators who has explained depression in terms of "an attitude of external control."<sup>6</sup> His work has sought to answer the questions posed by Blaney, who said,

What is it about certain life events that make them depression inducing? And under what circumstances do such events lead to depression, to anxiety, to rages or to physical illness?

It has been generally assumed that if one experiences internal control, he is somewhat healthier and better adjusted than is the person

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<sup>5</sup>Julian B. Rotter, "Generalized Expectancies for Internal Versus External Control of Reinforcement," Psychological Monographs, 80 (1966) Whole No. 609.

<sup>6</sup>Martin E. P. Seligman, Helplessness: On Depression, Development and Death, (San Francisco: Freeman, 1975) p. 74.

<sup>7</sup>Paul H. Blaney, "Contemporary Theories of Depression: Critique and Comparison," Journal of Abnormal Psychology, 86 (1977) pp. 203-223.

who experiences his world as controlled by outside forces. This was the view of mental health Tiffany set out to test. He defined mental health as a trend toward self-expansion and self-governing. His investigation involved two groups of twenty-four subjects who were patients at the Kansas City Mental Health Foundation. The patients volunteered to take part in a research project, which they were told would help the examiner increase his understanding of how patients improve. One group of subjects was selected from the Admissions Ward and one group was from the Pre-discharge Ward. Patients answered a sixteen item paper and pencil questionnaire designed to measure their locus of control. Admission and discharge patients differed significantly ( $p < .001$ ) in their perception of control, with discharge patients feeling less control from outside.<sup>8</sup> It is significant to note that therapy in that particular hospital was designed to encourage self-initiated action on which the patient put some social value.

Changing the focus from mental health in general to depression in particular, Abramowitz hypothesized that external control would vary positively with depression. Using a twenty-item version of the Internal-External Social Reaction Scale, which is said to mediate the expectation of securing valued life goals over time, and the Guilford Depression Scale (Guilford D) of the Guilford Five-factor Personality Inventory, he tested forty-eight female and twenty-one male introductory psychology students. The expectation that external control would vary with

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<sup>8</sup> Donald W. Tiffany, "Mental Health: A Function of Experienced Control," Journal of Clinical Psychology, 23 (1967) pp. 311-315.

depression was confirmed. The more the subjects believed in internal control, the less depressed they were.<sup>9</sup>

In Abramowitz's pioneering study in locus of control and depression, he suggested a broader study among a more heterogeneous population. But Calhoun, Cheney and Dawes, in further testing the relationship of locus of control to depression, again chose college students as their subjects. Eighty-one undergraduates, of whom thirty-seven were males and forty-four females, rated themselves on the I-E Scale and on the Zung Depression Scale. Externality was significantly related to depressive symptoms, for males ( $r = .58$ ,  $p < .001$ ) and for females ( $r = .38$ ,  $p < .05$ ).<sup>10</sup>

Another simple correlation between locus of control and depression was attempted when a group of normal students, fifty-eight females and fifty-four males, were compared with a group of agoraphobics, seventy-seven females and twenty-two males. Once more, significant correlations were found. Students demonstrated a somewhat greater correlation ( $r = .44$ ,  $p < .01$ ) but agoraphobics showed a similar significant correlation ( $r = .37$ ,  $p < .01$ ). Emmelkamp and Cohen-Kettenis concluded that the results of their study called for further investigation into

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<sup>9</sup>Stephen I. Abramowitz, "Locus of Control and Self-reported Depression Among College Students," Psychological Reports, 28 (1971) pp. 619-640.

<sup>10</sup>Lawrence G. Calhoun, Thomas Cheney and A. Stephen Dawes, "Locus of Control, Self-reported Depression and Perceived Causes of Depression," Journal of Consulting and Clinical Psychology, 42 (1974) p. 736.

causal relationships between locus of control orientations on the one hand and depression and phobic anxiety on the other.<sup>11</sup>

### Locus of Control and Learned Helplessness

Following Seligman's success at producing helplessness in dogs by administering electric shock which was inescapable, Hiroto achieved very similar results with human subjects using loud noise as the inescapable noxious stimulus. Ninety-six introductory psychology students were divided into three pretreatment groups. The pretreatment conditions were: 1) a loud tone that was unavoidable, that is, the tone was instigated by the experimenter, but could be escaped (turned off) by the subject; 2) a loud tone that was unavoidable and inescapable (the subject could not turn it off); and 3) no pretreatment. The subjects took part in an experiment, described below, in which the group in the unavoidable/inescapable pretreatment situation reacted in a helpless manner to the experiment.

The students were next divided into two groups. One group was told they could escape a loud noise if they figured out how to escape. The other group was told that the experimenter controlled the solution to escaping the noise and only if the students guessed the solution correctly could they escape. The students who perceived that reinforcements were contingent on their own actions, those whose locus of

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<sup>11</sup>Paul M. G. Emmelkamp and Peggy T. Cohen-Kettenis, "Relationship of Locus of Control to Phobic Anxiety and Depression," Psychological Reports, 36 (1975) p. 390.

control was internal, escaped the sound more rapidly than externals, regardless of the instructions they received.<sup>12</sup>

Perhaps the most significant outcome of Hiroto's experiment was the proof that learned helplessness can be experimentally produced in man. Hiroto further suggested that a single process may underlie learned helplessness and an attitude of external control.

