

University of Montana

ScholarWorks at University of Montana

Graduate Student Theses, Dissertations, &
Professional Papers

Graduate School

1995

Evaluating the effectiveness of an intervention designed to encourage the adoption of optimistic explanatory styles by individuals with disabilities

Quincy-Robyn Young
The University of Montana

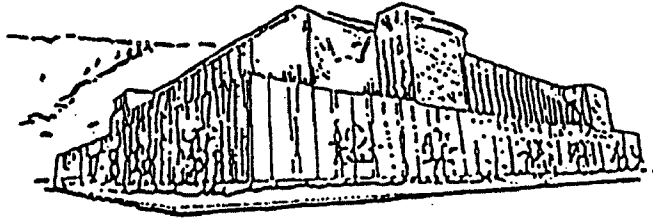
Follow this and additional works at: <https://scholarworks.umt.edu/etd>

Let us know how access to this document benefits you.

Recommended Citation

Young, Quincy-Robyn, "Evaluating the effectiveness of an intervention designed to encourage the adoption of optimistic explanatory styles by individuals with disabilities" (1995). *Graduate Student Theses, Dissertations, & Professional Papers*. 5643.
<https://scholarworks.umt.edu/etd/5643>

This Thesis is brought to you for free and open access by the Graduate School at ScholarWorks at University of Montana. It has been accepted for inclusion in Graduate Student Theses, Dissertations, & Professional Papers by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.



Maureen and Mike
MANSFIELD LIBRARY

The University of **MONTANA**

Permission is granted by the author to reproduce this material in its entirety,
provided that this material is used for scholarly purposes and is properly cited in
published works and reports.

*** Please check "Yes" or "No" and provide signature ***

Yes, I grant permission
No, I do not grant permission

Author's Signature OK Young

Date 5-15-95

Any copying for commercial purposes or financial gain may be undertaken only with
the author's explicit consent.

EVALUATING THE EFFECTIVENESS OF
AN INTERVENTION DESIGNED TO ENCOURAGE
THE ADOPTION OF OPTIMISTIC EXPLANATORY STYLES
BY INDIVIDUALS WITH DISABILITIES

by

Quincy-Robyn Young

B.A., University of California San Diego, 1991

Presented in partial fulfillment of the requirements
for the degree of
Master of Arts
University of Montana
1995

Approved by:


Chairperson, Board of Examiners


Dean, Graduate School

May 17, 1995
Date

UMI Number: EP41107

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



UMI EP41107

Published by ProQuest LLC (2014). Copyright in the Dissertation held by the Author.

Microform Edition © ProQuest LLC.

All rights reserved. This work is protected against unauthorized copying under Title 17, United States Code



ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 - 1346


8-7-95

ABSTRACT

Young, Quincy-Robyn, B.A

Clinical Psychology

Evaluating the Effectiveness of an Intervention Designed to Encourage the Adoption of Optimistic Explanatory Styles by Individuals with Disabilities (137 pp.)

Director: Mark Schaller, Ph.D. 

The purpose of this research was to develop, and test, a group explanatory style intervention for individuals with disabilities. It was suggested that individuals with disabilities who have pessimistic explanatory styles are at an increased risk for depression and other secondary conditions. By intervening at the explanatory style level it was hoped that the amount of impairment associated with depression and other secondary conditions would be reduced. Although there have been a plethora of studies involving changing subjects' causal attributions for specific events, little has been done to create a generalized intervention focused on changing subjects' explanatory styles. The present study assessed the effectiveness of an explanatory style intervention that targeted the participants' overall explanatory style. The participants were taught about attribution theory and taught generalizable skills for changing causal attributions. It was asserted that this intervention would result in the adoption of more optimistic explanatory styles. Although there were no statistically significant effects of the intervention on participants' explanatory styles, trends suggested that there were some positive changes in participants' explanatory styles from pre-test to post-test.

TABLE OF CONTENTS

ABSTRACT	ii
INTRODUCTION	1
Disability and Secondary Conditions	1
Depression and Explanatory Style	3
Learned Helplessness and Pessimistic Explanatory Style	6
Pessimistic Explanatory Style and an Increased Risk for Quitting	10
Pessimistic Explanatory Style and an Increased Risk for Illness	12
Summary	15
Explanatory Style Interventions	17
The Present Study	21
Predictions	21
METHODS	23
Participants	23
Procedure	24
Measures of Attributional Style	28
Other Measures	32
RESULTS	35
Comparability of Control and Intervention Groups	35
Testing the Main Hypothesis	38
Repeated Measures ANOVA with the FC-ASQ Data	39
Repeated Measures ANOVA with the ASQ Data	43
Examination of the Means	47
Repeated Measures ANOVA with Optimists and Pessimists separated at pre-test	49
Repeated Measures ANOVA with FC-ASQ Optimists and Pessimists	56
Regression Analysis of the ASQ Data	57
Chi Squared Analysis of Clinical Significance	57
Support for the Proposed Model	59
DISCUSSION	63
Summary of Results	63
Measurement Issues	65
Challenges of Community Based Research	67
REFERENCES	73

APPENDIX A		
	The Attribution Style Questionnaire	77
APPENDIX B		
	The Forced-Choice Attribution Style Questionnaire	85
APPENDIX C		
	Secondary Disability Surveillance Instrument.....	90
APPENDIX D		
	The Center's for Epidemiology Scale of Depression	98
APPENDIX E		
	The Satisfaction with Life Scale	100
APPENDIX F		
	The Explanatory Style Intervention (Week 3)	101
APPENDIX G		
	The Explanatory Style Intervention (Week 4)	129

LIST OF TABLES

Table 1: Demographic Means	35
Table 2: Demographic Frequencies	37
Table 3: Group Comparisons	38
Table 4: Repeated Measures ANOVA with the SUM-NEGATIVE Variable on the FC-ASQ	40
Table 5: Repeated Measures ANOVA with the HOPELESS Variable on the FC-ASQ	41
Table 6: Repeated Measures ANOVA with the SUM-POSITIVE Variable on the FC-ASQ	41
Table 7: Repeated Measures ANOVA with the HOPEFUL Variable on the FC-ASQ	42
Table 8: FC-ASQ Group Means	43
Table 9: Repeated Measures ANOVA with the SUM-NEGATIVE Variable on the ASQ	44
Table 10: Repeated Measures ANOVA with the HOPELESS Variable on the ASQ	44
Table 11: Repeated Measures ANOVA with the SUM-POSITIVE Variable on the ASQ	45
Table 12: Repeated Measures ANOVA with the HOPEFUL Variable on the ASQ	45
Table 13: ASQ Group Means	46
Table 14: Change in Pre-test to Post-test Means in the ASQ SUM-NEGATIVE Variable	48
Table 15: Change in Pre-test to Post-test Means in the ASQ HOPELESS Variable	49
Table 16: Repeated Measures ANOVA with the SUM-POSITIVE variable on the ASQ with Optimists and Pessimists Separated	52
Table 17: Repeated Measures ANOVA with the HOPEFUL Variable on the ASQ with Optimists and Pessimists Separated	53

Table 18: Repeated Measures ANOVA with the SUM-NEGATIVE Variable on the ASQ with Optimists and Pessimists Separated	54
Table 19: Repeated Measures ANOVA with the HOPELESS Variable on the ASQ with Optimists and Pessimists Separated	56

CHAPTER I

Introduction

The purpose of the present research was to develop, and test, a group explanatory style intervention for individuals with disabilities. It was suggested that individuals with disabilities who have pessimistic explanatory styles are at an increased risk for depression and other secondary conditions. By intervening at the explanatory style level it was hoped that the amount of impairment associated with depression and other secondary conditions would be reduced. The proposed explanatory style intervention was composed of two sessions of an eight-week workshop with the overall goal of reducing the disability associated with secondary conditions.

Disability & Secondary Conditions

An individual is considered to have a disability when she or he has an impairment that prevents an individual from participating in one or more major life activities. Studies of the general population have found that health is closely related to lifestyle behaviors (Matarazzo, 1984). This relationship also holds for the population of individuals with physical disabilities. In fact, DeJong and Hughes (1982) have suggested that the behavior of individuals with disabilities may be even more critically related to their

level of health. They assert that people with disabilities have a "narrower margin of health". In other words, individuals with disabilities are more likely to suffer the consequences of an unhealthy lifestyle. Having a disability increases the risk of suffering from a variety of preventable health problems (Seekins, Clay, & Ravesloot, 1994). These additional health problems are referred to as secondary conditions (Marge, 1988; Pope & Tarlov, 1991) and have the potential of increasing the level of disability that the individual experiences by adversely affecting an individual's health, independence and overall activity level (Seekins, et al., 1994). Among the most commonly reported secondary conditions are; pain, fatigue, pressure sores, physical conditioning problems, contractures and depression.

The cost of treatment for secondary conditions is a burden for both the individual and the society as a whole. For example, 50% of individuals with spinal cord injuries have been reported to develop pressure sores (Sugarman, 1985). Medical treatment for pressure sores can cost as much as \$90,000 per wound (Wharton, Milani, & Dean, 1987), and this does not take into account the loss of freedom, the time away from work, or the pain and suffering that the individual experiences. Compared to their non-disabled counter-parts, disabled young adults are also reported to experience more than twice as many days of restricted activity and twice as many days in bed due to chronic health

problems (McManus, Newacheck, & Greaney, 1990). These young adults with disabilities also made nearly four times as many visits to their doctor than did those without a disability. Clearly, preventing secondary conditions would be beneficial for both individuals with disabilities and the society as a whole. Health promotion and lifestyle management interventions are believed to reduce the disability associated with these secondary conditions (Seekins, et al., 1994; White, Matthews, & Fawcett, 1989). The present study focused on one particular intervention designed to reduce suffering from secondary conditions in general through more direct effects on explanatory style and depression.

Depression and Explanatory Style

Depression poses a special problem for people with disabilities. First of all, it is an extremely common secondary condition (Seekins, et al., 1994). Estimations of the prevalence of depression in this population are strikingly higher than that of the general population, varying from 34.9% (Turner & Wood, 1985) to 60% (Seekins, et al., 1994) among people with disabilities, compared to the overall prevalence of 4% to 8%. Seekins and his colleagues surveyed 236 individuals with disabilities living in rural areas in Montana. The authors developed an instrument, the Secondary Disability Surveillance Instrument (SDSI), to assess the prevalence of secondary conditions, as well as

the level of disability (activity limitation) associated with each condition.

The severity of a secondary condition was operationalized by the degree of activity limitation reported to be associated with that secondary condition. In other words, in this framework, a secondary condition was considered severe when it increases the overall disability level (or level of activity limitation) of an individual. To illustrate, let us consider Barnaby and Fred, two men with spinal cord injuries who both report having urinary tract infections. Although they both have infections, Fred's interferes more in his ability to carry out his normal life activities. From the authors' point of view, this means that Fred is experiencing more disability due to the secondary condition. In other words, Fred's secondary condition is more severe than Barnaby's.

The SDSI instructed the respondents to rate the severity of 40 different problems previously identified as secondary conditions on a scale from 0 to 3. A rating of 0 meant the condition had not been a problem, 1 meant it was a mild or infrequent problem (activity limited 1-5 hours per week), 2 meant it was a moderate problem (activity limited 6-10 hours per week), and 3 meant that it had been a significant problem, limiting activity for 11 or more hours per week. Depression was endorsed as a secondary condition by 136 respondents (60%) with an average severity rating of

2, indicating that depression limited their activity 6 to 10 hours a week.

Depression also appears to increase the likelihood of other secondary conditions being present at the same time. Raveslout, Seekins, and Norris (1995) surveyed 354 individuals who hold handicapped parking permits in Montana, to follow up on the above study (Seekins, et al., 1994). This was done for two reasons, (1) to establish the reliability and validity of the SDSI, and (2) to get a more representative sample of individuals with disabilities, in order to further understand the scope and ramifications of secondary conditions. The authors found that depression was a reliable predictor of the presence of other secondary conditions. Depression, when used as an independent variable to predict activity limitation due to the presence of other secondary conditions, accounted for 26% of the variance.

There are at least two explanations for why depression may be related to the activity limitation associated with secondary conditions. One explanation is that if people are experiencing a secondary condition (or multiple conditions) that is seriously limiting their activity level, they are likely to feel depressed about it. Second, depression may have a causal impact on the activity level of disabled persons. Given previous research documenting similar effects (Seligman, 1975), it is likely that depression will

reduce the probability that disabled individuals engage in behaviors that are essential for maintaining health. Clearly, then, depression is a powerful secondary condition associated with disability, and the onset of depression may increase the risk of suffering additional secondary conditions. What triggers this process? To answer this question, it is important to understand the role of explanatory style.

"Explanatory style" refers to the way people tend to explain the events in their lives. Everybody looks at life in their own unique way. Research linking explanatory style to depression and physical health dates back to the early 1970's and the development of the theory of learned helplessness.

Learned Helplessness and Pessimistic Explanatory Style

The learned helplessness theory was born out of animal research. These experiments have shown that when animals are exposed to uncontrollable events, like unavoidable shock, they will respond with passivity (Maier & Seligman, 1976). It was as if these animals had learned that their behavior would not affect the outcome, so they just gave up trying. Similar paradigms were explored with human subjects with much the same results. For example, Hiroto (1975) did an experiment that was analogous to the prior animal paradigms. In this experiment, college student volunteers

were assigned to one of three groups, controllable noise, uncontrollable noise, and no noise. During the first phase of the experiment, subjects in the controllable noise group heard a loud noise that could be terminated by pressing a button four times. In the uncontrollable noise group, the subjects heard a loud noise that would terminate independent of their behavior. The third group was subjected to no noise. In the second phase of the experiment, all groups were tested with the same hand shuttle box. Noise termination was controllable by all subjects by simply moving a lever from one side of the box to the other. The subjects that were in the controllable noise condition or the no noise condition readily learned how to terminate the noise in the test phase. On the other hand, the subjects that were previously in the uncontrollable noise situation typically failed to escape the loud noise, and instead just listened passively.

In the process of applying the learned helplessness theory to humans, Abramson, Seligman, & Teasdale (1978) applied notions adapted from past attribution theories (Heider, 1958; Weiner, 1974) to the cognitions surrounding learned helplessness. Within this new "Reformulated Model of Learned Helplessness," Abramson et al. (1978) asserted that a person must come to expect that his or her outcomes are uncontrollable in order to become helpless and suffer the symptoms of depression. This expectation of

uncontrollability is influenced by an individual's experiences as well as by that person's causal explanations for those experiences.

According to this theory, the attributions that people make about events vary along three dimensions: internal-external, stable-unstable, and global-specific. The internal-external dimension refers to whether the individual believes that environmental (external) or personal (internal) factors are the cause of the event. The stable-unstable dimension taps into the perceived permanence of the event, and the global-specific dimension is postulated to measure the perceived pervasiveness of the event (whether the outcome is generalizable to ALL areas of his/her life). In addition to identifying those dimensions along which people's attributions vary, this theory suggests that each individual person has a disposition, or "style" for explaining events in their lives, and that this style generalizes across situations. Research on explanatory style and depression has firmly established a relation between explanatory style and depression (Peterson & Seligman, 1984; Robins, 1988; Sweeny, Anderson & Bailey, 1986). Depressed people are more likely to attribute negative events to causes that are internal, stable and global. We might call this a "pessimistic" explanatory style. Conversely, "optimistic" explanatory styles (attributing negative events to causes that are external,

unstable, and specific) have been shown to protect individuals against depression, as well as increase the likelihood of recovering from depression (Needles & Abramson, 1990).

The reformulation of the theory postulates that learned helplessness in humans is the result of a cognitive attributional process. In this framework, there are two ways an individual can develop a pessimistic explanatory style. One, through repeated exposure to uncontrollable events, and two, through the experience of a single traumatic uncontrollable event. The theory asserts that it is not entirely necessary for an individual to *repeatedly* experience uncontrollable events in order to expect that future events will elude control. Rather, the *perception* of even a single traumatic event may shape the development of the individual's explanatory style. In this way, individuals with disabilities may be at greater risk for developing a pessimistic explanatory style because they are sometimes faced with the double-whammy of not only repeated exposure to uncontrollable events, but also exposure to the traumatic uncontrollable event of the serious physical injury that led to the disability in the first place.

Consider Barnaby, an individual with a spinal cord injury who uses a wheelchair. While he has been in a chair, he has been repeatedly stymied by inaccessible buildings. For example, on a number of occasions he has made plans to

meet friends at restaurants, only to find them inaccessible. Sometimes he can not even get to the front door, let alone, through it, and at other times he has discovered that although the restaurant claimed to be accessible, the bathroom was impossible to negotiate. The unrelenting exposure to such situations where he didn't feel like he had any control, has resulted in learned helplessness. This has led Barnaby to become less willing to even try to go out (leading to isolation and depression), and further, has encouraged him to adopt a pessimistic explanatory style. Because of his pessimistic explanatory style, Barnaby will be more likely to give up whenever he does run into the inevitable obstacles faced by a person in a wheelchair.

Pessimistic Explanatory Style and an Increased Risk for Quitting

Continuing with our "Barnaby" example, let us say that Barnaby has, indeed, developed a pessimistic explanatory style. In an effort to reduce secondary conditions, Barnaby has been on a special diet for two weeks and has been fairly successful so far. However, last night he went over to a friends house for a birthday celebration, and in the course of the evening he over-indulged in foods restricted by his diet. By the time he got home he was feeling somewhat depressed about his diet. He felt like it was all *his* fault (internal), and that he could *never* stay on a diet (stable).

In fact, he felt that if he couldn't even stay on a diet, he obviously couldn't do *anything* right (global). Such internal, global, and stable explanations set up the expectancy for future failure and helplessness. If an individual feels that all he or she could *possibly* do is fail, he or she is likely to give up trying. In this case, Barnaby is likely to quit his new diet because if he "can't do anything right", what is the use of even trying?