Continuing the studies of learned helplessness in man, Hiroto and Seligman were prepared to postulate that learned helplessness may be an induced "trait", and that helplessness which had been produced when faced with insoluble instrumental problems might transfer to cognitive problems, especially if one assumes that insolubility and inescapability both give rise to the expectation that responding is independent of reinforcement.

To test the generalization of learned helplessness, fifty-one men and forty-five women undergraduate subjects were trained in either instrumental helplessness with loud noise or in a situation where they were asked to solve insoluble cognitive problems. The subjects, now with feelings of helplessness, were assigned to soluble cognitive tasks or escapable instrumental tasks. Interference from the induced helplessness was produced in three of the four experiments: Instrumental-Instrumental, Instrumental-Cognitive, Cognitive-Instrumental. The Cognitive-Cognitive experiment did not show significant effects though there was a trend in that direction. The study suggests that learned helplessness involves "a trait-like system of expectancies that

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<sup>12</sup>Donald S. Hiroto, "Locus of Control and Learned Helplessness," Journal of Experimental Psychology, 102 (1974) pp. 187-193.

responding is futile."<sup>13</sup> According to Seligman, the expectancies that responding is futile should also produce a mild depression.

The consensus of those experimenting with the production of helplessness in both animals and humans is that laboratory subjects could be made to behave in a way similar to individuals whose experience of control in their lives is external. Not only, then, did these researchers equate external control with helplessness, they were prepared to make tentative declarations that depression was linked to external control, or to feelings of helplessness. At least among college students, some evidence existed that depressed subjects experienced more external control than nondepressed subjects.

Getting away from a college population for the first time, O'Leary, et. al, tested the helplessness/depression hypothesis with alcoholic patients. The subjects were fifty-eight male veterans with a mean age of 47.4 years who were patients in an alcoholic treatment center. In this older, though specialized, group the External Control group (as measured by Rotter's I-E Scale) who had low experienced control (Tiffany's Experienced Control Scale) had significantly higher depression scores on both the Beck Depression Inventory (BDI) and the Minnesota Multiphasic Personality Inventory (MMPI) D Scale.<sup>14</sup> Within an alcoholic population the learned helplessness model of depression was supported.

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<sup>13</sup>Donald S. Hiroto and Martin E. P. Seligman, "Generality of Learned Helplessness in Man," Journal of Personality and Social Psychology, 31 (1975) pp. 311-327.

<sup>14</sup>Michael R. O'Leary, Brian Cysewski, Dennis M. Donovan and Edmund F. Chaney, "Perceived Locus of Control, Experienced Control and Depression: A Trait Description of the Learned Helplessness Model of Depression," Journal of Clinical Psychology, 33 (1977) pp. 164-170.



Evans and Dinning carried Seligman's theory into a mental institution and sought to establish whether helplessness is specific to clinical depression or whether it might be a characteristic of other psychotic diagnostic categories as well. Their findings were consistent with the work of others in that females showed a greater degree of depression than males. For both sexes, those reporting a greater loss of control as measured by the Evans-Dinning Scale-II (EDS-II) had higher depression scores on the BDI.<sup>15</sup> Evans and Dinning felt that the results of O'Leary, et. al, may have been a result of reduction in control of life events which was reflected in a report of their current sense of control.

Other findings in the Evans-Dinning study tend to confuse the issue of helplessness and depression, however, and add to the inconsistent relationships of locus of control and depression which were pointed to earlier. In this case, a group of clinically diagnosed depressives had significantly more internal scores than several other diagnostic groups.<sup>16</sup>

#### Helplessness and Depression in Loss

McKinney, Suomi and Harlow, seeking to establish an animal model of human depression by studying the behavior of rhesus monkeys, hypothesized they could produce depression in the animals by separating them from their peers. Previous studies had focused on separation from or

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<sup>15</sup>Ronald G. Evans and W. David Dinning, "Reduction in Experienced Control and Depression in Psychotic Inpatients: A Test of the Learned Helplessness Model," (1977) unpublished Journal Article (Accepted by Journal of Clinical Psychology).

<sup>16</sup>Ibid.

loss of a mother. These monkeys were raised away from their mothers but with three or four other monkeys of the same age. When they were about three months old, they were taken out of their social group and isolated for a period of four days. The result of the separation was that each monkey reacted, first with protest and then, when the protestations went unheeded, despair.<sup>17</sup> That is, the animals showed great activity and vocalization during the first twenty-four hours (protest) and much self-clasping and huddling (despair) during the last three days. When the animals were reunited, experimenters noted a great deal of clinging to one another.