On the other hand, if Barnaby had an optimistic explanatory style, his reaction to the evening is likely to have been quite different. Although he may have been disappointed in what happened he would realize that it was a situation with many tempting food and social cues (external). He would also realize that it was a special occasion (unstable) as he only goes out with his friends every once in a while. Further, it would be unlikely that after focusing on these situational variables he would go on and generalize one evening's mishap to other areas of his life. In addition, if he believes that the cause of the slip up was environmental and unstable he is likely to ascertain that he can avoid it in the future. This belief will leave him with hope for the future, and it is more likely that he will stick with his diet.

Barnaby's plight is only one example of how explanatory styles can affect behavior change efforts. In a summary of research on motivation, Weiner (1974) states that

individuals with pessimistic explanatory styles tend to, "...avoid undertaking achievement tasks, work with relatively little intensity, and quit when they are failing (p. 37)." Conversely, studies have also consistently shown that optimistic explanatory styles lead to increased persistence, even at difficult tasks (Chapin & Dyck, 1976; Fowler & Peterson, 1981; Schunk, 1982; Wilson & Linville, 1985). Fowler and Peterson's (1981) study is a good example of the research in this area. They had children read difficult sentences aloud. After reading each sentence the experimenter gave the child an optimistic attribution (emphasizing the child's level of effort for both successful and unsuccessful attempts) regarding his or her performance. Fowler and Peterson found that children who were given optimistic attributions for their performances tried to read aloud more sentences with difficult words than those who were not given optimistic attributions for their efforts.

Pessimistic Explanatory Style and an Increased Risk for Illness

Barnaby's plight is an example of how explanatory styles may influence an individual's ability to stick to a health regimen. In much the same way, an individual's explanatory style may affect whether they seek treatment for a medical condition. If Barnaby believes that he is helpless to do anything about his condition, it is unlikely

that he will seek treatment at all. For example, if Barnaby truly believes that he will suffer from pressure sores no matter what he does (be it seeking medical treatment or engaging in behavioral interventions such as pressure releases) it is highly probable that he will respond with passivity. Such passivity will usually result in a worsening condition which will in turn extract a high cost from both the individual and society.

A number of studies have linked pessimistic explanatory styles to health. In a study involving college students, Peterson and Seligman (1987) found that a pessimistic explanatory style reliably predicted ($p < .05$) illness (operationalized by self reported symptoms and the number of doctor visits in a year). Another study links pessimistic explanatory styles and mortality. Peterson and his colleagues (1987) studied members of the Baseball Hall of Fame whose playing career occurred between 1900 and 1950. They used the Content Analysis of Verbatim Explanations (CAVE) technique on verbatim quotes by the players to assess their explanatory styles. Composite scores were formed for good and bad events (collapsing across the internality, stability and globality dimensions). It was found that, "to the degree that a player offered internal stable and global explanations for bad events, he lived a shorter life ($r = .26, p < .08$). If he offered external, unstable, and specific explanations for good events, he also lived a

shorter life ($r = .45, p < .02$) (p. 251)."

It is difficult to ascertain whether the health reported in these studies with humans is a function of the healthier lifestyle that is associated with optimistic explanatory styles (i.e. the increased ability to stick to health regimens and/or the willingness to seek medical treatment), or whether it is a function of a more basic biological factor like the immune system. Research with animals indicates that learned helplessness is associated with a less effective immune system. Visintainer, Volpicelli and Seligman (1982) studied the effect of learned helplessness on tumor rejection in rats. All the rats in the study were injected with enough sarcoma cells such that under normal conditions, 50% of them would reject the tumor. The rats were then divided into three groups, one group was faced with inescapable shock, the second group was given escapable shock, and the third group was a control. As expected, 50% of the rats in the control group rejected the tumor, and the other 50% died. However, 70% of the rats that had mastered the shock by pressing a lever to escape it, rejected the tumor. Only 27% of the rats that experienced the inescapable shock condition rejected the tumor.

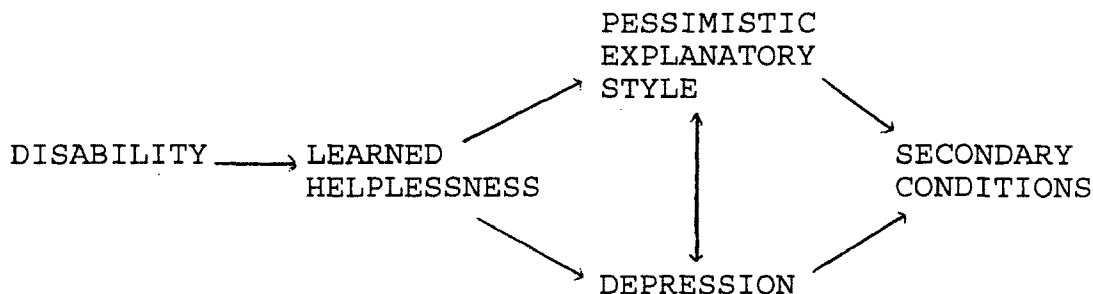
Similar results have been found with humans. In a study with snake phobics, Weidenfeld, O'Leary, Bandura, Brown, Levine, and Raska (1990), explored the affect of

perceived self-efficacy on the immune system. Self-efficacy is the degree to which an individual feels in control of his or her life and can be conceptualized as the opposite of learned helplessness. The snake phobic subjects participated in a cognitive behavioral intervention to reduce the phobia. The intervention emphasized self-efficacy. The authors found that the acquisition of perceived self-efficacy produced an improvement in the immunological system. In addition, these improvements were not transient, but were generally stable over time. Both of these studies suggest that there may be direct health benefits involved in having an optimistic explanatory style.

Summary

Focusing on the explanatory styles of people with disabilities is important because pessimistic explanatory styles may be linked to an increased risk for developing secondary conditions for a number of reasons. A pessimistic explanatory style may be an important mediating factor between disability and the development of secondary conditions (See figure 1).

FIGURE 1



As described earlier, having a disability is likely to increase the probability of experiencing uncontrollable situations (i.e. continually facing inaccessible buildings) which has been shown to foster learned helplessness (Abramson, Seligman, & Teasdale, 1978; Hiroto, 1975). Research has firmly established links between learned helplessness and both pessimistic explanatory styles and depression (Peterson & Seligman, 1984; Robins, 1988; Sweeny, et al., 1986). Both pessimistic explanatory styles and depression have, in turn, been linked to ill health in a number of ways. First of all, depression is itself, a common, and destructive, secondary condition, and in addition, appears to increase the likelihood of other secondary conditions being present at the same time (Ravesloot, et al., 1995). Similarly, pessimistic explanatory styles have been linked with an increased risk for illness (Peterson & Seligman, 1987). Having a

pessimistic explanatory style is likely to increase the probability that an individual will quit health regimens and will not seek medical advice (Seligman, 1991) which will in turn lead to an increased risk for secondary conditions. Thus, it is proposed that intervening at the level of explanatory style may reduce the risk of individuals with disabilities experiencing depression and other secondary conditions.

Explanatory Style Interventions

Research consistently shows that people's explanatory styles can be changed. Studies exploring this possibility usually implement one-shot interventions where the subjects are persuaded into making particular attributions for specific events. A review of these studies (Fosterling, 1985) illustrates that subjects' attributions can be reliably changed. In fact, those that involve follow up measures indicate that these changes can last at least a year. For example, in one study, subjects were asked to call up other students and convince them to donate blood (Anderson, 1983). Subjects who were led to believe that the outcomes of the calls (whether the student agreed to donate blood) were determined by unstable causes persuaded more students to donate blood than those subjects who were told that the outcomes depended on stable causes. The subjects who were persuaded to adopt unstable attributions not only

performed better, but also had increased expectancies and improved motivation.

In another study, Wilson and Linville (1985) used an informational format to influence the attributions of their subjects. The subjects were a group of college freshmen who reported anxiety about their academic performance. They were given information indicating that most students have fewer academic problems and tend to do better in their upper-class years. This information was in the form of statistics, and videotaped interviews of our upperclass students who reported that their grades were low their freshman year but improved thereafter. This was asserted to encourage subjects to attribute their academic problems to unstable causes. Subjects that received the intervention and were asked to reflect on their mood during the first week reported better mood. And improved academic performance was evidenced by an immediate improvement in GRE performance, increased academic persistence (lower drop out rate), the expectation for an improved GPA in the long run, and improvement in GPA after one year.

Although there have been a plethora of studies illustrating that it is possible to influence causal attributions by providing individuals with more optimistic explanations and thereby produce persistence and improved performance (Fosterling, 1985), there have been relatively few attempts to create a generalized attribution

intervention. In other words, little has been done to try and affect individual's overall explanatory styles, instead of concentrating only on specific attributions. Even popular individual cognitive therapies that have been shown to be successful interventions for depression (Beck, Rush, Shaw, & Emery, 1979), do not necessarily provide their clients with generalizable tools. Such therapy in clinical settings often focuses only on helping clients come up with alternative explanations for specific stressful situations. They do not usually include didactic instruction on the underpinnings of the theory. Such instruction would provide clients with a knowledge base that would help them deal with stressful events in the future.

A study by Green-Emrich & Altmaier (1991), explored the possibility of providing subjects with an explanation of the attribution theory and teaching them the basic tools needed to change explanatory styles in adaptive directions. They looked at attribution retraining as a group counseling intervention. The subjects were given the Attribution Style Questionnaire (ASQ) to assess their explanatory style. They were then separated into two groups, those with optimistic styles, and those with pessimistic styles. The pessimistic explanatory style group was then randomly assigned to either a treatment group or a control group. All together three groups were formed, Adaptive (optimistic) Group, Non-adaptive (pessimistic) group and Treatment Group. All

three groups participated in a problem-solving session, the Treatment Group also participated in an attribution retraining session one week prior to the problem-solving session. The attribution intervention included didactic instruction on attributional theory (the subjects were taught how to classify attributions along the three dimensions) including information that some attributions were more optimistic than others (external, unstable, specific attributions for negative events is a more optimistic explanatory style). The subjects were then taught, and encouraged to practice through homework, to create alternative, more optimistic explanations, for their pessimistic explanations. By teaching the participants attribution theory, the authors gave the subjects a generalizable tool that they could use in any situation. The authors were able to change the explanatory styles of the subjects in the Treatment group in optimistic directions, as evidenced by equivalent post treatment attributions for failure by both the Adaptive and Treatment groups, that were significantly worse than the attributions made by the Nonadaptive Group (as measured during the problem solving phase, one week after the attribution intervention). They also found that the Treatment Group had significantly lower scores than the Nonadaptive group on the depression scale. In general, Green-Emrich and Altmaier were successful in their attempt to create a generalized

explanatory style intervention.

The Present Study

The purpose of the present study was to apply a similar, generalized explanatory style retraining method in a field setting. The explanatory style intervention was one part of a workshop designed to reduce disability associated with secondary conditions in a population of individuals with spinal cord injuries. The workshop was eight weeks long, with one, two-hour session every week. Explanatory style training occurred in two of the eight week sessions, during weeks three and four.

There were a number of reasons for including the explanatory style training in two sessions. The first, and most obvious, was that it increased the likelihood of the participants learning the necessary skills to change their explanatory styles when appropriate. The two sessions also allowed the researchers to focus on two different aspects of explanatory style. The first session (Week 3) focused on the stable and global dimensions of explanatory style, whereas the second session (week 4) focused on the personal dimension of explanatory style.

Predictions

It was suggested that individuals with disabilities who have pessimistic explanatory styles would be at an increased

risk for depression and other secondary conditions. By intervening at the explanatory style level it was asserted that the amount of functional impairment associated with depression and other secondary conditions would be reduced. The present study focused on whether explanatory style could be changed in a group format with individuals with disabilities. It was hypothesized that individuals with internal, stable and global (i.e. pessimistic) attributions for negative events at pre-test, would have more external, unstable, and specific (i.e. optimistic) attributions for negative events at post-test. Further, individuals with external, unstable, and specific (i.e. pessimistic) attributions for positive events at pre-test, would have more internal, stable, and global (i.e. optimistic) attributions for positive events at post-test.

CHAPTER II

Methods

Participants

Individuals with spinal cord injuries were recruited through local Independent Living Centers in Montana and Kansas to participate in the intervention, with the understanding that they would be given \$50 for filling out a variety of questionnaires. Fifty-three individuals with spinal cord injuries were contacted about participating in the workshop, and 35 expressed interest in participating. Of those 35, 22 participants actually filled out the pre-measures and participated in the first few sessions. This pre-workshop attrition was due a number of problems including; 1) the experience of secondary conditions such as pressure sores, urinary tract infections, flu, and hospital stays, 2) transportation difficulties, and 3) personal problems including divorce, childcare difficulties, and overly busy schedules. As the workshop continued, a total of 6 more of the original 22 participants dropped out. These participants quit the workshop for the following reasons; 1) two of them experienced secondary conditions, 2) one said the material was "too painful", and 3) three participants had either schedules that were too busy, and, or, the material was not appropriate for them. In addition, 4 participants either refused to fill out the post-measure

questionnaire, or skipped over the measures that were key to this study. As a result, there were only 12 matched pre-test and post-test measures from the workshop participants to be analyzed.

The control group, which received no intervention, was composed of 27 individuals with mobility impairments from New Mexico. Three hundred and twenty-seven pre-measure questionnaires were mailed through the Division of Vocational Rehabilitation (DVR) central office. Thirty-eight pre-measure questionnaires were returned for a response rate of 11.6 %. Of those 38 pre-measure responses, 27 post-measures were returned with a single follow up phone call, for a response rate of 71.1 %. These participants were given \$10 each time they filled out a questionnaire.

Procedure

There were five workshops held in Kansas and Montana (2 in Kansas and 3 in Montana). The workshops were conducted from the first week in October, through the third week in December. The subjects in Montana and Kansas participated in the full eight-week workshop, whereas the participants from New Mexico received no intervention at the time of this study. All participants (in both the control and the intervention groups) were given the Attributional Style Questionnaire (ASQ) twice (as a pre- and post-test), once in October, before any of the workshops began and then

again, after the workshops ended in December. The forced-choice Attributional Style Questionnaire (FC-ASQ) was given to the intervention-group participants just before and just after the two-session intervention (at the end of session 2, and just before 5 begins -- see below for an outline of the workshop). However, the FC-ASQ scale was given to the control-group at the same time that they were given the ASQ, before and after the entire workshop takes place.

The Missoula, Montana workshop started two weeks earlier than the rest of the workshops. This provided an opportunity to trouble-shoot any problems that may have come up in the implementation of the intervention. No major problems presented themselves, and neither the intervention nor its presentations was altered.

The workshop was composed of eight weekly, two-hour group sessions. A manual of the material to be covered in the workshop was developed. This manual was written in a "self-help" format, with easy to understand exercises and text. It was designed so that it could guide participants through the topics even without the benefit of a workshop or a teacher. There was a chapter in the manual corresponding to each of the eight workshop sessions. The workshop participants were given the chapters one at a time, one week before the topic was discussed in a session. The chapters averaged about 30 pages long, about half of which were exercises.

The workshops were presented through local Independent Living Centers (ILC) located in 5 towns in Montana and Kansas, by ILC staff. ILC's are community based, non-profit, consumer directed non-resident organizations. Their primary purpose is to support the efforts of adults with physical disabilities to live independently in the community by providing advocacy, case management, skills training and other support services. A good proportion of ILC staff tend to be individuals with disabilities themselves; thus, 3 out of 5 of the workshops were led by individuals with disabilities. The leader of the Missoula, Montana workshop had both a visual and a mobility impairment, the leader of the Billings, Montana had a spinal cord injury, and the Kansas City, Kansas leader had a hearing impairment. Only one of the workshops, the one in Topeka, Kansas, had leaders with a significant amount of experience teaching or leading workshops.

All the leaders went through an intensive two-day training to prepare them for the workshop. They were given the workshop manual to read before the training session. The training involved lectures on the material being presented in the workshop as well as the rationale behind the subjects selected for each session, guidelines for session format, explanations of exercises, and some general instruction on teaching techniques.

The workshop consisted of eight weekly sessions. Each

week, new topics were presented that built on the information presented the week before. The sessions were as follows: Week 1 - Goal Setting, Week 2 - Problem Solving, Week 3 - Explanatory Style, stable and global dimensions, Week 4 - Explanatory Style, personal dimension, and Depression, Week 5 - Communication, Week 6 - Information Seeking, Week 7 - Physical Activity and Nutrition, Week 8 - Maintenance and Advocacy.

Two of the eight sessions, weeks 3 and 4, included the explanatory style intervention. The first explanatory style intervention, during week three of the workshop (see Appendix F) began by teaching the participants to become sensitive to their "self-talk" - the automatic cognitive reactions that they have to events in their life. Materials were presented to highlight the following: (1) that one's initial reaction to a situation is not always accurate, (2) the connection between thoughts and feelings, and (3) the effect of feelings on the progress toward goals. Techniques for generating a variety of alternative explanations for events in one's life were also be presented. These techniques were based on the two of the three dimensions of attribution theory. Participants were taught to identify two of the theoretical dimensions (global-specific, and stable-unstable) of an explanation and then guided to generate as many plausible alternative explanations along those dimensions as possible. Participants were then

encouraged to adopt explanations for events that left them feeling positive and hopeful for the future. Exercises took the participants through this in a step-by-step process. Examples of individuals with disabilities incorporating healthy life-style behavior changes in their lives were used to facilitate understanding of the theory and exercises, as well as to underscore the importance of an optimistic explanatory style for maintaining new behaviors.

The explanatory style intervention in session four (see Appendix G) highlighted skills for how to stop negative thoughts before they lead to negative feelings. The focus was on the internal-external, or personal, dimension of explanatory style. As in the last session, participants were taught to identify the particular attributional dimensions of their explanations (focusing on identifying the personal aspect). In particular, self-blaming thoughts were addressed. This was done in a manner similar to the previous session, taking the participants through a step-by-step process to identify internal-external explanations and then to generate as many plausible alternative explanations along that dimensions as possible.