The role of loss in depression has been explored by countless people interested in depressive illness. One unusual study was done by Brown, Harris and Copeland in Southeast London among 458 women aged eighteen to sixty-five years. The investigators, looking for a relationship between loss of a mother and depression, found that women who had lost their mothers before they were eleven years of age had a greater chance to become victims of depression. Yet, according to the authors of the study, "Loss is not the central agent in depression. Hopelessness and not grief is the crucial element."<sup>18</sup>

Most authors who write about loss, speak of it as a known event. For example, a person is able to say, "That individual is unhappy because he lost his job two weeks ago." Freud believed that this

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<sup>17</sup>William T. McKinney, Jr., Stephen J. Suomi and Harry F. Harlow, "Depression in Primates," American Journal of Psychiatry, 127 (1971) pp. 1313-1320.

<sup>18</sup>George W. Brown, Tirril Harris and John R. Copeland, "Depression and Loss," British Journal of Psychiatry, 130 (1977) pp. 1-18.

statement is only true of grief, and that depression, or melancholia, is really something else, thereby lending some support to the statement that grief is not the crucial element in depression. In melancholia, the sufferer does not know what he has lost.<sup>19</sup>

### Helplessness and Depression in Social Stress

Most of the investigators who studied depression in social stress were not looking for helplessness as a factor of that depression. However, some of the results of those studies are startlingly revealing.

Testing a normal population which ranged in age from eighteen to sixty-four years, Ilfeld found that current stresses were more significantly associated with depression than were past ones.<sup>20</sup> The results of the study can be interpreted to suggest a current perception of control was operative, especially since Ilfeld pointed out that high correlations for depressive symptoms appeared in parental stress for mothers, job stress for married men, and financial stress for single men and women.

A feeling of not being able to control the events in one's life appears to intensify when one marries. As Bartemeier said, "Marriage complicates one's life."<sup>21</sup>

Leff, Roatch and Bunney, who studied depression among forty patients in the Research Ward of the National Institute of Mental Health

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<sup>19</sup>Sigmund Freud, "Mournign and Melancholia," Collected Papers Vol. 14, ed. Ernest Jones (New York: Basic, 1959).

<sup>20</sup>Frederick W. Ilfeld, Jr., "Current Social Stressors and Symptoms of Depression," American Journal of Psychiatry, 134 (1977) pp. 161-166.

<sup>21</sup>Leo H. Bartemeier, "Emotional Reactions to Divorce," Stress Situations, ed. Samuel Liebman (Philadelphia: Lippincott, 1954).

found that among the environmental factors which preceded hospitalization, the ones named by the patients as most stressful were "threat to sexual identity" and "changes in marital relationships." In addition, they concluded that the life events which made the patient feel most helpless were often initiated by spouses.<sup>22</sup> Similarly, Tiffany found that the source of control which his forty-eight mental patients identified most often was the home.<sup>23</sup>

Traditionally women experience a greater degree of depressive symptoms than men. Burton felt that men were melancholy more often, but when women are depressed they are "far more violent and grievously troubled."<sup>24</sup> Three hundred and fifty years after Burton's statement, Dohrenwend agreed with him and reasoned that the higher life stress scores she found among women, which correlated with psychological symptoms, were probably reflections of a lack of power to control their own lives.<sup>25</sup>

Some studies suggest that people of a lower social class tend to suffer more stress and more depression.<sup>26</sup> Uhlenhuth, Lipman, Balter and Stern tested 735 noninstitutionalized urban people between the ages of

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<sup>22</sup>Melitta J. Leff, John F. Roatch and William E. Bunney, Jr., "Environmental Factors Preceding the Onset of Severe Depression," Psychiatry, 33 (1970) pp. 293-311.

<sup>23</sup>Donald W. Tiffany, "Mental Health: A Function of Experienced Control," Journal of Clinical Psychology, 23 (1967) pp. 311-315.

<sup>24</sup>Robert Burton, The Anatomy of Melancholy (Oxford: Lichfield and Short, 1621).

<sup>25</sup>Barbara Snell Dohrenwend, "Social Stress and Stressful Life Events," Journal of Personality and Social Psychology, 28 (1973) pp. 225-235.

<sup>26</sup>Ibid.

eighteen and sixty-five years. They found higher symptom intensity among women, the lower social class, the young, and the physically ill. "Symptom intensity of women and lower social class may be reflections and instruments of a life style," reported the authors.<sup>27</sup> If life style was a reference to living their lives without exerting much control over those lives, the study reflected a helplessness model. Add to that the finding that the young and physically infirm have severe psychological symptoms, and helplessness as a model of depression is supported.

Joe, reviewing the internal-external construct as a personality variable, expressed the phenomenon of lower class depression more explicitly: "Social class interacts with race so the individuals from lower class and minority groups tend to have high expectations of external control." He further speculated that there may be sex differences in internal-external traits,<sup>28</sup> a view held by many researchers.

### Helplessness and Depression in Physical Illness

Perhaps nothing gives a person a greater feeling of helplessness than being physically incapacitated. Unable to continue with normal routines, it is common for an individual to react to injury, infection or organ failure with depression.

Work has been done with many patients, covering a wide range of ailments from life-threatening diseases to temporary disabilities.

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<sup>27</sup>Eberhard H. Uhlenhuth, Ronald S. Lipman, Mitchell B. Balter and Martin Stern, "Symptom Intensity and Life Stress in the City," Archives of General Psychiatry, 31 (1974) pp. 756-764.