Measures of Attributional Style

Explanatory style was assessed with two scales; 1) the Attribution Style Questionnaire, (ASQ) (Peterson, Semmel, von Baeyer, Abramson, Metalsky, & Seligman, 1982) which was

administered before and after the entire workshop, and 2) a forced-choice Attribution Style Questionnaire, (FC-ASQ) (Seligman, 1990) which was administered just before and just after the sessions that included the explanatory style intervention. The ASQ (see Appendix A) is a well-established instrument designed to assess individuals' attributions for a number of hypothetical positive and negative events along the dimensions proposed by the hopelessness theory. Research has shown that ASQ scores predict the type of attributions individuals will make for personal life events (Metalsky, Halberstadt & Abramson, 1987).

The questionnaire requires individuals to generate a cause for a hypothetical situation, and then rate the cause on a 1 - 7 scale on each of the three dimensions (internal-external, global-specific, and stable-unstable). This rating process provides a score for each of the dimensions for each of the events (6 positive events and 6 negative events). These scores were combined into four different composite scores, each of which is used as a dependent measure in the analyses. The four scores are composed of, 1) the sum of the dimension ratings for all the negative events (SUM-NEGATIVE), 2) the sum of all the dimension ratings of the positive events (SUM-POSITIVE), 3) the sum of the global-specific and the stable-unstable dimensions for negative events (HOPELESS), 4) the sum of the global-

specific and the stable-unstable dimensions for positive events (HOPEFUL). These composite scores have been found to be the most reliable indicators of an individual's explanatory style (Seligman, Abramson, Semmel, & von Baeyer, 1979; Peterson et al., 1982).

The forced-choice Attribution Style Questionnaire (FC-ASQ) was published in M.E.P. Seligman's book, Learned Optimism. The scale has 48 multiple choice items (see Appendix B). Each item presents a scenario, such as "The project you are in charge of is a great success". For each of these scenarios the respondent is required to choose between one of the two explanations provided. For example, for the scenario described above the choices of explanations are: A) I kept a close watch over everyone's work, or B) Everyone devoted a lot of time and energy to it. The 48 scenarios are scored according to which of the dimensions the items are tapping into. Like the ASQ, scores are divided up into those involving positive events; with both SUM-POSITIVE and HOPEFUL scores, and those involving negative events; with both SUM-NEGATIVE and HOPELESS scores. In addition, a composite score of optimism is also created. This score is the total score of the bad scenarios minus the total score of the good scenarios.

The scale's validity and reliability have not been reported in the literature, however, a pilot study provided the data necessary for correlations between the ASQ and the

forced-choice ASQ to be analyzed. The pilot study involved 29 individuals from Montana and Kansas with mobility impairments. The correlation for the negative scenarios in the ASQ and the FC-ASQ was moderate at .38 ($p = .057$). The correlation of the optimism composite score from the FC-ASQ was positively correlated with the positive scenarios in the ASQ, at .48 ($p < .05$), and negatively correlated with the negative scenarios in the ASQ at $-.65$ ($p < .001$). Thus, although the FC-ASQ has not been thoroughly validated, there was evidence that it was tapping into the same phenomenon as the ASQ.

Although these correlations were compelling enough to support the choice of using the FC-ASQ, they were not reflected in the present data. In these data, the correlation for the negative scenarios in the ASQ and the FC-ASQ was almost non-existent at .0386 ($p = .845$). Similarly, the correlations of the composite score of optimism from the FC-ASQ (the total score of the bad scenarios minus the total score of the good scenarios) was correlated with the positive scenarios in the ASQ, at $-.3217$ ($p = .095$), and with the negative scenarios in the ASQ at $-.1003$ ($p = .612$). It is clear that there is either substantial measurement error in either or both the ASQ and the FC-ASQ in this study, or that the correlations seen in the pilot study were an anomaly.

The Content Analysis of Verbatim Explanations (CAVE)

technique (Schulman, Castellon, & Seligman, 1989), which uses independent trained judges to perform an attributional analysis of individuals' self-generated verbatim text, was planned to be used on data gathered during intake and exit interviews. However, the verbatim material that was gathered during the intake interviews with the intervention group was not suited for this kind of analysis. Schulman et al. (1989) recommend a minimum of 4 or 5 explanations for negative events in order to get an accurate assessment of explanatory style. Such verbalizations were simply not being generated by the interviewees. It was believed to be clinically inappropriate to force, or even encourage, the participants to generate explanations for negative events during the first personal contact with them. Given this, the CAVE technique was abandoned.

Other Measures

Basic demographics, including age, gender, race, education, income, type of disability, and time since injury, were collected for both the intervention and the control groups.

Functional limitation due to secondary conditions was measured with the Secondary Disability Surveillance Instrument (SDSI; Seekins, Smith, McCleary, Clay, and Walsh, 1990). This instrument (see Appendix C) asks respondents to rate the time limitation due to each of 43 medical, social

and psychological conditions on a scale of 0 to 3, where zero meant the condition was not a problem during the past year, one meant it was a mild or infrequent problem (limits activity 1-5 hours per week), two meant it was a moderate problem during the past year (limits activity 6-10 hours per week) and three meant that it was a significant/chronic problem (limits activity 11 or more hours a week). These ratings were summed for a total score reflecting the subjective experience of functional impairment (SUM-CONDITIONS). A score that reflects the sum of secondary conditions, while factoring out depression was also calculated (SUM-NODEP).

Functional impairment is also measured with two single-item questions, Overall Health and Overall Independence. These questions ask the respondent to rate their level of overall health or independence on a 4 point likert type scale with 0 = excellent, 1 = good, 2= fair, and 3 = poor. Thus, both of these items are keyed such that lower scores indicate a higher level of functioning.

Depression was measured with the Center's for Epidemiological Study of Depression Scale (CES-D; Radloff, 1977). This is a 20 item scale designed to measure an individual's current level of depressive symptomatology, with an emphasis on depressed mood (see Appendix D). On a four point likert scale, ranging from "rarely or none of the time", to "most or all of the time" respondents are asked to

indicate how often they experienced each of the symptoms in the last week. Higher scores indicate a greater level of depression. This scale has been used with individuals with spinal cord injuries, including a study that involved 989 persons with disabilities (Turner & Wood, 1985).

Life satisfaction was measured with the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). This is a five item scale that measures respondents global life satisfaction, based on their idiosyncratic ideas of what is important, rather than only his or her satisfaction with particular life domains (see Appendix E). This scale is keyed such that a lower score indicates a higher level of life satisfaction.

CHAPTER III

Results

Comparability of Control and Intervention Groups

Basic demographics, including age, gender, race, education, income, type of disability, and time since injury, were collected for both the intervention and the control groups. These demographics were compared with either independent sample t -tests, or chi squared analyses. Age, education, income, and time since injury, were compared with independent sample t -tests with only one significant difference found, in the education variable ($p = .044$). See Table 1 for a break down of the means of these demographics of the two groups, as well as results from the independent sample t -tests.

Table 1
Demographic Means

Variable	Intervention Means	Control Means	p
Yrs Since Disability	13	10.41	.359
Age	37.50	35.32	.545
Education (years)	12.83	14.50	.044 *
Income	13,182	21,684	.200

* Significant at the .05 level.

Gender, race, and type of disability, were compared with the chi squared analysis. Race was examined in two different ways, 1) comparing all the races, and 2) organizing participants into just two groups, caucasian and non-caucasian. These two analyses revealed quite different results. When the participants were categorized as caucasian versus non-caucasian, the chi square revealed no significant difference between the groups ($X^2(1) = .750$, $p = .386$). However, when all the separate races were considered there was a significant difference ($X^2(3) = 10.256$, $p = .016$). This difference merely highlights that although the ratio of caucasians to non-caucasians is roughly the same, the intervention group includes 4 african americans, whereas the control group has none, and the control group has 9 hispanics, whereas the intervention group has none (see Table 2). The gender comparison also revealed a significant difference ($X^2(1) = 4.364$, $p = .037$). See Table 2 for a break down of the frequencies and significance levels of these analyses.

Table 2
Demographic Frequencies

Variable	Intervention Frequencies	Control Frequencies	p
Type of Disability			
Spinal Cord Injury	100 %	96.2 %	.491
Multiple Sclerosis	0 %	7.7 %	
TBI	0 %	7.7 %	
Polio	0 %	3.8 %	
Gender			
Male	71 %	37 %	.037*
Female	29 %	63 %	
Race			
Caucasian	64.3 %	50 %	.016*
African American	28.6 %	0 %	
Asian	0 %	0 %	
American Indian	7.1 %	15.4 %	
Hispanic	0 %	34.6 %	

* Significant at the .05 level.

Although there are clearly differences in race, education, and income in the two groups being compared, it is argued that the two groups are comparable along the dimensions that are specifically being addressed in this study. Firstly, an independent sample t -test revealed that the two groups did not differ significantly at pre-test on the measures (the ASQ and the FC-ASQ) that are most germane to this study (see Table 3). This argument is bolstered by the comparison of two one-item measurements (Overall Health and Overall Independence) that are key to the assessment of the degree of functional impairment experienced. In past research, these single item questions have correlated highly with the amount and severity of secondary conditions

experienced (Ravesloot et al., 1995). In an effort to quantify the functional similarities of the two groups, the group means of the Overall Health and Overall Independence items, were compared via an independent sample t -test. This test indicated no significant differences between the two groups (see Table 3).

Table 3
Comparability of Groups

Scale	Mean		p
	Intervention	Control	
ASQ			
Negative Event	96.70	97.05	.941
Positive Event	72.78	73.47	.916
FC-ASQ			
Negative Event	11.00	11.22	.840
Positive Event	9.80	10.91	.302
Overall Independence	1.28	1.35	.786
Overall Health	1.32	1.18	.544

Testing the Main Hypothesis

The main hypothesis being tested in this study is that individuals' explanatory style can be made more optimistic through a group workshop intervention. More explicitly, it was hypothesized that individuals with internal, stable and global attributions (i.e. pessimistic attributions) to negative events at pre-test would demonstrate more external, unstable, and specific attributions (i.e. optimistic

attributions) at post-test; and that individuals with external, unstable, and specific (i.e. pessimistic) attributions for positive events at pre-test, would have more internal, stable, and global (i.e. optimistic) attributions for positive events at post-test.

A number of repeated measures ANOVAs, involving the four different composite scores, were run in order to test these hypotheses. Recall that the four composite scores were computed in the following way: data was first divided into two groups, scores for negative events and scores for positive events. Then, the scores for each of the three dimensions of the attribution model (internal-external, stable-unstable, and global-specific) were totaled to compute the sum score for both positive (SUM-POSITIVE) and negative (SUM-NEGATIVE) events. Two more scores were constructed by summing just the stable-unstable and the global-specific dimensions for both negative events (the HOPELESS score), and for positive events (the HOPEFUL score). These four scores were computed for both the FC-ASQ data and the ASQ data, and used in a number of different repeated measures ANOVAs.

Repeated Measures ANOVA with the FC-ASQ Data

The first analyses performed were four repeated measures ANOVAs involving the FC-ASQ data. The analysis of the FC-ASQ data is the strongest test of the main hypothesis

that individuals' explanatory styles were changed by the explanatory style intervention that was introduced to the participants in weeks three and four of the workshop. The reason that this analysis is the strongest lies in the timing of the pre-test and post-test measures. The FC-ASQ was given just before and just after the two-week intervention in an effort to isolate the effect of the intervention. The results of the four repeated measures ANOVAs with the FC-ASQ data are presented in Tables 4 through 7.

Table 4
Repeated Measures ANOVA with the SUM-NEGATIVE Variable on the FC-ASQ

SUMMARY TABLE

Source	<u>SS</u>	<u>DF</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Subjects Effects					
WITHIN + RESIDUAL	516.01	32	16.13		
TREATMENT	14.47	1	14.47	.90	.351
Within Subjects Effects					
WITHIN + RESIDUAL	71.05	32	2.22		
TIME	4.14	1	4.14	1.87	.181
TREATMENT x TIME	.97	1	.97	.44	.514

Table 5
Repeated Measures ANOVA with the HOPELESS Variable on the FC-ASQ

SUMMARY TABLE

Source	SS	DF	MS	F	p
Between Subjects Effects					
WITHIN + RESIDUAL	317.65	32	9.93		
TREATMENT	12.41	1	12.41	1.25	.272
Within Subjects Effects					
WITHIN + RESIDUAL	62.25	32	1.95		
TIME	4.69	1	4.69	2.41	.130
TREATMENT x TIME	.98	1	.98	.50	.482

Table 6
Repeated Measures ANOVA with the SUM-POSITIVE Variable on the FC-ASQ

SUMMARY TABLE

Source	SS	DF	MS	F	p
Between Subjects Effects					
WITHIN + RESIDUAL	436.49	32	13.64		
TREATMENT	3.00	1	3.00	.22	.643
Within Subjects Effects					
WITHIN + RESIDUAL	113.11	32	3.53		
TIME	.03	1	.03	.01	.933
TREATMENT x TIME	.26	1	.26	.07	.788

Table 7
Repeated Measures ANOVA with the HOPEFUL Variable on the
FC-ASQ

SUMMARY TABLE

Source	SS	DF	MS	F	p
Between Subjects Effects					
WITHIN + RESIDUAL	354.14	32	11.07		
TREATMENT	.09	1	.09	.01	.928
Within Subjects Effects					
WITHIN + RESIDUAL	71.22	32	2.23		
TIME	.25	1	.25	.11	.738
TREATMENT x TIME	.25	1	.25	.11	.738

There were no significant effects revealed by these analyses. The TIME x TREATMENT interaction was not significant for any of the composite scores (SUM-NEGATIVE, $p = .514$; HOPELESS, $p = .482$; SUM-POSITIVE, $p = .788$; HOPEFUL, $p = .738$), indicating that there was no significant difference in the intervention and control groups (TREATMENT) from pre-test to post-test (TIME). In other words, the explanatory style intervention did not change the participants performance on the FC-ASQ in any systematic fashion (see Table 8 for the group means of the various variables).

However, there were indications that there were measurement difficulties with the FC-ASQ. Recall that the FC-ASQ is an instrument that has not been used in any

studies reported in the literature, nor has any norms, reliability or validity information been published on it. Further, this study did not find any significant correlations between the FC-ASQ and the ASQ data. In light of these facts, the remaining tests of the main hypothesis will rely on the ASQ data.

Table 8 FC-ASQ Group Means

Variable	Intervention Means		Control Means	
	PRE	POST	PRE	POST
SUM-NEGATIVE	10.18	10.45	10.91	11.70
HOPELESS	5.09	5.91	6.26	6.57
SUM-POSITIVE	10.64	10.73	11.22	11.04
HOPEFUL	8.18	8.18	8.39	8.13

Note: On the SUM-NEGATIVE and HOPELESS variables, a higher score indicates more pessimism, whereas on the SUM-POSITIVE and HOPEFUL variables a higher score indicates more optimism.

Repeated Measures ANOVA with the ASQ Data

The next analyses performed were another set of four repeated measures ANOVAs. However, these analyses examined the differences from pre-test to post-test in the ASQ data. As with the FC-ASQ analyses, the data were compiled into four composite scores, SUM-NEGATIVE, HOPELESS, SUM-POSITIVE, and HOPEFUL, and each was used in a repeated measures ANOVA. Again, the main hypothesis that individuals' explanatory

style could be made to be more optimistic at post-test was tested. The results of these analyses are presented in Tables 9 through 12.

Table 9
Repeated Measures ANOVA with the SUM-NEGATIVE Variable on the ASQ

SUMMARY TABLE

Source	<u>SS</u>	<u>DF</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Subjects Effects					
WITHIN + RESIDUAL	8077.25	25	323.09		
TREATMENT	44.08	1	44.08	.14	.715
Within Subjects Effects					
WITHIN + RESIDUAL	1733.92	25	69.36		
TIME	2.68	1	2.68	.04	.846
TREATMENT x TIME	30.08	1	30.08	.43	.516

Table 10
Repeated Measures ANOVA with the HOPELESS Variable on the ASQ

SUMMARY TABLE

Source	<u>SS</u>	<u>DF</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Subjects Effects					
WITHIN + RESIDUAL	5279.14	25	211.17		
TREATMENT	94.45	1	94.45	.45	.510
Within Subjects Effects					
WITHIN + RESIDUAL	804.47	25	32.18		
TIME	5.79	1	5.79	.18	.675
TREATMENT x TIME	1.56	1	1.56	.05	.827

Table 11
Repeated Measures ANOVA with the SUM-POSITIVE Variable on the ASQ

SUMMARY TABLE

Source	SS	DF	MS	F	p
Between Subjects Effects					
WITHIN + RESIDUAL	5524.96	25	221.00		
TREATMENT	26.37	1	26.37	.12	.733
Within Subjects Effects					
WITHIN + RESIDUAL	782.14	25	31.29		
TIME	111.56	1	111.56	3.57	.071
TREATMENT x TIME	23.86	1	23.86	.76	.391

Table 12
Repeated Measures ANOVA with HOPEFUL Variable on the ASQ

SUMMARY TABLE

Source	SS	DF	MS	F	p
Between Subjects Effects					
WITHIN + RESIDUAL	2896.80	26	111.42		
TREATMENT	108.13	1	108.13	.97	.334
Within Subjects Effects					
WITHIN + RESIDUAL	599.42	26	23.05		
TIME	78.93	1	78.93	3.42	.076
TREATMENT x TIME	14.93	1	14.93	.65	.428

Like the analyses involving the FC-ASQ data, there were no significant effects revealed by the analyses involving the ASQ data. The TIME x TREATMENT interaction was not

significant for any of the composite scores (SUM-NEGATIVE, $p = .516$; HOPELESS, $p = .827$; SUM-POSITIVE, $p = .391$; HOPEFUL, $p = .428$), indicating that there was no significant difference in the intervention and control groups (TREATMENT) from pre-test to post-test (TIME). In other words, the explanatory style intervention did not change the participants performance on the ASQ in any systematic fashion (see Table 13 for the group means of the various variables). There is, however, a possibility that these analyses are missing a significant effect of the intervention. It may be that the mean change seen from pre-test to post-test is being truncated by the optimistic pre-test scores. Clearly, individuals who are optimistic at pre-test will have much less room to become more optimistic at post-test than those who are pessimistic at pre-test.

Table 13 ASQ Group Means

Variable	Intervention Means		Control Means	
	PRE	POST	PRE	POST
SUM-NEGATIVE	74.36	71.08	73.47	75.75
HOPELESS	47.82	46.00	49.37	49.75
SUM-POSITIVE	95.00	93.33	97.06	91.65
HOPEFUL	62.08	60.25	65.42	61.05

Note: On the SUM-NEGATIVE and HOPELESS variables, a higher score indicates more pessimism, whereas on the SUM-POSITIVE and HOPEFUL variables a higher score indicates more optimism.

Examination of the Means

In an effort to explore the possibility that differences between the pre-test and post-test measures were being truncated by the optimistic pre-test scores, individuals were separated into two groups, optimists and pessimists, according to their explanatory style scores at pre-test (STYLE). These new group means were then examined to see if individuals with pessimistic explanatory styles at pre-test were becoming more optimistic at post-test.

This examination of the mean differences among the groups is suggestive of change in the hypothesized direction at post-test. Tables 14 and 15 present the pre-test and post-test negative events means (SUM-NEGATIVE and HOPELESS) for both the pessimists and optimists in the control and the intervention groups. There appears to be an effect of regression to the mean, reflected by the fact that pessimists at pre-test tend to become more optimistic at post-test, and conversely, that optimists at pre-test tend to become more pessimistic at post-test. This pattern is fairly stable across groups and variables. However, there is also a pattern where the amount of change that is seen from pre-test to post-test tends to be approximately twice as great in the intervention-pessimists condition than in the other three conditions (intervention-optimists, control-pessimists and control-optimists).

For example, Table 14 presents the pre-test and post-

test means for the SUM-NEGATIVE variable on the ASQ. The last column of the table displays the amount of change from pre-test to post-test, and the direction of that change. Notice that the amount of change in the intervention-pessimists group is approximately twice the size (- 9.80) of the amount of change seen among the control-pessimists (-4.68). Further, the change that is seen in the intervention-pessimist group is in the desired direction, with more optimism at post-test. This pattern can also be seen in Table 15, where the pre-test and post-test means of the HOPELESS variable are presented. Are these trends statistically significant? In an effort to answer this question, another series of repeated measures ANOVAs were performed.

Table 14
Change in Pre-test to Post-test Means in the ASQ
SUM-NEGATIVE Variable

Variable	Pre	Post	Change
INTERVENTION			
Pessimists	87.20	77.40	- 9.80 (more optimistic)
Optimists	63.67	67.17	+ 3.50 (less optimistic)
CONTROLS			
Pessimists	87.25	82.57	- 4.68 (more optimistic)
Optimists	63.54	68.45	+ 5.00 (less optimistic)

Note: Lower score = more optimistic

Table 15
Change in Pre-test to Post-test Means in the ASQ HOPELESS Variable

Variable	Pre	Post	Change
INTERVENTION			
Pessimists	59.00	52.00	- 7.00 (more optimistic)
Optimists	38.50	42.50	+ 4.00 (less optimistic)
CONTROLS			
Pessimists	60.44	57.13	- 3.31 (more optimistic)
Optimists	39.40	42.20	+ 2.80 (less optimistic)

Note: Lower score = more optimistic

Repeated Measures ANOVAs with Optimists and Pessimists

Separated at Pre-test

In an effort to capture change between the pre-test and post-test measures, individuals were separated into two groups, optimists and pessimists, according to their explanatory style scores at pre-test, as measured by the ASQ (STYLE). This manipulation adds another dimension to the original two-by-two design. There is still one within subject variable (TIME, i.e. pre-test versus post-test), however, there are now two between subjects variables; 1) control versus intervention groups (TREATMENT), and 2) explanatory style at pre-test (STYLE; i.e. optimistic versus pessimistic).

Positive Events on the ASQ

The hypothesis that individuals with external, unstable, and specific (i.e. pessimistic) attributions for positive events at pre-test, would have more internal, stable, and global (i.e. optimistic) attributions for positive events at post-test was tested with two different repeated measures ANOVAs; one with the total score for all positive events on the ASQ (SUM-POSITIVE), and the other with a composite score of just the stable and global scores for positive events on the ASQ (HOPEFUL).

The first of these analyses involved the SUM-POSITIVE score (see Table 16). The only significant effect that was revealed by this repeated measures ANOVA was a main effect of the STYLE variable. This is not very meaningful, as the variable reflects the experimental manipulation of assigning participants into a pessimistic group or an optimistic group, based on their pre-test ASQ scores (STYLE, $p < .001$). The results that are most germane to testing the hypothesis are found in the interaction between TIME (pre-test to post-test change) and TREATMENT (intervention versus group assignment) and reveal non-significance (TIME x TREATMENT, $p = .429$). In other words, there was not a significant difference in the amount of change that was experienced by those participants in the intervention group than those in the control group. There was also no significant three-way interaction (TIME x TREATMENT x STYLE, $p = .509$).

The results for the repeated measures ANOVA with the HOPEFUL variable (the composite score of the sum of the stable and global dimensions for positive events) roughly mirrored the analysis for the SUM-POSITIVE variable (see Table 17). However, unlike previous analyses, there was a significant within subjects effect involving the TIME variable (the difference between the pre-test mean of 64.13, and the post-test mean of 60.75; $p = .041$). This change indicates that across groups, participants became more pessimistic from pre-test to post-test. There was no significant interaction between TREATMENT and TIME ($p = .647$). In other words, although there was a significant amount of change from pre-test to post-test across groups, there was a no significant difference due to participation in the workshop.

Table 16
Repeated Measures ANOVA with the SUM-POSITIVE Variable on
 the ASQ with Optimists and Pessimists Separated

SUMMARY TABLE

Source	SS	DF	MS	F	p
Between Subjects Effects					
WITHIN + RESIDUAL	2532.22	25	101.29		
TREATMENT	6.99	1	6.99	.07	.795
STYLE	4578.60	1	4578.60	45.20	.001
TREATMENT x STYLE	303.30	1	303.30	2.99	.096
Within Subjects Effects					
WITHIN + RESIDUAL	812.46	25	32.5		
TIME	116.58	1	116.58	3.59	.070
TREATMENT x TIME	21.04	1	21.04	.65	.429
STYLE x TIME	49.37	1	49.37	1.52	.229
STYLE x TREATMENT x TIME	5.24	1	5.24	.16	.691

Table 17
Repeated Measures ANOVA with the HOPEFUL Variable on the ASQ
 with Optimists and Pessimists Separated

SUMMARY TABLE

Source	<u>SS</u>	<u>DF</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Subjects Effects					
WITHIN + RESIDUAL	1678.80	25	64.57		
TREATMENT	21.25	1	21.25	.33	.571
STYLE	1976.41	1	1976.41	30.61	.001
TREATMENT x STYLE	164.50	1	164.50	2.55	.123
Within Subjects Effects					
WITHIN + RESIDUAL	582.70	25	22.41		
TIME	103.60	1	103.60	4.62	.041
TREATMENT x TIME	4.80	1	4.80	.21	.647
STYLE x TIME	22.10	1	22.10	.99	.330
STYLE x TREATMENT x TIME	.67	1	.67	.03	.864

Negative Events on the ASQ

The next repeated measures ANOVA involved the total scores for negative events on the ASQ (SUM-NEGATIVE) (see Table 18). There was no main effect of pre to post scores (TIME, $p = .655$) across the control and intervention groups. The two groups did not change in a significantly different way from pre-test to post-test. There was also no significant interaction between TIME and TREATMENT (TIME x TREATMENT, $p = .317$). The fact that this interaction was not significant indicates that the intervention did not affect participants scores on the post-test ASQ in a significantly systematic manner. The three-way interaction

was also not significant (TIME x TREATMENT x STYLE, $p = .509$). The assignment of participants into a pessimistic group and an optimistic group (STYLE) did result in two groups that were significantly different from each other (STYLE $p = .001$), however, this is merely an artifact of experimental manipulation. There was a significant two-way interaction between the assignment of participants into a pessimistic group and an optimistic group, and the change in scores from pre-test to post-test (STYLE x TIME, $p = .022$). This interaction suggests that in the SUM-NEGATIVE variable there is a significant effect of regression to the mean.

Table 18
Repeated Measures ANOVA with the SUM-NEGATIVE Variable on the ASQ with Optimists and Pessimists Separated

SUMMARY TABLE

Source	SS	DF	MS	F	p
Between Subjects Effects					
WITHIN + RESIDUAL	4217.19	25	168.69		
TREATMENT	14.62	1	14.62	.09	.771
STYLE	4030.63	1	4030.63	23.89	.001
TREATMENT x STYLE	3.46	1	3.46	.02	.887
Within Subjects Effects					
WITHIN + RESIDUAL	1521.01	25	60.84		
TIME	12.48	1	12.48	.21	.655
TREATMENT x TIME	63.44	1	63.44	1.04	.317
STYLE x TIME	362.75	1	362.75	5.96	.022
STYLE x TREATMENT x TIME	27.33	1	27.33	.45	.509

The next repeated measures ANOVA on the negative events scores involved the HOPELESS variable (a composite score of the sum of global and stable negative events). As with the two repeated measures ANOVAs involving the positive event scores, the two analyses involving the scores for negative events revealed a similar pattern of results. There were two significant effects, although neither of them supported the hypothesis being tested. One of the effects merely reflected the experimental manipulation of placing participants into groups at pre-test (STYLE; $p = .001$). There was also a significant two-way interaction between the assignment of participants into a pessimistic group and an optimistic group, and the change in scores from pre-test to post-test (STYLE x TIME, $p = .022$). This interaction suggests that in the HOPELESS variable there is a significant effect of regression to the mean. In sum, neither of the repeated measures ANOVAs that involved scores for negative events supported the hypothesis of significant change from pre-test to post-test in those individuals who were pessimistic at pre-test.

Table 19
Repeated Measures ANOVA with the HOPELESS Variable on the ASQ with Optimists and Pessimists Separated

SUMMARY TABLE

Source	SS	DF	MS	F	p
Between Subjects Effects					
WITHIN + RESIDUAL	1848.14	25	73.93		
TREATMENT	20.92	1	20.92	.28	.599
STYLE	3437.11	1	3437.11	46.49	.001
TREATMENT x STYLE	12.04	1	12.04	.16	.690
Within Subjects Effects					
WITHIN + RESIDUAL	685.24	25	27.41		
TIME	1.48	1	1.48	.05	.818
TREATMENT x TIME	18.47	1	18.47	.67	.419
STYLE x TIME	188.24	1	188.24	6.87	.015
STYLE x TREATMENT x TIME	42.30	1	42.30	1.54	.226

Repeated Measures ANOVA with FC-ASQ Optimists and Pessimists

One more set of four repeated measures ANOVAs (involving the SUM-POSITIVE, HOPEFUL, SUM-NEGATIVE and HOPELESS variables) were run to test the hypothesis that individuals' explanatory styles can be made more optimistic through the participation in the explanatory style intervention. These last analyses involved the FC-ASQ data, and revealed no significant support for the hypothesis. The details of these analyses are not reported due to the measurement problems discussed earlier.

Regression Analysis of the ASQ Data

Despite the fact that it is somewhat redundant with the repeated measures ANOVAs already reported, a regression analysis was utilized to test the main hypothesis. The regression analysis is more sensitive to finding change from pre-test to post-test because it treats the pre-test explanatory style score as a continuous variable instead of as two discrete variables. The regression analysis tested for an interaction between change from pre-test to post-test and explanatory style at pre-test. The pre-test explanatory style score was treated as a continuous independent variable, and regressed on the change score. Four regression analyses were run, one with each of the following ASQ scores; SUM-NEGATIVE, HOPELESS, SUM-POSITIVE, and HOPEFUL. None of these analyses revealed significant effects as a result of the intervention, but there were indications of regression to the mean.

Chi Squared Analysis of Clinical Significance

Although neither the repeated measures ANOVAs nor the regression analyses revealed any statistically significant effects as a result of the explanatory style intervention, the trends noted earlier in mean differences from pre-test to post-test were striking enough to merit further examination. In an effort to determine whether any of the differences in pre-test and post-test data trends were

clinically significant, the following was done with the SUM-NEGATIVE variable. The SUM-NEGATIVE variable was chosen because 1) the negative events on the ASQ have been shown to be the most reliable indicator of explanatory style, and 2) of the scores involving negative events, the SUM score encompasses the most data. A chi squared analysis was done on the frequency of participants that improved (became more optimistic) from pre-test to post-test by at least one standard deviation (determined by the standard deviation of pre-test scores). It is argued that change beyond one standard deviation from pre-test to post-test is likely to reflect a clinically significant change in explanatory style. The results of this analysis are as follows; 25% of the intervention group improved (became more optimistic) from pre-test to post-test by one standard deviation or more, whereas only 4% of the control group showed such marked improvement. A chi squared analysis revealed that this difference was just shy of statistical significance ($X^2(1) = 3.323, p < .07$).

Similarly, an examination of the amount of decline (becoming more pessimistic at post-test) from pre-test to post-test by at least a standard deviation, also uncovers some interesting results. Although none (0%) of the participants in the intervention group showed such a marked (a standard deviation or more) decline, 17% of the participants in the control group became that much more

pessimistic from pre-test to post-test. A chi squared analysis reveals this also approaches significance ($X^2(1) = 2.356, p < .13$). These results suggest that the explanatory style intervention may indeed be affecting participants' score in the hypothesized direction. However, with the limited sample size in the present study, it is difficult to say for certain what is happening.

Support for the Proposed Model

Several correlations were tested that lend substantial support to the model proposed by this study. Recall the model asserted that pessimistic explanatory styles may be an important mediating factor between disability and the development of secondary conditions. It was asserted that 1) having a disability is likely to increase the probability of experiencing uncontrollable situations (i.e. continually facing inaccessible buildings) which has been shown to foster learned helplessness, 2) research has firmly established links between learned helplessness and both pessimistic explanatory styles and depression, and 3) both pessimistic explanatory styles and depression have, in turn, been linked to ill health in a number of ways. It was therefore proposed that intervening at the level of explanatory style may reduce the amount of functional impairment associated with secondary conditions. Six correlations were run to examine the relationship between a

pessimistic explanatory style and 1) depression, 2) health, and 3) quality of life.

Firstly, although the relationship between depression and pessimistic explanatory styles has been well established within the literature, it is important to confirm it with this population. The correlation between scores on the CES-D (a measure of depression) and SUM-NEGATIVE (on the ASQ) was significant (.6214; $p = .041$), thus supporting one of the cornerstones of the model.

Secondly, in order to further support the model, it is essential to establish the relationship between pessimistic explanatory styles and ill health. A number of health measures were employed in this study, 1) SUM-CONDITIONS - the sum of the functional impairment associated with secondary conditions, 2) SUM-NODEP - the SUM-CONDITIONS score with depression factored out, and 3) Overall Health - this is a one item question that has respondents rate their health on a five point scale where a higher number indicates worse health. All of these scores were positively correlated with the SUM-NEGATIVE score and revealed consistent support for the proposed model.

Most striking is the relationship between explanatory style and the level of functional impairment due to secondary conditions. A pessimistic explanatory style (as measured by the ASQ SUM-NEGATIVE score) was highly correlated with the sum of secondary conditions (SUM-

CONDITIONS; as measured by the SDSI) at .7130 ($p = .009$). This relationship also held when depression was factored out of the SUM-CONDITIONS score (i.e. the SUM-NODEP score). SUM-NODEP and SUM-NEGATIVE were also significantly and positively correlated at .7146 ($p = .009$). Both of these correlations support the notion that individuals with pessimistic explanatory styles are more likely to experience functional limitation associated with ill health. Further, the relationship between Overall Health (the one item health question) and SUM-NEGATIVE (.6574, $p = .020$) suggests that pessimistic individuals are more like to report having ill health.

The final assertion of the model was that by intervening at the level of explanatory style, not only would the functional impairment of secondary conditions be reduced, but overall quality of life would also be improved. Two measures that tap into perceived quality of life were employed in this study including the Life Satisfaction Scale, and Overall Independence. The Life Satisfaction Scale is a short, global measurement of an individual's level of satisfaction with his or her life. The scores on this scale were positively and significantly correlated with pessimistic explanatory style scores (.6956; $p = .013$). The Life Satisfaction scale was scored such that low scores indicated more satisfaction and high scores indicated less satisfaction. Thus, pessimistic individuals were more

likely to report a less satisfying life.

Similarly, the Overall Independence item was also significantly and positively correlated with pessimistic explanatory styles (.7669; $p = .004$). Again, Overall Independence was keyed such that low scores indicated more independence, whereas high scores indicated less independence. This relationship suggests that individuals with pessimistic explanatory styles see themselves as less independent. Independence is argued to be a key factor in the level of quality of life that persons with disabilities experience. It is asserted then, that this correlation reflects that persons with disabilities who are pessimistic have a lower quality of life. In summary, although the main hypothesis tested in this study (i.e. that the proposed intervention changed the participants' explanatory styles) awaits further testing, the basic conceptual model that underlies this hypothesis is clearly supported.