<sup>28</sup>Victor Clark Joe, "Review of the Internal-External Control Construct as a Personality Variable," Psychological Reports, 28 (1971) pp. 619-640.

Among the voluminous amount of literature dealing with depression and physical illness, one study will suffice to illustrate the premise.

Using sixty-two cardiac patients as subjects, Verwoerd and Dovenmuehle tested for depressive symptoms based on the subjects' own statements. The subjects were divided into two groups. In one group were patients aged thirty-five to forty-nine years, and in the second group were patients over sixty. Verwoerd and Dovenmuehle expected to find a relationship between the age of the heart patient and the degree of depression he exhibited, but they found that age was not a factor. In both age groups sixty-four per cent of the patients had moderate to severe symptoms of depression.<sup>29</sup> It is easy to speculate that the depression resulted from feelings of helplessness at having heart problems, regardless of age.

#### A Review of Seligman's Work

Much of the current research on depression and helplessness is the result of the theoretical position of one man, Seligman. In his own words, Seligman explained,

The focus of my theory is that if the symptoms of learned helplessness and depression are equivalent, then what we have learned experimentally about the cause, cure, and prevention of learned helplessness can be applied to depression.<sup>30</sup>

A few years before Seligman outlined his helplessness model of depression, he had been working with Maier and Overmier to test a certain learning theory. The test involved giving dogs an electric shock

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<sup>29</sup>Adriaan Verwoerd and Robert H. Dovenmuehle, "Heart Disease and Depression," Geriatrics, 19 (1974) pp. 856-864.

<sup>30</sup>Martin E. P. Seligman, "Fall Into Helplessness," Psychology Today, 7 (1973) pp. 43-48.

which was traumatic but not harmful. Later, when the dogs were put into a shuttle box from which they were expected to escape when shocked, they did not behave in the way a normal, naive dog does. Instead of howling, urinating, defecating, scrambling and eventually learning to jump a low barrier, the previously shocked dogs (that had been in restraining devices at the time) cowered in a corner and were unable to learn to jump the barrier until they were physically dragged across that barrier. After observing the strange behavior of the dogs, Seligman began to investigate the phenomenon of learned helplessness.

Knowing well that "It is not trauma as such that produced interference with later adaptive responding, but not having control over trauma,"<sup>31</sup> Seligman examined the problem from the standpoint of learning theory. In other words, the helpless subject has learned that response and reinforcement are independent. He further concluded that "what depressing situations have in common is that the patient finds himself no longer in control of those aspects of his life that are important to him."<sup>32</sup> With that conclusion, his premise that helplessness and depression have a common etiology was established.

Looking for further theoretical support, Seligman noted a similarity in the symptoms of depression and helplessness. Both behavioral and physiological similarities have been noted in animal experiments, but some symptoms of depression cannot be tested in animals.

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<sup>31</sup>Martin E. P. Seligman, "Depression and Learned Helplessness," in R. J. Friedman and M. M. Katz (eds.) The Psychology of Depression: Contemporary Theory and Research, (Washington, D. C.: Winston, 1974) p. 93.

<sup>32</sup>Ibid. p. 98.

These characteristics include "dejected mood, feelings of self-blame and self-dislike, loss of mirth, suicidal thoughts and crying."<sup>33</sup>

Having proved that helplessness can be learned by inducing it in a laboratory setting, Miller and Seligman next tested the similarities of performance impairment one finds in depression and that one finds in experimentally-induced helplessness. College students were assigned to depressed and nondepressed groups on the basis of their scores on the BDI. The subjects were then randomly assigned to inescapable, escapable, or no noise pretreatment groups. In all, twenty-three males and twenty-five females took part in the experiment. As Hiroto and Seligman had done earlier, Miller and Seligman selected a loud noise as the noxious stimulus. After the pretreatment session, the subjects were given an anagram task.<sup>34</sup> In general, the results were as predicted. That is, both the depressed group and the inescapable noise pretreatment group suffered impairment in solving the anagrams.<sup>35</sup>

The next problem to interest Seligman was the anatomy of failure. He, along with Klein and Fencil-Morse, concluded that: "Failure in itself is apparently not sufficient to produce helplessness

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<sup>33</sup>Martin E. P. Seligman, Helplessness: On Depression, Development and Death, (San Francisco: Freeman, 1975) p. 92.

<sup>34</sup>Donald S. Hiroto and Martin E. P. Seligman, "Generality of Learned Helplessness in Man," Journal of Personality and Social Psychology, 31 (1975) pp. 311-327.

<sup>35</sup>William R. Miller and Martin E. P. Seligman, "Depression and Learned Helplessness in Man," Journal of Abnormal Psychology, 84 (1975) pp. 228-238.



deficits in man, but failure that leads to decreased belief in personal competence is sufficient."<sup>36</sup>

In the Klein, Morse and Seligman study, three groups of college students: depressed controls, nondepressed subjects who had been given unsolvable problems, and nondepressed controls, were given an anagram task. Only the nondepressed controls did well on the task. Part of the subjects were then told that failure on the anagram task was their own fault while part of them were told that others had failed and they probably would, too. Those who believed they were responsible did not do as well as those who were told they might fail since others had.<sup>37</sup>

Seligman's firm belief that he had found the cause of depression, that mysterious epidemic of the 1970's, led him also into experiments designed to find a cure. He found helplessness in man similar to helplessness in animals. He found, too, that he could cure helplessness in dogs by dragging them bodily over the low barrier in their shuttle boxes. Could man be cured in a similar way? That is, could man be cured if he was led to experience even minor success in controlling his destiny? Could he be taught to find his way over his emotional barrier?

In 1976 Klein and Seligman produced helplessness in college students by using inescapable noise. Those conditioned under inescapable noise and a group of depressed students confirmed previous findings of impaired performance. The subjects were then given "therapy", a

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<sup>36</sup>David C. Klein, Ellen Fencil-Morse, and Martin E. P. Seligman, "Learned Helplessness, Depression and the Attribution of Failure," Journal of Personality and Social Psychology, 33 (1976) pp. 508-516.

<sup>37</sup>Ibid.

condition in which solvable problems were presented and the solutions reinforced. Learning deficits were reversed in all the subjects.<sup>38</sup> The evidence points to the teaching of mastery or competence in dealing with life events as a device for reducing the effects of depressive illness.

### Conclusion

While the literature on helplessness and depression has been dominated by the work of one man, Seligman, others have contributed to his conclusions in both direct and indirect ways. A new theory is tested many times, and the body of theoretical and empirical data in this area promises to grow.

Much more research is needed to clarify the relationship between locus of control and depression. To date the results have been meager and inconclusive. Some studies point out that externals (those who feel controlled by outside forces) are more apt to be depressed while other studies claim that internals (who assume responsibility for their own actions) are more depressed. Future work in the depression/control controversy should find an interested audience awaiting the outcomes.

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<sup>38</sup>David C. Klein and Martin E. P. Seligman, "Reversal of Performance Deficits and Perceptual Deficits in Learned Helplessness and Depression," Journal of Abnormal Psychology 85 (1976) pp. 11-26.

## Chapter 3

### METHODS AND PROCEDURES

In a test of the helplessness model of depression, two conditions were considered of primary importance. First, there must be a clear-cut differentiation between depressed and nondepressed subjects. Second, the testing, performed in a clinical setting, must be as simple as possible.

During the summer of 1978 the study was done. This chapter describes how the data were collected, the methods and instruments used, the population tested, the design of the study, and the analysis of the data.

### POPULATION AND SAMPLING

In an effort to help round out the body of scientific knowledge generated by the helplessness/depression theory, it was felt that a study should be undertaken to compare a population of clinically diagnosed depressed persons with a population of nondepressed individuals. The study was made in an acute care general hospital in Topeka, Kansas where both populations were available.

Sixty subjects were selected. Thirty of the subjects were patients from the psychiatric ward of the hospital who had been diagnosed as suffering neurotic depression or reaction adjustment. Thirty of the subjects were employees of the hospital, professionals and

service workers, who were determined to be nondepressed. An equal number of male and female subjects were selected.

The thirty depressed patient subjects were referred to the investigator by their attending physicians. They were selected on the basis of their clinical diagnoses and on their ability to tolerate testing as determined by the psychiatrists and verified by the investigator.

The thirty nondepressed employees were randomly selected from a list of employees, nursing and non-nursing, of the hospital. Female employees were assigned consecutive numbers from one to 997, and male employees were assigned consecutive numbers from one to 334. Random numbers were then selected from a Table of Random Digits,<sup>1</sup> consecutively, from the first vertical column. The employees were selected whose assigned numbers matched the random digits. The sample included both nursing and non-nursing personnel.

#### MATERIALS AND INSTRUMENTATION

Because half of the subjects were suffering from depressive illness, instruments were selected not only for effective measurement, but because they were simple. Depressed patients become easily discouraged when faced with overly long or complex tasks, but the questionnaires used were accepted and, in all but two cases, completed.

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<sup>1</sup>Edward W. Minium, Statistical Reasoning in Psychology and Education, (New York: Wiley & Sons, 1970) p. 454.

The instruments used were Rotter's I-E Scale, which measures the perceived locus of control;<sup>2</sup> Beck's Depression Inventory, which measures degree of depression;<sup>3</sup> and the Evans and Dinning Scale (EDS-II), which measures perceived changes in locus of control.<sup>4</sup>

The three scales are self-report measures. The I-E Scale uses a forced choice format and contains twenty-three scorable items and six filler items. The higher the score, the more external control the subject experiences. Beck's Inventory is a twenty-six item measure on which the subject rates the degree of his symptoms of depression from 0-3 on each item. The EDS-II is a rating scale of twenty-six items on which the subjects report the degree of reduction or increase in control they have perceived in the six months prior to taking the test. Different life events are scored from 1 (high loss) to 7 (high increase). The EDS-II was found by its developers to have a corrected split-half reliability of .96.

The instruments are not copyrighted. The EDS-II was secured from Evans, one of its authors, with permission for its use.