CHAPTER IV

Discussion

Summary of Results

The main hypothesis tested in this study is that individuals' explanatory style can be made more optimistic through a group workshop intervention. More explicitly, it was hypothesized that individuals with internal, stable and global attributions (i.e. pessimistic attributions) to negative events at pre-test would demonstrate more external, unstable, and specific attributions (i.e. optimistic attributions) at post-test; and that individuals with external, unstable, and specific (i.e. pessimistic) attributions for positive events at pre-test, would have more internal, stable, and global (i.e. optimistic) attributions for positive events at post-test. The results of the present study were not conclusive. Although there were no statistically significant effects found as a result of the intervention (i.e. no TIME x TREATMENT interaction found in any of the repeated measures ANOVAs), there were indications that the intervention was having an effect. These indications were in the trends seen in the change in the means from pre-test to post-test. There was consistent improvement in the intervention-pessimists group that could not be accounted for by mere regression to the mean. Further, an analysis of clinically significant change (i.e.

improvement by more than one standard deviation) revealed an effect just shy of statistical significance. Pessimistic participants in the workshop intervention improved more markedly than did the participants in the control group. It is argued that this is an indication of the beneficial effect of participating in the explanatory style intervention. Due to the small sample size of this study, and corresponding lack of statistical power, conclusions are not absolute. However, there was substantial support for the model on which this study was based.

The model proposed that pessimistic explanatory styles may be an important mediating factor between disability and the development of secondary conditions. It was asserted that having a disability is likely to increase the probability of experiencing uncontrollable situations which has been shown to foster pessimistic explanatory styles. Individuals with pessimistic explanatory styles are more likely to experience depression. And lastly, both pessimistic explanatory styles and depression have, in turn, been linked to ill health in a number of ways. Correlations supported each of these hypothesized relationships.

Of these correlations, those examining the relationship between pessimistic explanatory styles and secondary conditions were most striking. Correlations between explanatory style and the limitation people experience revealed a strong positive relationship. In other words,

the more pessimistic an individual was, the more likely she or he was experiencing a debilitating amount of secondary conditions. This relationship lends credence to the idea that improving an individual's explanatory style (i.e. making it more optimistic) will decrease the level of functional impairment associated with the experience of secondary conditions, and thereby improve the quality of life of individuals with spinal cord injuries. Although this study does not answer whether this particular intervention is successful in changing individuals' explanatory style, it does highlight the relevance of this line of research.

Measurement Issues

One clear conclusion of this study is that there was a substantial amount of error involved in the measurement of explanatory style. The correlation between the two measures used to assess explanatory style (the ASQ and the FC-ASQ) was significantly lower, in fact almost non-existent, for this population than it was in a pilot study. It is impossible to assess exactly where the measurement problems are, as there are potential problems with both of the measures used. Firstly, neither of these scales have been normed on a population of individuals with disabilities. And further, as the FC-ASQ has not been used in any published studies up to this date, there are no norms

available for it on any population, let alone a population of persons with physical disabilities.

There also seemed to be some difficulties associated with the FC-ASQ procedure. The FC-ASQ was filled out by workshop participants in the sessions. The result was that all intervention participants filled them out at the same time, in a group setting. By the time these questionnaires were presented to the participants they had already filled out a 42 page pre-measure questionnaire, and were quite vocal about not wanting to fill out anymore measures. This added to a rather unprofessional atmosphere, including much joking and talking that is likely to have interfered with the accuracy of responses given.

On the other hand, although the ASQ is a well published validated measure, and was filled out in the privacy of their own home, there have been difficulties when used with a population of individuals with disabilities. In past research, a survey that examined the occurrence of secondary conditions and its correlates among individuals with spinal cord injuries was sent out to individuals with spinal cord injuries (Ravesloot & Young, 1995). The analysis of this data was hampered by a significant amount of missing data in the Attribution Style Questionnaire. Participants either avoided filling out the entire ASQ, or selectively skipped some of the scenarios. Inspection of the pattern of missing data within the ASQ suggested that participant's omission of

items within the scale was not random. 17.3% of respondents selectively skipped the scenarios that involved romantic relationships, 12.9% of the respondents avoided responding to the scenarios that involved paid employment, and only 7.8% skipped any of the other scenarios. This pattern of results suggests that the ASQ may not be an appropriate measurement for this sample of people. Individuals with physical impairments are often particularly frustrated by their attempts to develop intimate relationships and to work. These results, and the measurement problems that surfaced in this study, suggest that a more sensitive instrument should be developed to measure explanatory style in individuals with physical disabilities.

Challenges of Community Based Research

The challenges involved with this project were many. However, the majority of these challenges stemmed from the community based research model from which we were operating. This project was funded by a grant from the Center for Disease Control (CDC). These demonstration grants are highly competitive and a number of factors besides pure experimental design were taken into account when designing the proposed study. The model we ascribed to asserts that it is essential for an intervention to possess a number of important attributes in order to be contextually appropriate. An appropriate intervention is; 1) effective,

2) inexpensive, 3) decentralized, 4) flexible, 5) sustainable, 6) simple, and 7) compatible. Notice that of these seven attributes, the only one that depends on clean and sound experimental design is the first one, effectiveness. It is obvious that in order to be able to establish effectiveness, one needs to have a clean experimental design. However, in the process of attempting to satisfy the other six attributes (creating an intervention that is inexpensive, decentralized, flexible, sustainable, simple and compatible), our experimental design was compromised. In other words, in the process of creating a contextually appropriate intervention, our ability to prove its effectiveness was jeopardized. Let us explore how this developed.

In an effort to satisfy the model, it was decided to create an intervention that could be easily disseminated around the country. This required that the workshop could be presented by Independent Living Center (ILC) staff (decentralized, inexpensive and sustainable). However, this decision had many ramifications for evaluating the effectiveness of the intervention. First of all, it made it difficult to know what the strengths and the weaknesses of the intervention were because the researchers would not have an opportunity to directly see the materials being used and assess the participants' reactions to them. Secondly, since the workshop leaders would not be experts in the areas being

presented, it made it impossible to know if difficulties in the intervention were a result of insufficiently trained leaders, or inappropriate materials. However, if the more "scientific" route was taken, and the researchers themselves taught the workshops, it would be difficult to assert that the materials could be disseminated by local ILC's and still be effective. In other words the intervention would no longer be inexpensive, decentralized, flexible, and sustainable. Beyond this, is the fact that the CDC may not have funded such a "limited" study of an intervention.

The choice to use Independent Living Center (ILC) staff as workshop leaders brought many challenges with it. It is important to understand that, like many social agencies, ILC's are under-funded, under-staffed, and overworked. Further, few ILC staff have any formal training or experience in running workshops. Out of the five workshops that this study undertook, only one of them was led by an individual with experience (Topeka, Kansas). It is interesting to note that this was the most "successful" workshop in terms of the number of participants from start to finish; eight individuals participated in the full eight-week workshop. Due to the nature of this field research, it is impossible to say whether the leaders' being inexperienced, or overworked had any impact on the efficacy of the materials developed for this project.

Another challenging aspect of using ILC staff to teach

the workshops revolved around the staff having disabilities themselves. Three out of the five workshop leaders had physical disabilities and each one involved special challenges to overcome. The leader of the Missoula, Montana workshop had a visual impairment. Fortunately, he had a computer with a voice chip that could read to him. It was through this computer that we relayed the contents of the workshop to him; giving him all the chapters on computer floppy discs. However, he did find it challenging to lead a group without the benefit of visual cues. It seemed to hamper his ability to manage group dynamics. The leader of the Billings, Montana workshop had a mobility impairment which did not directly affect his ability to lead the workshop. However, he did experience substantial problems with his automatic chair during the workshop. His automatic chair broke in the beginning of the eight week intervention. While it was being repaired he used a manual chair, and he found himself getting overly fatigued. In order to ensure his continued participation as a workshop leader we provided him with a rental chair that was automated until his chair was fixed.

The leader of the Kansas City workshop had the most difficult time overcoming the obstacles associated with his disability in terms of the workshop. In fact, all of the data from that workshop was lost. First of all, it is important to understand that the ILC where he was working

had suffered from a high rate of staff turn-over. He had been recently employed and further had little support from other staff who were also new to the Center. Carrying out his ILC responsibilities in addition to organizing the workshop and assimilating the large amount of information required to present the materials was more than he could manage. Second, because the leader had a hearing impairment, workshop quality and communicating with the participants was influenced greatly by the competency of the interpreters. There was apparently miscommunication concerning both days and times that sessions were to be held as well as which topics were to be covered. This miscommunication resulted in, among other things, no pre-measures being taken from these participants until the third session. Since these pre-measures were taken after these participants had already had half of the explanatory style intervention, the pre-measures were then considered invalid.

Losing all of the data from the Kansas City workshop added to the unfortunate rate of attrition that has hampered the ability to draw strong conclusions from this study. It is likely that even if the Kansas City data had not been lost, there would still have been too few subjects to draw strong conclusions. One contributor to the small sample size is the fact that the whole population of individuals with spinal cord injuries is not that large to begin with. Further, to find enough people within that population that

are functioning well enough to come to a workshop (i.e. not clinically depressed, able to leave their house, and able to stay out of the hospital for 8 weeks), are motivated to change and in addition, and not so well functioning that the workshop materials are of no benefit to them, was extremely challenging. It was also apparent that a number of the participants were wary, if not outright distrusting, of psychologists. It is possible that this wariness added to the small number of participants that either agreed to join the workshop, or that were willing to stick with it for eight weeks.

For all of these reasons, it would be beneficial to expand the population being served by this workshop beyond just individuals with spinal cord injuries. Firstly, it would increase our sample size and therefore improve our ability to appropriately evaluate the effectiveness of this intervention. And secondly, this intervention would benefit a wide variety of people. The benefits of an optimistic explanatory style are by no means limited to only those individuals with spinal cord injuries. Quite the contrary, an optimistic explanatory style is likely to improve the quality of life of anyone who struggles with their health.

REFERENCES

- Abramson, L.Y., Seligman, M.E.P., & Teasdale, J.D. (1978). Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87(1), 49-74.
- Anderson, C.A. (1983). Motivational and performance deficits in interpersonal settings: The effects of attributional style. Journal of Personality and Social Psychology, 45, 1136-1147.
- Beck, A.T., Rush, A.J., Shaw, B.F., & Emery, G. (1979). Cognitive Therapy of Depression. New York: Guilford Press.
- Burns, M. O., & Seligman, M.E.P. (1989). Explanatory style across the life span: Evidence for stability over 52 years. Journal of Personality and Social Psychology, 56, 471-477.
- Chapin, M., & Dyck, D.G. (1976) Persistence in children's reading behavior as a function of length and attribution retraining. Journal of Abnormal Psychology, 85, 511-515.
- Diener, E., Emmons, R.A., Larsen, R.J., & Griffin, S. (1985) The satisfaction with life scale. Journal of Personality Assessment, 49(1), 71-75.
- Ellis, A. (1993). Reflections on Rational-Emotive therapy. Journal of Consulting and Clinical Psychology, 61(2), 199-201.
- Fosterling, F. (1985). Attributional Retraining: A Review. Psychological Bulletin, 98(3), 495-512.
- Fowler, J.W., & Peterson, P.L. (1981). Increasing reading persistence and altering attributional style of learned helpless children. Journal of Educational Psychology, 73, 251-260.
- Green-Emrich, A. ;. A., E. M. (1991). Attribution Retraining as a Structured Group Counseling Intervention. Journal of Counseling and Development, 69, 351-355.
- Heider, F. (1958). The psychology of interpersonal relations. New York: Wiley.
- Hiroto, D.S. (1975). Generality of learned helplessness in man. Journal of Personality and Social Psychology, 31, 311-327.

- Kanfer, F. H., & Goldstein, A.P. (1986). Helping people change: A textbook of methods. (Third ed.). New York: Pergamon.
- Maier, S.F., & Seligman, M.E.P. (1976). Learned helplessness: Theory and evidence. Journal of Experimental Psychology, 105, 3-46.
- Marge, M. (1988). Health promotion for persons with disabilities: Moving beyond rehabilitation. American Journal of Health Promotion, 2(94), 29-44.
- Metalsky, G. L., Halberstadt, L.J., & Abramson, L.Y. (1987). Vulnerability to depressive mood reactions: Toward a more powerful test of the diathesis-stress and causal mediation components of the reformulated theory of depression. Journal of Personality and Social Psychology, 52, 386-393.
- Needles, D. J., & Abramson, L.Y. (1990). Positive life events, attributional style, and hopefulness: Testing a model of recovery from depression. Journal of Abnormal Psychology, 99(2), 156-165.
- Peterson, C., Semmel, A., von Baeyer, C., Abramson, L.Y., Metalsky, G.I., & Seligman, M.E.P. (1982). The attributional style questionnaire. Cognitive Therapy and Research, 6, 287-300.
- Peterson, C., Luborsky, L., & Seligman, M.E.P. (1983). Attributions and depressive mood shifts: A case study using the symptom-context method. Journal of Abnormal Psychology, 92, 96-103.
- Peterson, C., & Seligman, M.E.P. (1984). Causal explanations as a risk factor for depression: Theory and evidence. Psychological Review, 91, 347-374.
- Peterson, C., & Seligman, M.E.P. (1987). Explanatory style and illness. Journal of Personality, 55(2), 237-265.
- Pope, A.M., & Tarlov, A.R. (1991). Disability in America: Toward a national agenda for prevention. Washington, D.C.: National Academy Press.
- Radloff, (1977) The Center's for Epidemiological Study of Depression Scale: A self-report depression scale for research in the general population. Applied Psychological Measurement, 1(3), 385-401.

- Ravesloot, C., Seekins, T., & Norris, K. (1995). A descriptive report of secondary conditions experienced by holders of handicapped parking permits in Montana. Manuscript in preparation.
- Ravesloot, C., & Young, Q-R. (1995). The measurement and implications of pessimistic explanatory styles for individuals with physical disabilities. Manuscript in preparation.
- Reisenzein, R. (1983). The Schacter theory of emotion: Two decades later. Psychological Bulletin, 94, 239-264.
- Robins, C. J. (1988). Attributions and depression: Why is the literature so inconsistent? Journal of Personality and Social Psychology, 54, 880-889.
- Schulman, P., Castellon, C., Seligman, M.E.P. (1989). Assessing explanatory style: The content analysis of verbatim explanations and the attributional style questionnaire. Behavior Research Therapy, 27(5), 505-512.
- Schunk, D.H. (1982). Effects of effort attributional feedback on children's perceived self-efficacy and achievement. Journal of Educational Psychology, 74, 548-556.
- Seekins, T., Clay, J., & Ravesloot, C. (1994). A descriptive study of secondary conditions reported by a population of adults with physical disabilities served by three independent living centers in a rural state. Journal of Rehabilitation, 16, 319-328.
- Seligman, M.E.P. (1975). Helplessness: On depression, development and death. San Francisco: Freeman.
- Seligman, M.E.P. (1991). Learned Optimism. New York: Pocket Books.
- Seligman, M.E.P., Abramson, L.Y., Semmel, A., & von Baeyer, C. (1979). Depressive attributional style. Journal of Abnormal Psychology, 88, 242-247
- Storms, M. D., & Nisbett, R.E. (1970). Insomnia and the attribution process. Journal of Personality and Social Psychology, 16, 319-328.
- Sugarman, B. (1985). Infection and pressure sores. Archives of Physical Medicine and Rehabilitation, 66, 177-179.

- Sweeny, P. D., Anderson, K., & Bailey, S. (1986). Attributional style in depression: A meta-analytic review. Journal of Personality and Social Psychology, 50, 974-991.
- Turner, J.R., & Wood, W. (1985). Depression and disability: The stress process in a chronically strained population. Research in Community and Mental Health, 5, 77-109.
- Visintainer, V.A., Volpicelli, J.R., & Seligman, M.E.P. (1982). Tumor rejection in rats after inescapable shock. Science, 216, 437-439.
- Weidenfeld, S.A., O'Leary, A., Bandura, A., Brown, S., & Raska, K. (1990). Impact of perceived self-efficacy in coping with stressors on components of the immune system. Journal of Personality and Social Psychology, 59(5), 1082-1094.
- Weiner, B., & Sierad, J. (1975). Misattribution for failure and enhancement of achievement strivings. Journal of Personality and Social Psychology, 31, 415-421.
- Weiner, B. (1986). An attributional theory of motivation and emotion. New York: Springer-Verlag.
- Weiner, B. (1974). Achievement motivation and attribution theory. Morristown, N.J.: General Learning Press.
- Wharton, G.W., Milani, J.C., & Dean, L.S. (1987). Pressure sore profile. Proceedings of the American Spinal Injury Association, 115-119.
- White, G.W., Matthews, R.M., & Fawcett, S.B. (1989). Reducing risk of pressure sores: Effects of watch prompts and alarm avoidance on wheelchair push-ups. Journal of Applied Behavior Analysis, 22(3), 287-295.
- Wilson, T.D., & Linville, P.W. (1985). Improving the performance of college freshman with attribution techniques. Journal of Personality and Social Psychology, 49(1), 287-293.

APPENDIX A
The Attribution Style Questionnaire (ASQ)

This section is about why you believe events happen in your life. We are including it because many experts agree that our beliefs affect our health. This questionnaire was not developed specifically for people with disabilities and the situations presented are not intended to be disability-specific.

Please try to vividly imagine yourself in the situations that follow. If such a situation happened to you, what would you feel would have caused it? While events may have many causes, we want you to pick only one - the *major* cause if this event happened to *you*. Please write this cause in the blank provided after each event. Next we want you to answer some questions about the *cause* and a final question about the *situation*. To summarize, we want you to:

- a. Read each situation and vividly imagine it happening to you.
- b. Decide what you believe would be the one major cause of the situation if it happened to you.
- c. Write this cause in the blank provided.
- d. Answer three questions about the cause by circling one number per question. Do not circle the words.
- e. Go on to the next situation.

YOU MEET A FRIEND WHO COMPLIMENTS YOU ON YOUR APPEARANCE.