#### DESIGN OF THE STUDY

The design chosen for this study was consistent with those used in previous studies of depression and locus of control. Because a

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<sup>2</sup>Julian B. Rotter, "Generalized Expectancies for Internal Versus External Control of Reinforcement," Psychological Monographs, 80 (1966) Whole No. 609.

<sup>3</sup>Aaron T. Beck, Depression, (New York: Hoeber, 1967).

<sup>4</sup>Ronald G. Evans and W. David Dinning, "Reductions in Experienced Control and Depression in Psychiatric Inpatients: A Test of the Learned Helplessness Model," (1977) Unpublished Journal Article (Accepted by Journal of Clinical Psychology).

dimension was added, in the form of the change of control assessment, the study was a two-part investigation.

The I-E Scale, Beck Inventory, and EDS-II were administered to the sixty subjects. The Beck Inventory was used to confirm the depression diagnosis for the patient sample and to determine the nondepressive status of employee subjects. Employees who scored over seven on the Beck scale were considered to be depressed, and their data were discarded from the nondepressed sample. Both groups of subjects were divided into male and female samples. Final groups consisted of fifteen subjects each. The four groups were: female/depressed, female/nondepressed, male/depressed, male/nondepressed.

Locus of control scores for the groups were compared to determine the relationship of perception of control to depression and to determine sex differences in perception of control. EDS-II scores for the groups were compared in an effort to find out if the depressed groups had suffered an increase in attitudes of helplessness, or a sense of loss of control, in the last six months.

#### DATA COLLECTION

It was ascertained early in the study that the collection of data might proceed slowly. The hospital in which the testing was done had a single-unit psychiatric ward which dealt mostly with emergency admissions. During the test period the census of that ward was often down to six or eight patients; however, by the end of the four months the collection of data was complete.

The data were scores from the I-E Scale, Beck Depression Inventory, and EDS-II (Change of Control). Data were collected from

patients after consultation with their attending physicians and on the basis of their voluntary participation. Each patient signed a release form which stated his voluntary participation and assured him that the answers to the questionnaires would not become a part of his medical record.

Employees were contacted during their work shifts and given assurances of the confidential and voluntary nature of their participation in the research. No time limit was imposed, and employees, as well as patients, completed the tests as time and inclination permitted.

One employee and two patients declined to take the tests. Of those who did agree, one male patient scored in the nondepressed range of the Beck Inventory and two male patients left the hospital (Against Medical Advice) before they completed the tests. Five female and two male employees scored above seven on the Beck Inventory and were, thus, judged to be depressed. Those tests were discarded. Testing continued until thirty depressed patients and thirty nondepressed employees were obtained.

Scores were calculated from penciled choices on the tests indicated and assembled for each subject in the final sample. Data were collected only by the investigator.

#### DATA ANALYSIS

The experimental hypotheses could best be tested by dividing the study into two parts. Gender was used as a variable in both studies because of the traditional view that women feel less control over their lives than men.

The data were analyzed using first a 2 X 2 ANOVA. Independent variables were gender (male-female) and depression (depressed-non-depressed). The dependent variable was locus of control. Scores from the I-E Scale were measures of the dependent variable.

A second analysis was a 2 X 2 ANOVA in which the independent variables were gender (male-female) and depression (depressed-non-depressed). The dependent variable was change of control. Scores from the EDS-II were measures of the dependent variable.



## Chapter 4

### ANALYSIS OF DATA

The results of the study were drawn from two 2 X 2 ANOVA computations. The details of those results, the summaries and the interpretations, are presented in this chapter.

There was a significant difference of scores on Rotter's I-E Scale,  $F(1, 45)=8.26$ ,  $p < .05$ , between depressed and nondepressed groups. The data indicated that depressed patients made higher scores on the I-E Scale, suggesting a greater perception of external control in their lives. The null hypothesis of no significant difference was rejected.

When I-E scores were compared using gender as the independent variable, no significant difference in means appeared between male and female groups,  $F(1, 45)=2.93$ ,  $p > .05$ . The results are illustrated in Table 1. While the data do support the hypothesis that there was no significant difference between internal and external scores of the two sexes, there was a trend toward greater externality among depressed females. That trend did not hold up in measurements of nondepressed females whose I-E scores showed virtually no difference from the scores of nondepressed males.

Table 1

Analysis of Variance of Depression and Gender When Locus of Control was the Dependent Variable

Source	df	SS	MS	F	p
Depression (A)	1	147.27	147.27	8.26	.05
Gender (B)	1	52.27	52.27	2.93	NS
Depression X Gender (AXB)	1	45.06	45.06	2.52	NS
Error	56	998.40			
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Total	59	1243.00			

When change of control (EDS-II) scores were analyzed, a significant difference was noted between the means of the depressed and non-depressed groups,  $F(1, 45) = 6.37$ ,  $p < .05$ . Table 2 shows the outcome of that analysis.