1. Write down the one major cause: _____

2. Is the cause of your friend's compliment due to something about you or something about other people or circumstances? (circle one number)

Totally due to
other people or
circumstances

1 2 3 4 5 6 7

Totally due
to me

3. In the future when you are with your friend, will this cause again be present?

Will never again
be present

1 2 3 4 5 6 7

Will always
be present

4. Is the cause something that just affects interacting with friends, or does it also influence other areas of your life?

Influences just
this particular
situation

1 2 3 4 5 6 7

Influences
all situations
in my life

YOU HAVE BEEN LOOKING FOR A JOB UNSUCCESSFULLY FOR SOME TIME.

5. Write down the one major cause: _____

6. Is the cause of your unsuccessful job search due to something about you or to something about other people or circumstances?

Totally due to
other people or
circumstances

1 2 3 4 5 6 7

Totally due
to me

7. In the future when you look for a job, will this cause again be present?

Will never again
be present

1 2 3 4 5 6 7

Will always
be present

8. Is the cause something that just influences looking for a job, or does it also influence other areas of your life?

Influences just
this particular
situation

1 2 3 4 5 6 7

Influences
all situations
in my life

YOU BECOME VERY RICH.

9. Write down the one major cause: _____

10. Is the cause of your becoming rich due to something about you or to something about other people or circumstances?

Totally due to
other people or
circumstances

1 2 3 4 5 6 7

Totally due
to me

11. In your financial future, will this cause again be present?

Will never again
be present

1 2 3 4 5 6 7

Will always
be present

12. Is the cause something that just affects obtaining money, or does it also influence other areas of your life?

Influences just
this particular
situation

1 2 3 4 5 6 7

Influences
all situations
in my life

A FRIEND COMES TO YOU WITH A PROBLEM AND YOU DON'T TRY TO HELP HIM/HER.

13. Write down the one major cause: _____

14. Is the cause of your not helping your friend due to something about you or to something about other people or circumstances?

Totally due to
other people or
circumstances

1 2 3 4 5 6 7

Totally due
to me

15. In the future when a friend comes to you for help with a problem, will this cause again be present?

Will never again
be present

1 2 3 4 5 6 7

Will always
be present

16. Is the cause something that just affects what happens when a friend comes to you with a problem, or does it also influence other areas of your life?

Influences just
this particular
situation

1 2 3 4 5 6 7

Influences
all situations
in my life

YOU GIVE AN IMPORTANT TALK IN FRONT OF A GROUP AND THE AUDIENCE REACTS NEGATIVELY.

17. Write down the one major cause: _____

18. Is the cause of the audience's negative reaction due to something about you or to something about other people or circumstances?

Totally due to
other people or
circumstances

1 2 3 4 5 6 7

Totally due
to me

19. In the future when you give talks, will this cause again be present?

Will never again
be present

1 2 3 4 5 6 7

Will always
be present

20. Is the cause something that just influences giving talks, or does it also influence other areas of your life?

Influences just
this particular
situation

1 2 3 4 5 6 7

Influences
all situations
in my life

YOU DO A PROJECT WHICH IS HIGHLY PRAISED.

21. Write down the one major cause: _____

22. Is the cause of your being praised due to something about you or something about other people or circumstances?

Totally due to
other people or
circumstances

1 2 3 4 5 6 7

Totally due
to me

23. In the future when you do such a project, will this cause again be present?

Will never again
be present

1 2 3 4 5 6 7

Will always
be present

24. Is the cause something that just affects doing projects, or does it also influence other areas of your life?

Influences just
this particular
situation

1 2 3 4 5 6 7

Influences
all situations
in my life

YOU MEET A FRIEND WHO ACTS HOSTILELY TO YOU.

25. Write down the one major cause: _____

26. Is the cause of your friend acting hostile due to something about you or something about other people or circumstances?

Totally due to
other people or
circumstances

1 2 3 4 5 6 7

Totally due
to me

27. In the future when interacting with friends, will this cause again be present?

Will never again
be present

1 2 3 4 5 6 7

Will always
be present

28. Is the cause something that just influences interacting with friends, or does it also influence other areas of your life?

Influences just
this particular
situation

1 2 3 4 5 6 7

Influences
all situations
in my life

YOU CAN'T GET ALL THE WORK DONE THAT OTHERS EXPECT OF YOU.

29. Write down the one major cause: _____

30. Is the cause of your not getting the work done due to something about you or something about other people or circumstances?

Totally due to
other people or
circumstances

1 2 3 4 5 6 7

Totally due
to me

31. In the future when doing work that others expect, will this cause again be present?

Will never again
be present

1 2 3 4 5 6 7

Will always
be present

32. Is the cause something that just affects doing work that others expect of you, or does it also influence other areas of your life? (circle one number)

Influences just
this particular
situation

1 2 3 4 5 6 7

Influences
all situations
in my life

YOUR SPOUSE (BOYFRIEND/GIRLFRIEND) HAS BEEN TREATING YOU MORE LOVINGLY.

33. Write down the one major cause: _____

34. Is the cause of your spouse (boyfriend/girlfriend) treating you more lovingly due to something about you or something about other people or circumstances?

Totally due to
other people or
circumstances

1 2 3 4 5 6 7

Totally due
to me

35. In future interactions with your spouse (boyfriend/girlfriend), will this cause again be present?

Will never again
be present

1 2 3 4 5 6 7

Will always
be present

36. Is the cause something that just affects how your spouse (boyfriend/girlfriend) treats you, or does it also influence other areas of your life?

Influences just
this particular
situation

1 2 3 4 5 6 7

Influences
all situations
in my life

YOU APPLY FOR A POSITION THAT YOU WANT VERY BADLY (E.G., IMPORTANT JOB, GRADUATE SCHOOL ADMISSION, ETC.) AND YOU GET IT.

37. Write down the one major cause: _____

38. Is the cause of your getting the position due to something about you or to something about other people or circumstances?

totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

39. In the future when you apply for a position, will this cause again be present?

Will never again be present	1	2	3	4	5	6	7	Will always be present
--------------------------------	---	---	---	---	---	---	---	---------------------------

40. Is the cause something that just influences important applications, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
---	---	---	---	---	---	---	---	--

YOU GO OUT ON A DATE AND IT GOES BADLY.

41. Write down the one major cause: _____

42. Is the cause of the date going badly due to something about you or something about other people or circumstances?

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

43. In the future when you are dating, will this cause again be present?

Will never again be present	1	2	3	4	5	6	7	Will always be present
--------------------------------	---	---	---	---	---	---	---	---------------------------

44. Is the cause something that just influences dating, or does it also influence other areas of your life? (circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
---	---	---	---	---	---	---	---	--

YOU GET A RAISE.

45. Write down the one major cause:
46. Is the cause of your getting a raise due to something about you or something about other people or circumstances?

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

47. In the future on your job, will this cause again be present?

Will never again be present	1	2	3	4	5	6	7	Will always be present
--------------------------------	---	---	---	---	---	---	---	---------------------------

48. Is the cause something that just affects getting a raise, or does it also influence other areas of your life?

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
---	---	---	---	---	---	---	---	--

APPENDIX B

The Forced-Choice Attribution Style Questionnaire (FC-ASQ)

Take as much time as you need to answer each of the following questions. On average this test takes about fifteen minutes. There are no right or wrong answers.

Read the description of each situation and vividly imagine it happening to you. You have probably not experienced some of the situations, but that does not matter. Perhaps neither response will seem to fit; go ahead anyway and circle either A or B, choosing the cause likelier to apply to you. You may not like the way some of the responses sound, but don't choose what you think you *should* say or what would sound right to other people. Choose the response you'd be likelier to have.

Circle only one response for each question. Please answer every question.

1. The project you are in charge of is a great success.
 - A. I kept a close watch over everyone's work.
 - B. Everyone devoted a lot of time and energy to it.
2. You and your spouse (boyfriend/girlfriend) make up after a fight.
 - A. I forgave him/her.
 - B. I'm usually forgiving.
3. You get lost driving to a friend's house.
 - A. I missed a turn.
 - B. My friend gave me bad directions.
4. Your spouse (boyfriend/girlfriend) surprises you with a gift.
 - A. He/she just got a raise at work.
 - B. I took him/her out to a special dinner the night before.
5. You forget your spouse's (boyfriend's/girlfriend's) birthday.
 - A. I'm not good at remembering birthdays.
 - B. I was preoccupied with other things.
6. You get a flower from a secret admirer.
 - A. I am attractive to him/her.
 - B. I am a popular person.
7. You run for a community office position and you win.
 - A. I devote a lot of time and energy to campaigning.
 - B. I work very hard at everything I do.

8. You miss an important engagement.
 - A. Sometimes my memory fails me.
 - B. I sometimes forget to check my appointment book.
9. You run for a community office position and you lose.
 - A. I didn't campaign hard enough.
 - B. The person who won knew more people.
10. You host a successful dinner.
 - A. I was particularly charming that night.
 - B. I am a good host.
11. You stop a crime by calling the police.
 - A. A strange noise caught my attention.
 - B. I was alert that day.
12. You were extremely healthy all year.
 - A. Few people around me were sick, so I wasn't exposed.
 - B. I made sure I ate well and got enough rest.
13. You owe the library ten dollars for an overdue book.
 - A. When I am really involved in what I am reading, I often forget when it is due.
 - B. I was so involved in writing the report that I forgot to return the book.
14. Your stocks make you a lot of money.
 - A. My broker decided to take on something new.
 - B. My broker is a top-notch investor.
15. You win an athletic contest.
 - A. I was feeling unbeatable.
 - B. I train hard.
16. You fail an important examination.
 - A. I wasn't as smart as the other people taking the exam.
 - B. I didn't prepare for it well.
17. You prepared a special meal for a friend and he/she barely touched the food.
 - A. I wasn't a good cook.
 - B. I made the meal in a rush.
18. You lose a sporting event for which you have been training for a long time.
 - A. I'm not very athletic.
 - B. I'm not good at that sport.
19. Your car runs out of gas on a dark street late at night.
 - A. I didn't check to see how much gas was in the tank.
 - B. The gas gauge was broken.

20. You lose your temper with a friend.
 - A. He/she is always nagging me.
 - B. He/she was in a hostile mood.
21. You are penalized for not returning your income tax forms on time.
 - A. I always put off doing my taxes.
 - B. I was lazy about getting my taxes done this year.
22. You ask a person out on a date and he/she says no.
 - A. I was a wreck that day.
 - B. I got tongue-tied when I asked him/her on the date.
23. A game-show host picks you out of the audience to participate in the show.
 - A. I was sitting in the right seat.
 - B. I looked the most enthusiastic.
24. You are frequently asked to dance at a party.
 - A. I am outgoing at parties.
 - B. I was in perfect form that night.
25. You buy your spouse (boyfriend/girlfriend) a gift and he/she doesn't like it.
 - A. I don't put enough thought in to things like that.
 - B. He/she has very picky tastes.
26. You do exceptionally well at a job interview.
 - A. I felt extremely confident during the interview.
 - B. I interview well.
27. You tell a joke and everyone laughs.
 - A. The joke was funny.
 - B. My timing was perfect.
28. Your boss gives you too little time in which to finish a project, but you get it finished anyway.
 - A. I am good at my job.
 - B. I am an efficient person.
29. You've been feeling run-down lately.
 - A. I never get a chance to relax.
 - B. I was exceptionally busy this week.
30. You ask someone to dance and he/she says no.
 - A. I'm not a good enough dancer.
 - B. He/she doesn't like to dance.
31. You save a person from choking to death.
 - A. I know a technique to stop a person from choking.
 - B. I know what to do in crisis situations.

32. Your romantic partner wants to cool things for a while.
A. I'm too self-centered.
B. I don't spend enough time with him/her.
33. A friend says something that hurts your feelings.
A. She always blurts things out without thinking of others.
B. My friend was in a bad mood and took it out on me.
34. Your employer comes to you for advice.
A. I am expert in the area about which I was asked.
B. I am good at giving useful advice.
35. A friend thanks you for helping him/her get through a bad time.
A. I enjoy helping him/her though tough times.
B. I care about people.
36. You have a wonderful time at a party.
A. Everyone was friendly.
B. I was friendly.
37. Your doctor tells you that you are in good physical shape.
A. I make sure I exercise frequently.
B. I am very health-conscious.
38. Your spouse (boyfriend/girlfriend) takes you away for a romantic weekend.
A. He/she needed to get away for a few days.
B. He/she likes to explore new areas.
39. Your doctor tells you that you eat too much sugar.
A. I don't pay much attention to my diet.
B. You can't avoid sugar, it's in everything.
40. You are asked to head an important project.
A. I just successfully completed a similar project.
B. I am a good supervisor.
41. You and your spouse (boyfriend/girlfriend) have been fighting a great deal.
A. I have been feeling cranky and pressured lately.
B. He/she has been hostile lately.
42. You fall down a great deal while skiing.
A. Skiing is difficult.
B. The trails were icy.
43. You win a prestigious award.
A. I solved an important problem.
B. I was the best employee.

44. Your stocks are at an all-time low.
A. I didn't know much about the business climate at the time.
B. I made a poor choice of stocks.
45. You win the lottery.
A. It was pure chance.
B. I picked the right numbers.
46. You gain weight over the holidays and can't lose it.
A. Diets don't work in the long run.
B. The diet I tried didn't work.
47. You are in the hospital and few people come to visit.
A. I'm irritable when I am sick.
B. My friends are negligent about things like that.
48. They won't honor your credit card at a store.
A. I sometimes overestimate how much money I have.
B. I sometimes forget to pay my credit-card bill.

APPENDIX C

Secondary Disability Surveillance Instrument (SDSI)

Secondary Conditions

A secondary condition is a problem experienced after you have a primary disability. For example, a person with cerebral palsy may develop arthritis. Arthritis would then be a secondary condition for that person. Like a primary disability, a secondary condition may restrict your ability to do things independently.

Please rate how much each of the following conditions affected your activity and independence in the last year. If you have not experienced a secondary condition in the last year, or if it is an insignificant problem for you, please circle "0". Please refer to the rating scale, which is reproduced on each page, in making your ratings.

- 0 = Not experienced during past year/insignificant problem (rarely or never limits activity or independence)
 1 = Mild or infrequent problem (limits activity 1 to 5 hours per week)
 2 = Moderate/occasional problem (limits activity 6 to 10 hours per week)
 3 = Significant/chronic problem (limits activity 11 or more hours per week)

Injuries to the Skin/Body Description

- | | | |
|---------|-----------------------|--|
| 0 1 2 3 | Pressure Sores | These develop as a skin rash or redness and may progress to an infected sore. Also called skin ulcers, bedsores, or decubitus ulcers. Persons who use wheelchairs are at risk for developing pressure sores. |
| 0 1 2 3 | Injuries Due to Loss | Many people with disabilities involving loss of sensation of Sensation(e.g., spinal cord injury, MS) report injuries because they can not feel pain in some areas (e.g., frostbite, burns from sitting too close to heater or fire). |
| 0 1 2 3 | Care-related Injuries | When others provide personal care, some injuries can result, such as skin abrasions or a broken leg during a transfer. |
| 0 1 2 3 | Amputation | Some individuals have had a limb or limbs removed for medical reasons. |

- 0 1 2 3 Spasticity
Spasticity refers to uncontrolled, jerky muscle (Muscle Spasms)movements, such as uncontrolled muscle twitch or spasm. Often spasticity increases with infection. Persons with multiple sclerosis, cerebral palsy, and spinal cord injury are among individuals at risk for developing spasticity.
- 0 1 2 3 Scoliosis
These three terms refer to an abnormal curvature of the spine. Scoliosis is the curvature of the spine sideways. Lordosis is the forward curvature of the lower back. Kyphosis is the curvature of the upper back (hunchback). Persons with SCI are at risk of these because of not sitting right, muscle imbalance, or paralysis.
- 0 1 2 3 Contractures
A contracture is a limitation in range of motion caused by shortening of the soft tissue around a joint (e.g., elbow, hips). This occurs when a joint can not move frequently enough through its range of motion. Pain commonly accompanies this condition.
- 0 1 2 3 Heterotopic Bone Ossification
This is an overgrowth of bone, often occurring after a fracture. Early signs include a loss in range of motion, local swelling, and warmth at the area to the touch. It must be diagnosed by a physician.
- 0 1 2 3 Osteoporosis
This is a wasting of bone. It may cause pain, can lead to fractures and predisposes individuals to developing urinary tract stones. Any disabled individual who is not able to have adequate weight bearing exercise on their bones may develop osteoporosis, and women are at particular risk. It is diagnosed by a physician.
- 0 1 2 3 Arthritis
Arthritis results from inflammation of the joints, making movement both difficult and painful. Symptoms include pain and swelling around the joints. Cold weather and stress can make this condition worse.
- 0 1 2 3 Fatigue
Fatigue is a tired (though not necessarily sleepy) feeling after minimal exertion.

Weight/Physical Fitness Problems				Description	
0	1	2	3	Physical Fitness or Conditioning Problems	Some disabled persons find they are not able to do as much as they would like because they are out of shape.

0	1	2	3	Eating or Weight Problems	This includes difficulty in regulating weight, as well as problems with eating (e.g., overeating, undereating, vomiting food).
---	---	---	---	---------------------------	--

Bladder/Bowel Problems				Description
-------------------------------	--	--	--	--------------------

0	1	2	3	Bladder Dysfunction	Incontinence, bladder or kidney stones, kidney problems, leakage, urine backup, and associated problems are all symptoms of bladder dysfunction. Persons with impaired or absent muscle function in the area of the bladder are at risk for bladder dysfunction.
---	---	---	---	---------------------	--

0	1	2	3	Bowel Dysfunction	Diarrhea, constipation, "accidents," and associated problems are signs of bowel dysfunction. As with bladder dysfunction, persons with impaired muscle function or paralysis in the abdominal region are most likely to have bowel dysfunction.
---	---	---	---	-------------------	---

0	1	2	3	Urinary Tract Infections	This includes such infections as cystitis and pseudomonas. Symptoms include pain on urination, a burning sensation throughout the body, blood in the urine, and cloudy urine. Persons with multiple sclerosis and spinal cord injury are especially at risk for urinary tract infections.
---	---	---	---	--------------------------	---

0	1	2	3	Sexual Dysfunction	This includes dissatisfaction with sexual functioning. Causes for dissatisfaction can be decreased sensation, changes in body image, difficulty in movement, and concern over bladder and bowel routines.
---	---	---	---	--------------------	---

Neurological Problems**Description**

0 1 2 3 Dysreflexia

Dysreflexia (sometimes called hyperreflexia) results from interference in the body's temperature and blood pressure regulating systems. Symptoms of dysreflexia include sudden rises in blood pressure and sweating, skin blotches, goose bumps, pupil dilation and headache. It is often related to overflowing leg bags. Dysreflexia can also occur as the body's response to pain where an individual doesn't experience sensation.