Table 2

Analysis of Variance of Depression and Gender When Change of Control was the Dependent Variable

Source	df	SS	MS	F	p
Depression (A)	1	6,998.42	6,998.42	6.37	.05
Gender (B)	1	601.67	601.67	.55	NS
Depression X Gender (AXB)	1	11,766.74	11,766.74	10.72	.05
Error	56	61,487.11			
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Total	59	80,853.94			

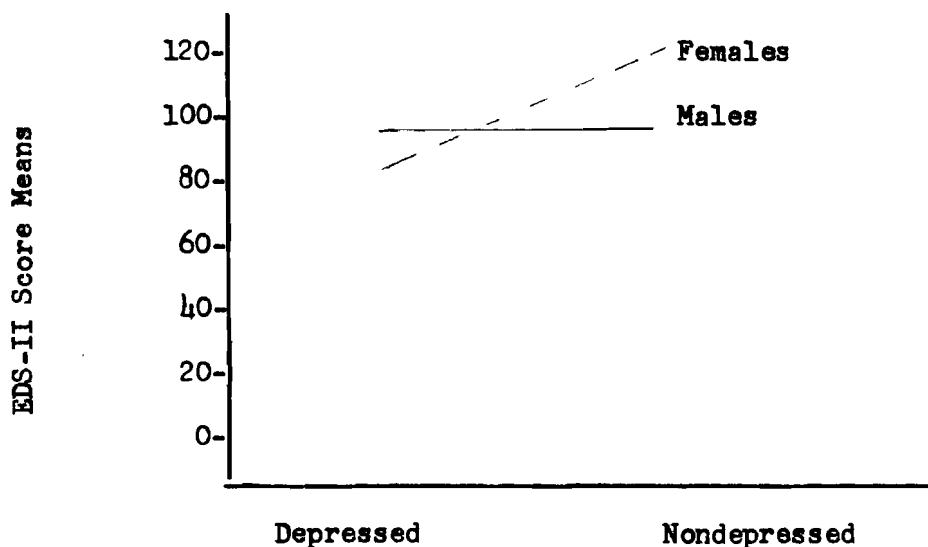
The depressed group perceived greater loss of control than the nondepressed group, who reported an increase in control of events in their lives in the last six months. The null hypothesis was rejected.

Gender was not a significant variable in EDS-II scores,  $F(1, 45) = .55$ ,  $p > .05$ . The null hypothesis was accepted.

There was significant interaction between sex and depression when change of control was the independent variable,  $F(1, 45) = 10.72$ ,  $p < .05$ . See Figure 1 for a graphic presentation of the interaction.

Figure 1

Graphic Presentation of Interaction of EDS-II Score Means For Depressed and Nondepressed Group



Nondepressed females appeared to feel a greater increase in control of their lives over the past six months than did males. At the same time, depressed females reported a greater sense of loss of control than did depressed males. There was little difference in the perception of loss of control between depressed and nondepressed males. Both male

groups appeared to perceive a slight loss of control, having mean EDS-II scores of 89.73 (depressed) and 94.67 (nondepressed).

Means and standard deviations for all test scores are presented in the appendix. Statistics are included for each test group.

## Chapter 5

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes the study and discusses the conclusions drawn from the results. In addition, it presents some recommendations for using the information generated by the research, as well as suggesting some areas for further study.

#### SUMMARY

This study sought to test the helplessness model of depression by comparing a sample of thirty clinically diagnosed depressed patients with a sample of thirty nondepressed employees of an acute care general hospital. When the data from Rotter's I-E Scale and the Evans-Dinning Scale were analyzed, a significant difference appeared in I-E scores and EDS-II scores between those samples. The depressed subjects obtained higher scores on both tests than the nondepressed subjects, indicating attitudes of external control were more evident among the depressed, and that the depressed patients felt they had lost some control over their lives in the past six months. The study also revealed that there was no significant difference in the I-E scores or EDS-II scores of males and females.

#### CONCLUSIONS

The helplessness model of depression was supported. Depressed patients, at the time they were tested, reported greater helplessness,

greater lack of personal control, than nondepressed subjects. Because the I-E Scale measures a generalized attitude that can be regarded as a personality variable, one can only conclude that helplessness is a characteristic way of responding among depressed individuals. A child reared in an environment in which the significant others in his life tend to be rigidly dominant or passively controlling so that his every action, thought, even emotion, is overridden, and if he is a sensitive, non-assertive child, may well learn that he is helpless and cannot control his life. If he learns to respond with helplessness, the child becomes virtually doomed to the experience of depression. The study appears to verify that premise.

The greater loss of control over events in their lives reported by depressed patients in the past six months suggests a further support of the helplessness model of depression. The EDS-II scores reflect responses to specific life events rather than generalized attitudes and cannot be used to speculate on developmental issues. What can be said when patients report a loss of control, is that they have made a helpless response and have experienced depression. Thus, while the helplessness/depression link is strong, there is less comfort in attributing the response to childhood depressogenic environments.

The study also revealed data which do not allow for the assumption that locus of control is a function of gender. Attitudes of internal or external control vary in both sexes, with neither males nor females revealing greater experienced control than the other. This result is in opposition to the traditional view that women experience greater external control than do men. Perhaps current consciousness raising among women accounts for the seeming break with traditional

attitudes of control. The study was not representative of women in general, however, and the fact that only employed females were included in the sample might explain the results obtained.