0 1 2 3 Carpal-tunnel Syndrome

This is a nerve disorder in the hand that causes pain and loss of feeling, especially in the thumb and first 3 fingers. Symptoms include numbness or tingling in part of the hand, shooting pains up the arm, thumb weakness, frequent dropping of objects, and shiny, dry skin on the hand.

Cardiovascular Problems**Description**

0 1 2 3 Postural Hypotension

This involves a strong sensation of lightheadedness following a change in position. It is caused by a sudden drop in blood pressure. Individuals with spinal cord injury or stroke may experience postural hypotension.

0 1 2 3 Circulatory Problems

Swelling of veins, feet, or the occurrence of blood clots. Specify: _____

Respiratory**Description**

0 1 2 3 Respiratory

Pneumonia and other respiratory tract infections can occur in disabled individuals. Symptoms of respiratory infections or problems include increased difficulty in breathing and increased secretions. Persons with quadriplegia, post polio, rheumatoid arthritis and multiple sclerosis are especially at risk for respiratory complications and infections.

Pain Problems**Description**

0 1 2 3 Chronic Pain

This is usually experienced as chronic tingling, burning or dull aches. It may occur in an area that normally has little or no feeling.

0 1 2 3 Joint & Muscle Pain

This includes pain in specific muscle groups or joints. Individuals who must overuse a particular muscle group (e.g., persons with paraplegia who may strain shoulder muscles) or those who must put too much strain on joints are at risk of developing joint and muscle pain.

- 0 = Not experienced during past year/insignificant problem (rarely or never limits activity or independence)
- 1 = Mild or infrequent problem (limits activity 1 to 5 hours per week)
- 2 = Moderate/occasional problem (limits activity 6 to 10 hours per week)
- 3 = Significant/chronic problem (limits activity 11 or more hours per week)

Psychological**Description**

- | | | |
|---------|------------|---|
| 0 1 2 3 | Depression | More than feeling blue. Symptoms include: extreme, long-term sadness, loss of pleasure in favorite things and activities, difficulty sleeping, weight loss or gain, thoughts of suicide and frequent and/or unexplained crying. |
| 0 1 2 3 | Anger | Extreme displeasure with situations or persons that is difficult to forget. |

Problems with Accessibility/Mobility**Description**

- | | | |
|---------|--|--|
| 0 1 2 3 | Isolation | Isolation from social contact and support may be a problem for some individuals, and may be due to a loss of relationships or being house-bound. |
| 0 1 2 3 | Problems with Mobility | Many physically disabled individuals are troubled by difficulty with getting around, due to a loss of strength or muscle control. |
| 0 1 2 3 | Access Problems | Access problems in the environment, such as lack of curb cuts or accessible buildings and restrooms, can pose an obstacle to functioning independently. |
| 0 1 2 3 | Equipment Failures | Equipment failures, such as a broken walker or brace, can limit independence by increasing the difficulty or prohibiting the completion of many desired activities. |
| 0 1 2 3 | Equipment-related (e.g., Injuries to Yourself) | The use of adaptive equipment can lead to injuries (e.g., injuries to one's underarms from poorly fitting crutches) that can limit an individual's completion of desired activities. |

Other Problems	Description
0 1 2 3 Side Effects From Medications	Several medications prescribed for various problems may produce unwanted side effects. Please specify medication(s) or side effects: _____ _____ _____
0 1 2 3 Alcohol/Drug Abuse	This involves use of alcohol and/or drugs.
0 1 2 3 Diabetes	Diabetes is a problem resulting from irregularities in blood sugar levels. Symptoms include frequent urination and excessive thirst. This condition is diagnosed by a physician. Native American individuals and persons who are overweight are at higher risk for developing diabetes.
0 1 2 3 Communication Difficulties	This includes difficulty talking due to a ventilator, speech problems and disorders, impaired muscle control around the mouth and other problems communicating with others.
0 1 2 3 Written Communication Problems	Visually impaired persons and persons with reading disorders may be print handicapped, while others turn pages or hold books and magazines. Still others find it difficult to write or type because of their disability.
0 1 2 3 Anemia	Anemia is a low level of iron in the blood and often occurs in conjunction with pressure sores. Symptoms include fatigue and low energy. This condition is diagnosed by a physician.
0 1 2 3 Visual Problems	Significant loss of ability to see (e.g., loss of acuity or field of vision) including blindness. Please specify the nature of your visual problems: _____ _____ _____
0 1 2 3 Hearing Impairment	Difficulties with hearing in general, or of particular kinds of sounds, is the criteria for hearing impairment. Usually this condition is diagnosed by a specialist.

- | | | | | | |
|---|---|---|---|---|--|
| 0 | 1 | 2 | 3 | Sleep Problems/
Disturbances | Difficulty falling asleep or staying asleep, difficulty staying awake during the day, or waking up early are all sleep disturbances. |
| 0 | 1 | 2 | 3 | Care-related Injuries
to Others | Injuries to others can occur in the process of providing care, such as a sprained back that occurs while transferring someone. |
| 0 | 1 | 2 | 3 | Equipment-related
Injuries to Others | The use of adaptive equipment can lead to injuries to others, such as injuries received moving heavy adaptive equipment. |

APPENDIX D

The Center's for Epidemiology Scale for Depression (CES-D)

This section is also about feelings. Circle the number for each statement which best describes how often you felt or behaved this way, **during the past week**. Use the following scale in your responses:

0 = Rarely or none of the time (Less than 1 day)

1 = Some or a little of the time (1-2 days)

2 = Occasionally or a moderate amount of time (3-4 days)

3 = Most or all of the time (5-7 days)

During the Past Week:

- | | | | | | |
|-----|---|---|---|---|---|
| 1. | I was bothered by things that usually don't bother me | 0 | 1 | 2 | 3 |
| 2. | I did not feel like eating; my appetite was poor. | 0 | 1 | 2 | 3 |
| 3. | I felt that I could not shake off the blues even with help from my family or friends. | 0 | 1 | 2 | 3 |
| 4. | I felt that I was just as good as other people. | 0 | 1 | 2 | 3 |
| 5. | I had trouble keeping my mind on what I was doing. | 0 | 1 | 2 | 3 |
| 6. | I felt depressed. | 0 | 1 | 2 | 3 |
| 7. | I felt that everything I did was an effort. | 0 | 1 | 2 | 3 |
| 8. | I felt hopeful about the future. | 0 | 1 | 2 | 3 |
| 9. | I thought my life had been a failure. | 0 | 1 | 2 | 3 |
| 10. | I felt fearful. | 0 | 1 | 2 | 3 |
| 11. | My sleep was restless. | 0 | 1 | 2 | 3 |
| 12. | I was happy. | 0 | 1 | 2 | 3 |
| 13. | I talked less than usual. | 0 | 1 | 2 | 3 |
| 14. | I felt lonely. | 0 | 1 | 2 | 3 |
| 15. | People were unfriendly. | 0 | 1 | 2 | 3 |

16.	I enjoyed life.	0	1	2	3
17.	I had crying spells	0	1	2	3
18.	I felt sad.	0	1	2	3
19.	I felt that people disliked me.	0	1	2	3
20.	I could not get "going".	0	1	2	3

APPENDIX E
The Satisfaction with Life Scale

This next section is about problems and how you would respond to them. For each of the statements below, please indicate how much you agree or disagree by circling the appropriate number:

- 1 = Strongly Agree;
- 2 = Moderately Agree;
- 3 = Slightly Agree;
- 4 = Slightly Disagree;
- 5 = Moderately Disagree
- 6 = Strongly Disagree

- | | | | | | | | |
|----|--|---|---|---|---|---|---|
| 1. | In most ways my life is close to ideal. | 1 | 2 | 3 | 4 | 5 | 6 |
| 2. | The conditions of my life are excellent. | 1 | 2 | 3 | 4 | 5 | 6 |
| 3. | I am satisfied with my life. | 1 | 2 | 3 | 4 | 5 | 6 |
| 4. | So far I have gotten the important things I want in life. | 1 | 2 | 3 | 4 | 5 | 6 |
| 5. | If I could live my life over, I would change almost nothing. | 1 | 2 | 3 | 4 | 5 | 6 |

APPENDIX F**Healthy Reactions: Thinking Your Way Through Frustration**

In the last two sessions, you began using a method for setting goals that is helpful for overcoming problems and obstacles. In other words, now you have a plan. Sometimes your own thoughts and feelings about your progress toward your goals will have an effect on whether or not you stick to the plan. These thoughts and feelings may either encourage you to keep working on your goals and problems, or, on the other hand, they may make you feel like giving up. This session does not present techniques to keep negative events from happening; rather, techniques for managing your emotions will be suggested that can be helpful if you begin to feel discouraged.

Goal: The overall goal of this session is for you to develop techniques for dealing with frustrations and setbacks in your life.

Section One: Things Aren't Always What They Seem.

Many times during the course of history (and probably your own life) what was believed to be an accurate assessment of a situation turned out to be incorrect. A good example of this comes out of 15th century Europe. For hundreds of years everybody not only believed that the earth was flat, but this was considered a "fact", not a "belief". Although this belief seems strange to us now, it is totally understandable when you think about it. When we look around, there are no visual cues that we are living on a huge sphere. The world seems more like a flat disk. This is especially true when we look out across the ocean -- it looks as if it just ends. In fact, when you look out at that great expanse it is hard to believe that it **is** a sphere that we live on. Things are not always what they seem:

There are times when we have to look beyond our own perceptions of a situation in order to understand correctly what is going on.

Another example of how things are not always what they seem also comes out of scientific discovery. A short time ago, if someone died of a heart attack, people believed it was just because they "had a bad ticker". Because of this belief, nobody did anything to try to prevent heart disease. Our perception of the situation was directly influencing our behavior. Recently health specialists have taught us that there are many factors involved in heart disease including lack of exercise and poor nutrition. This discovery is tremendously important because it gives us tools we can use to try and prevent heart disease in our own life. In the times when we thought we had no control over the health of our hearts, most people didn't think about the importance of exercise and ate more fatty foods, whereas now that we know we do have an influence, many people have adopted new healthy behaviors. How we think about our world totally influences our perception of it. Our thoughts affect our perception of every thing, every person, every situation, and every emotion that we experience. Because our thoughts have such a broad influence on our life it is extremely important to take a look at **how** we think about things and what that might mean for our life as a whole.

Section Two: Think Before You React

Most people just think. It is automatic. However, there is evidence that it is important to pay attention to how you think or react. How you respond to events in your life can influence the feelings that you experience every day. These thoughts and feelings can also have an effect on your ability to continue with a plan to change your behavior. Since your thought style has a major influence on your feelings and your ability to pursue your life goals, it is a good idea to explore and understand how and why you

think the way you do.

Most people assume that they will react to events in their life by explaining them in a logical manner, and that there is only **one** way to react to any given event. Neither of these assumptions is true. First of all, there are as many ways to react to a given life situation as there are people in the world. In addition, many of these reactions and explanations are not logical, and are not based on any visible facts. People often just come up with explanations for things that have happened to them based on automatic "knee-jerk" reactions. They usually don't try to gather (or even consider) all the facts that may be contributing to the situation. People very often just go through life trusting these automatic reactions and explanations. Well, as you may have already guessed, these **knee-jerk** explanations can be dangerous because they are often untrue, and have the power to make you feel bad about your life, yourself, and may even lead you to give up your journey toward your goals. This is a sad fact. Many people give up on their goals, and sometimes even on their life, because of **knee-jerk** explanations to events that have occurred. In order to not be **knee-jerkers**, we need to think before we react. The following exercise will show you that there are many explanations for events in your life.

Exercise 16 -- Explanation Choices

Instructions: For each event in the first column, choose all the explanations that make sense from the list of **Explanation Choices**. For example, let's look at the first event, *I missed the bus*. One explanation from the 'choice' list that makes sense is (A) - *I am a busy person*. So you would put the letter "A" in the blank after Event 1. Another explanation that makes sense is (C) - *I'm not very organized*. Go ahead and go through the list and choose all the explanations that makes sense for each event or situation.

<u>Event</u>	<u>Explanation</u>
1. I missed the bus.	_____
2. My key ring is missing.	_____
3. The waitress spilled coffee on me.	_____
4. My morning newspaper is missing.	_____
5. I was ignored by a salesperson.	_____
6. My PA was late this morning.	_____
7. A friend didn't return my call.	_____
8. A stranger was nice to me at the bookstore.	_____
9. Someone held the door open for me.	_____

Explanation Choices

- A. I am a busy person.
- B. My dog probably took it.
- C. I'm not very organized.
- D. That person was probably in a hurry.
- E. I am an attractive person.
- F. People just feel sorry for me.
- G. Some people are inconsiderate jerks.
- H. He or she is having a bad day.
- I. I am a likeable person.

As you can see, more than one of these explanations could apply to each of the events listed -- it just depends on how you look at the situation. The next exercise is designed to illustrate how thoughts influence your feelings. If you look at **Exercise 17** on the next page you will see that there are four **discouraging events** listed. For each event listed there are two different sets of thoughts and feelings with it. Your task is to fill in which emotion you think would accompany each thought listed. This is just to get you thinking about what kinds of thoughts tend to lead to what kinds of feelings, as well as to illustrate again that there is more than one way to react to every situation in your life.

Let's look at how Clark filled in a similar exercise. Clark had the following example to work with:

Table 11

- A. DISCOURAGING EVENT: A store clerk was rude to me.
 EXPLANATION: People don't like me.
 FEELINGS:
- | | | |
|------|----|-----|
| GOOD | OK | BAD |
|------|----|-----|
- B. DISCOURAGING EVENT: A store clerk was rude to me.
 EXPLANATION: The clerk was having a bad day and not handling the stress very effectively
 FEELINGS:
- | | | |
|------|----|-----|
| GOOD | OK | BAD |
|------|----|-----|

Clark read through example A, and tried to imagine himself in that situation. It wasn't too hard, because Clark has experienced rude store clerks in his own life. For part "A" he decided he would probably feel *BAD* if he thought a clerk was rude to him because people in general don't like him. For part "B", Clark thought that this explanation would probably leave him feeling *OK*.

Now it is your turn. Go through the exercise below and imagine yourself in each situation. Circle how you think you would feel (*GOOD*, *OK*, or *BAD*) as a result of the explanation given. Try hard to imagine the situation in your head and to create a story that makes sense.

Exercise 17 -- Relationship of Thoughts to Feelings

#1

- A. DISCOURAGING EVENT: My friend didn't return my call.
EXPLANATION: She doesn't like me anymore.

FEELINGS:

GOOD OK BAD

- B. DISCOURAGING EVENT: My friend didn't return my call.
EXPLANATION: She has been really busy remodeling her house

FEELINGS:

GOOD OK BAD#2

- A. DISCOURAGING EVENT: I missed the bus.
EXPLANATION: I can never manage my time.

FEELINGS:

GOOD OK BAD

- B. DISCOURAGING EVENT: I missed the bus.
EXPLANATION: My personal care attendant was late this morning, so I wasn't ready in time.

FEELINGS:

GOOD OK BAD

#3

- A. DISCOURAGING EVENT: I got in a fight with my neighbor.
EXPLANATION: He is in the process of a divorce and is under a lot of stress right now.

FEELINGS:

GOOD OK BAD

- B. DISCOURAGING EVENT: I got in a fight with my neighbor.

EXPLANATION: He is a complete jerk. I wish he didn't live next door to me.

FEELINGS:

GOOD OK BAD

You probably noticed as you were doing the last exercise that some of the explanations left you feeling *GOOD* or *OK*, whereas others left you feeling *BAD*. The strong connection between how you think and how you feel is a great tool for controlling emotions when they are not helpful. If we are able to change the way we think, we will also be able to change the way we feel! Once we learn how to catch and change our thoughts, our emotions will follow suit.

Although the progression from thoughts to feelings happens countless times throughout the day, this process often goes unnoticed. Thought and feeling reactions to events happen automatically and extremely quickly. Because of this, it takes some effort and practice to be able to recognize these automatic explanations. However, once you learn how to catch these thoughts, you can replace them with more accurate ones that will leave you feeling better.

There are certain kinds of explanations that will usually leave you feeling bad. These patterns of explanations come out of having a certain **thought style**. The next section focuses on different kinds of negative thought styles. You will learn how to recognize when you are using a particular thought style, and explore some tools you can use to change those thoughts when it is appropriate.

Section Three: What is Your Thought Style?

Everybody has his or her unique way of looking at life -- his or her own thought style. You have probably heard of optimists and pessimists. It is said that an optimist tends to look at a glass of water and see that it is half full, while a pessimist thinks the same glass is half empty. Optimism and pessimism are general thought styles. Research tells us that people's thought styles often fall into certain patterns. Some of these styles are healthy and helpful, and some are not. For example, if your goal is to have a full glass of water, which evaluation of the glass (half full or half empty) is the more encouraging evaluation? You will probably feel better about your progress toward having a full glass if you think of it as being half full instead of half empty.