Scores on the EDS-II further emphasized some unexpected aspects of the perception of control by gender. Nondepressed females reported a greater increase in experienced control in the past six months than did nondepressed males, but depressed females reported a greater loss of control in the past six months than depressed males. Again, the data might reflect the current assertiveness of women and a break with the traditional submissive role. When the women lost, or could not maintain their personal control, depression resulted.

#### RECOMMENDATIONS

The preceding study has established a link between depression and helplessness which suggests the consideration of some treatment plans in addition to those currently being used. Medication and traditional therapy have proven effective in the management of depressive illness, and their discontinuance or replacement should not be implied by the recommendation of other types of treatment for depression.

An acceptance of the helplessness model of depression points to a treatment plan aimed at the reduction of feelings of helplessness in the patient. Treatment techniques already in use could be applied to the treatment of depression in innovative ways that would lead to the attainment of that goal. Behavior modification, family therapy, and guided imagery therapy would be useful techniques of treatment.

Behavior modification is suggested because of the immediate feedback of positive responses to the patient. To reduce feelings of

helplessness, the patient must be lead to experience small successes with rewards contingent on autonomous behavior. The simple act of combing his hair may be a momentous step for a severely depressed patient. Appropriate rewards for such behavior should act to increase the patient's self esteem. Further, as Seligman noted with his "helpless" dogs, literally forcing a patient to act (and then rewarding the act) may help dispel feelings of helplessness. Behavior modification is recommended on the premise that something which has been learned can be unlearned.

Family therapy would be a valuable tool in exploring, and perhaps explaining, a depressogenic environment. Family members, in thousands of verbal and nonverbal ways, may support a climate in which the patient cannot be well. The patient's actions, emotions, or thoughts may be so disparaged in his family that he has learned to be helpless, defeated and depressed. By focusing on the family, the patient may, first of all, feel less guilty about his illness. Secondly, he may come to understand the dynamics of the interactions of his family and learn how he can handle his own life within that family, or by leaving the family.

Guided imagery therapy is a fairly new technique and one which appears to hold a great deal of promise. Its uses are many. When treating the depressed individual, the focus should be on self mastery and self esteem. Each session would begin with deep relaxation. The techniques of relaxation would have been taught with the use of bio-feedback equipment and consist of temperature training (hand warming) followed by deep muscle relaxation as measured by the electromyograph (EMG). The first lesson in self mastery could be accomplished with this



preliminary biofeedback training. In a state of deep relaxation, the therapist would guide the patient to imagine himself as the person he wants to be, to see himself accomplishing certain tasks, and to see himself handling events in his life in a satisfactory and appropriate manner.

Of all the techniques suggested, the possibilities in guided imagery therapy are the most exciting. There is still much to be learned about results from the use of the technique. It would be helpful to collect data about the reduction of depressive symptoms, length of time without symptoms, and self reports of attitudes of helplessness before and after therapy. A research project which focuses on the helplessness model of depression and the application of guided imagery therapy to the treatment of depressed patients is recommended.

Not only do the results of this study suggest certain treatment modalities, they force some attention on the current developmental literature. At present the literature deals with the autonomous vs the dependent personality but contains little information or speculation about the etiology of depression. It is recommended that some space be given in future textbooks to the outline of Seligman's developmental theory. A look at the attainment of self mastery and satisfactory self esteem as a sort of immunization against depression suggests that parents, teachers and others involved in the early shaping of a child's personality should have access to the ideas which support the premise of that immunization. They should have access to the specifics of how helplessness can be learned.

This is not to suggest that the helplessness theory of depression should be accepted without question or should replace any of the other

depression theories. Even though the link between helplessness and depression appears significant, there is a disturbing simplistic quality about the theory that helplessness is learned and leads to depression. It would seem that more research is necessary. Can the above study be replicated? Would non-hospitalized depressed patients show fewer attitudes of external control?

Further study is recommended. Specifically, it seems a backward approach to the helplessness/depression idea would be helpful. That is, spend more time trying to find an effective treatment technique, other than chemical, and backtrack from there to a clearer explanation of the development of depression. Such an investigation could well end up where it began, with verification that depression is a result of learned helplessness.

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**APPENDIX**



## APPENDIX

### Means and Standard Deviations of Test Scores for Each Group of Subjects

#### Beck Depression Inventory

	$\bar{X}$	$S_x$
Depressed/Male	21.00	10.44
Nondepressed/Male	3.20	2.01
Depressed/Female	22.93	8.58
Nondepressed/Female	2.20	1.80

#### Rotter's I-E Scale

	$\bar{X}$	$S_x$
Depressed/Male	9.27	4.69
Nondepressed/Male	7.87	3.56
Depressed/Female	12.87	4.08
Nondepressed/Female	8.00	3.93

#### EDS-II Scale

	$\bar{X}$	$S_x$
Depressed/Male	89.73	27.51
Nondepressed/Male	94.67	7.93
Depressed/Female	79.40	29.22
Nondepressed/Female	117.67	12.77