What are some of the different kinds of thought styles? Let's look at how Clark reacted to some situations in his life. In the first situation Clark left a new carton of milk out on the counter all night long and it spoiled. His

reaction was to think "I am so dumb. I always do things that waste money. I will never be able to afford the things that I want because I'm so disorganized." This whole episode left Clark feeling pretty depressed. Although this may seem like a minor incident that should not result in such an intense feeling as depression, it does because Clark had such a negative reaction to the event. When people commonly react to negative events like Clark did, they will often feel depressed. Clark felt depressed because of the explanation he made for why the situation happened. He was being a **fortune teller** and a **labeler**, both of which are types of negative thought styles that are guaranteed to make him feel bad about the negative event that happened.

"Fortune telling" means that Clark was trying to predict the future based on what just happened--"I will never be able to afford the things I want because I am so disorganized."

This statement not only suggests that the reason Clark left his milk out is his disorganization but also indicates that he will always be disorganized. Clark doesn't know for sure what will happen in the future, and it is damaging for him to think that he will never be able to afford the things he wants because he will always be so disorganized.

"Labeling" means that Clark was labeling himself--he said "I am dumb." He is labeling himself with a general personality characteristic based on one incident. Labeling yourself negatively is a dangerous thing to do because it is a recipe for depression. Clark is not dumb. He is smart, and has, in fact, done many intelligent things in his life. Everyone makes mistakes.

A different thought reaction Clark could have had to the milk situation is the following: "It is too bad I left the milk out last night. But it was only a mistake, and it is one that I haven't made in a long time. I will try to be more careful next time." This second reaction has some specific qualities to it that will leave Clark feeling okay

about what happened, as well as more hopeful for the future. For one thing, instead of **fortune telling** (trying to predict the future) he speaks of the situation as being much more **temporary**. He doesn't say he "**always** does things that waste money," rather, he talks about it as being a single incident that happened at a specific point in time - "last night" (which will make the explanation more temporary). He also says "I will try to be careful next time," which gives hope that it will not necessarily happen again in the future. Another way this reaction is different is that he does not label himself. He makes no sweeping personality assessments. Instead, the reaction he has is much more **specific**. He doesn't say "I am dumb"-- instead he just admits that he made a "mistake". There is a huge difference between thinking you are dumb and thinking you made a mistake. Everybody makes mistakes. It is important to remember that mistakes can be avoided in the future, and sometimes even fixed in the present. On the other hand, if you believe you are dumb there is very little you can do about it--and hence you are left feeling bad.

Let's go through another example. This time Clark forgot to go to his doctor appointment. His reaction was to think, "I just can't do anything right. I always miss my appointments, so I guess I will always have problems with urinary tract infections." Again Clark is being a **fortune teller**. He is **fortune telling** because he is trying to predict the future by thinking, "I guess I will always have problems" because he will "always" miss his appointments. (Notice that he uses the future tense "will".) Clark doesn't know that this will be true! And he is depressing himself by thinking that he will **always** be sick. He leaves no hope for the future in his thoughts.

Just like last time, if Clark can change his reaction to the situation by making it more **temporary** and **specific** to the particular event, he will not only feel better, but will

also be likely to make a more reasonable explanation for why it happened. For example, if he had thought, "Well, I missed my appointment yesterday. That is unfortunate, but I can make another appointment tomorrow." Again, this reaction has some specific qualities that should leave Clark feeling better about what happened. First of all, the explanation is more temporary -- he says he missed the appointment yesterday instead of thinking "I always miss my appointments." The second explanation is more specific to the situation. Instead of thinking, "I can't do anything right," he thinks about only that particular situation -- realizing that he missed **that** appointment, but that he can make another one. If he thinks about it in this way, he is much more likely to make another appointment and go, so he can get some medication to get over the infection. On the other hand, if he thinks, "I always miss my appointments, I guess I'll always have problems with urinary tract infections," he is much more likely to give up completely and resign himself to always having problems. As you can see, this is a dangerous thought style to have when it comes to staying healthy.

Section Four: How Do You Keep Going After a Setback?

As you have gone through life you may have wondered at times why some people seem not to be as bothered by frustrating events as other people. It seems as though no matter what happens to them, they manage to pick themselves up, and continue on their journey. Why is this? It has a lot to do with their thought style. These people tend to have **temporary** and **specific** explanations for frustrations that they encounter in their life, particularly when the frustration is related to some goal. The key is not to be a knee-jerker. You must remember that your initial reaction to a situation is not always accurate--even when it seems completely convincing (don't forget how easy it would be to

believe that the earth is flat if all you had to rely on was your perceptions).

Studies have shown that people who tend to think that negative events are temporary and specific are **less** likely to be depressed, angry, and unhealthy, and are **more** likely to stay on their path toward their goals, especially after facing setbacks. This is why we think it is important for you to learn about how you think. By going through the exercises in this section you may learn how you tend to react to events in your life. The exercises are also designed to provide you with some new tools for modifying the way you think, which you can use when you consider it appropriate. You may find that if you use these tools to monitor the way you think, and modify your thoughts when they seem to be getting in your way, you will have a more optimistic view of your future, and setbacks will not feel so devastating. Research shows that by doing this you will be increasing your chances of health, happiness, and sticking to your life goals.

Let's take some more time to get a better understanding of the difference between **temporary** and **permanent**, and **specific** and **global** reactions to negative events.

Temporary vs. Permanent

This category refers to how permanent you think the situation is. People with temporary explanations think that the causes of the event will not necessarily be present in the future. On the other hand, some people think that since something is bad now it will always be bad. This is the **fortune telling** thought pattern. This happens when someone is trying to tell the future based on what is happening to him or her right now. For example, let's say Clark has been looking for a job unsuccessfully for months. He is starting to think that "I will never get a job because I always interview poorly." This is fortune telling because Clark is reasoning that the cause of this negative event

(interviewing poorly) will always be present. Clark is assuming that since he is having difficulty interviewing now, it means he will never get a job. Clark has no way of knowing this unless he really can predict the future, and if he can indeed predict the future, he certainly won't have to worry about getting a job--he'll already be rich and famous! In this situation, instead of giving up, Clark could use his goal-setting and problem-solving skills to improve his interviewing skills. This way, he would have hope instead of despair for the future.

The following is a list of keywords to help you familiarize yourself with this category, as well as some examples of temporary and stable explanations for events.

Table 12

PERMANENT

Keywords: Always, Continuously, Forever, Never, Anymore

TEMPORARY

Keywords: Sometimes, Once, Now and Then, Every once in a while, Occasionally, Today, Yesterday, Tonight, the Weekend

(Likely to happen again in the future)

(Less likely to happen in the future)

Table 13

PERMANENT	TEMPORARY
I always fail my tests.	I have only failed a test once before.
I can never stay on a diet.	It is harder for me to stay on my diet on the weekend .
I don't have any fun anymore when I go out with my friends.	I didn't have as much fun as usual tonight because I wasn't feeling very well.
I always forget to take out the garbage.	I forget to take the garbage out occasionally .

Let's take a look at how Clark does when he tries to come up with some alternate explanations. During the goal setting session Clark decided to work toward the following

goal. "In the next six months, I would like to meet ten new people and plan two social activities with one or more of these people." In the process of working toward this goal, Clark made arrangements to have lunch with a neighbor that he has been getting to know. Unfortunately, the day before the lunch, Clark got a urinary tract infection and had to cancel the lunch date. Clark explained this disappointment to himself by thinking, "I never get to do the things I want because I always get sick." This explanation left him feeling pretty hopeless, so he came up with some alternative explanations. This is what he came up with when he tried to generate some more **temporary** explanations:

1. Just because I got a urinary tract infection doesn't mean I will always be sick (trying not to "fortune-tell").
2. I got a urinary tract infection now because I haven't been drinking as much water as usual during the last week or so (putting his explanation in a time frame).
3. Being sick every once in a while will not keep me from making and having friends (using "every once in a while").

Exercise 18 -- Generating Temporary Explanations

Now it is your turn. Use the following event and come up with a number of **temporary** explanations.

This morning you were shopping at your local grocery store. The store clerk you asked for help was extremely rude to you.

Use the following cues to help you search for as many temporary explanations as possible. Remember, at this stage in the game it is important **not** to judge the explanations you come up with, just try to think of as many as you can. Here are some "do's and don'ts" for your search.

Do's

- 1) **Do** try to find causes that only happen **sometimes**.
- 2) **Do** put the cause of the event in a **time frame**, using phrases like "_____ happened to me yesterday because _____."
- 3) **Do** use words like *sometimes, once, now and then, every once in awhile, occasionally, today, yesterday, tonight, the weekend, etc.*

Don'ts

- 4) **Don't** fortune tell (don't try to predict the future from what just happened)
- 5) **Don't** use words such as *always, forever, never, anymore, etc.*

Using these cues, come up with as many **temporary** explanations for the grocery store event as you can.

Specific vs. Global

This category is a little more difficult to understand as there aren't "keywords" associated with both parts of this category. The main distinction is that if you think of a **global** explanation for an event, it will seem to affect your **whole** life (Some keywords are: nobody, everybody, everything, anything). For example, a global explanation for making a mistake is "I am dumb." This is a **personality characteristic** and so will tend to affect your whole life. On the other hand, if you think of a **specific** explanation, it will only affect some specific aspect of your life.

Global thinkers are "labelers". They like to give labels and names to themselves as well as other people. Whenever you begin a sentence with "I am a..." or "He/she is a..." you are being a labeler. The problem is that labels give the thinker the impression that he or she behaves like that in all situations, and that isn't always true. Labeling can be very damaging when it is used excessively for negative events. For example, you may occasionally do something that is inconsiderate. That does not mean that you **are** inconsiderate. If you think about it, it doesn't even make sense. What you are is a person that **acted** inconsiderately and that is not the only way you ever behave.

Global thinkers are also sometimes "over-generalizers". These people will take one isolated event, and apply it to their whole life. Again, this type of thinking can be quite damaging when used consistently to explain negative events in your life. For example, Clark thought that since he got "another" urinary tract infection, it means he "is never healthy". Over-generalizations like this will be claims that the person cannot support. For example, in order to support the claim "I am never healthy," Clark would have to prove that he has never had a healthy day in his life. This is highly unlikely. Most everybody has had at least a few days when she or he felt good in their life. As soon as Clark started looking at the facts he realized, of course, that there were days when he felt good, both before and since his disability occurred. For example, last week he felt good most of the week. Since he didn't even have to look farther than last week to come up with a time when he felt good, he realized that his knee-jerk reaction was an over-generalization.

Here are some examples of global and specific explanations for the same event.

Table 14

GLOBAL	SPECIFIC
I am dumb.	I didn't do well on that one test.
Nobody likes me.	I am upset because my friend was very short with me on the phone.
I can't do anything right.	I'm having trouble staying on my diet.
My spouse is uncaring.	My spouse had a hard day and is in a bad mood.

In the *Goal Setting* session Clark decided to work toward the following goal, "In the next 6 months, I would like to meet 10 new people and plan two social activities with one or more of these people." Keeping this goal in mind, Clark tried to recognize opportunities for meeting people. One day he went to the public library to get a book on motorcycles. While he was there he met a man named Fred who was reading a motorcycle magazine, and the two of them got to talking about motorcycles. Fred told Clark all about his amazing Harley-Davidson. After talking about it for about a half an hour, Clark said, "I'd really like to take a look at your Harley sometime." Fred responded by mumbling something about being really busy and then just got up and left. Clark was really surprised by Fred's response because Clark thought the two of them had a lot in common and was looking forward to knowing someone who was also into motorcycles. As time passed, Clark felt worse and worse about this interaction. After thinking about it, Clark decided that Fred acted that way because, "Nobody wants to hang around with someone with a disability." As you might imagine, this explanation left Clark feeling pretty depressed. It made him feel like there was no point in even trying to make friends with people because he would always

have a disability. Since Clark was feeling so badly about what happened, he decided to try to find some alternative explanations as to why Fred didn't want him to see his Harley. These are the **specific** explanations that he came with:

1. Fred is uncomfortable around new people.
2. Fred had just remembered that he was late to an appointment.
3. Fred had exaggerated about how great his Harley is.
4. Fred was lying about having a Harley.
5. Fred had a stomach ache.
6. Fred has trouble trusting people.
7. Fred doesn't like people to know that he lives with his parents.

Exercise 19 -- Generating Specific Explanations

Try to come up with **specific** explanations for the following event:

This morning you missed the first meeting of a city council committee on accessibility issues at city hall.

Use the following cues to help you search for as many **specific** explanations as possible. Remember, at this stage in the game it is important **not** to judge the explanations you come up with, just try to think of as many as you can. Here are some "do's and don'ts" for your search.

Do's

- 1) **Do** focus on this **particular** situation--what is different/special about it?
- 2) **Do** use phrases like "This only happens when _____."
- 3) **Do** use phrases like "The reason for this event only affects _____ part of my life."
- 4) **Do** use 'some' phrases ("**Some** people" "**Some** things", etc.)

Don'ts

- 5) **Don't** be a labeler (Avoid phrases such as: "I'm a_" or "She/he is a _____.")
- 6) **Don't** be an over-generalizer (Avoid assuming that the cause of one event will apply to **all** aspects of your life.)
- 7) **Don't** use words such as "nobody, everybody, everything, anything".

Using these cues, come up with as many **specific** explanations for the transportation event as you can.

As you did this last exercise, you may have found that it can be difficult to distinguish the difference between an explanation that is **specific** and one that is **temporary**. That's okay. It is not essential to identify what type of explanation you have made. Although it is not essential, it **can** be helpful. For one thing, you may find that you have a tendency to make one particular kind of explanation for things that happen to you and that these explanations leave you feeling bad. If this is true, then when you start feeling bad you can look right away to see if you are making that particular kind of explanation. In addition, if you know that you have made a particular type of explanation, then this knowledge can help guide your search for a different explanation that will leave you feeling better.

We will go into this process in greater depth shortly. **Right now, the most important thing to understand is that if you are feeling bad--no matter what type of explanation it is--generating some more temporary and specific explanations to the negative event can help you feel better.** If you feel better you will increase your chances of successfully continuing on toward your life goals.

Section Five: When To Change Your Explanations

We are constantly "talking to ourselves." There is often some kind of dialogue about the world around us going on in our heads. Some of us have positive and optimistic thoughts, whereas some of us tend to have negative and pessimistic thoughts. If you can become aware that you are thinking in negative ways, it is more likely that you will be able to change these thoughts before they start causing problems in your life. You can use these types of problems as signals or reminders to take a look at your thoughts and see if there are any negative patterns beginning to take hold.

When you find that you are experiencing an unusual amount of sadness or if you are thinking about quitting your goal--it is a good idea to look at your reactions to current events in your life. Are you being a knee-jerker? a fortune teller? a labeler? an over-generalizer? If you are, you would likely feel better if you searched for some different explanations. The following explanation change worksheet can help you in your search.

Exercise 20 The "Explanation Change Worksheet"

As a group, try to come up with a frustrating event that everybody can relate to. The group's job will then be to work through the rest of the process together, generating other explanations, rating the feelings associated with them, and then choosing one. The following is some text to help you understand the various steps.

Step 1: Write out the event in #1 in the first column.

Step 2: As a group, choose **one** reason why the event happened, and write that in #2.

Step 3: Next, rate how you think that explanation would leave you feeling. Circle the appropriate feeling in #3.

Step 4: Come up with as many explanations to the event as you can and list them in #4. No explanations will be ruled out at this stage. Just brain-storm and try to come up with as many as you can. Make use of the **do's** and **don'ts** listed in the second column. Don't hesitate to go back to exercises 17 and 18 to remind yourself how to do this.

Step 5: Look at the explanations and try to imagine how each of them would make you feel. Label each of the explanations by circling the appropriate emotion.

Step 6: Choose what you think is the best and most reasonable explanation out of those that have been labeled as having a "good" feeling associated with them.

Review Evidence: Take a look at all of the good-feeling explanations that you have listed. Next, ask yourself, "Do

I have any **clear and solid** evidence that one of these explanations is "right" and one is "wrong"? If not, can I think of any good reason why I shouldn't choose one of the explanations that will leave me feeling good?"

At times you may have what is called an **Aha!** experience. This is when you stumble upon an explanation that has the ring of truth to it, but that you didn't think of before. When this happens, you might think to yourself, "Ohhhhh, I never looked at it that way before. I guess that is another way to look at it." If this happens to you, go with that explanation! It clearly makes sense to you, and if it makes you feel better, go with it!

If you have gone through this whole process and you find that you can't adopt an explanation that makes you feel good, there are several reasons why this may be happening.

- A. One possibility is that you didn't come up with enough temporary or specific explanations to the event--so what you should ask yourself is, "Did I consider **all** of the possible explanations for the event?" If not, go back to step #1, and try to generate some more temporary and specific explanations. If you think that you have considered all the possibilities, and none of them "feel" right, you still have some options left.
- B. The next option is to **act as if**. If you don't have an **Aha!** experience when you use any of the "good" feeling explanations, try to pick the one that helps you feel the best. If there isn't any **clear** evidence that one of the "bad" feeling explanations is right, just act **as if** a good-feeling explanation is right.
- C. Another thing to ask yourself is, "Is it helpful to me to believe in an explanation that leaves me feeling bad?" (In most cases there is nothing helpful about feeling bad.)
- D. The final possibility is that you may be depressed. If you are depressed it will be a special challenge for

you to teach yourself how to think about negative events more temporarily and specifically. Studies have shown that a part of being depressed is having a negative thought style. If you think you are depressed it will be especially important for you to learn how to use these tools to change your thought style. If you are able to change your thought style, even a little, it will help you get over your depression faster. Next week's workshop will focus on understanding and alleviating depression.

Step 7: This step has you rate the feeling associated with the explanation you chose in Step 6.

The Decision Tree for Negative Events on the following page will help you remember the order of the steps. They may look a little overwhelming and confusing at first glance, but if you just start at the top and answer each question as you go, you will find that they are really quite easy to use. You can use them along with the worksheet any time you feel like you might be having an automatic **knee-jerk** response.

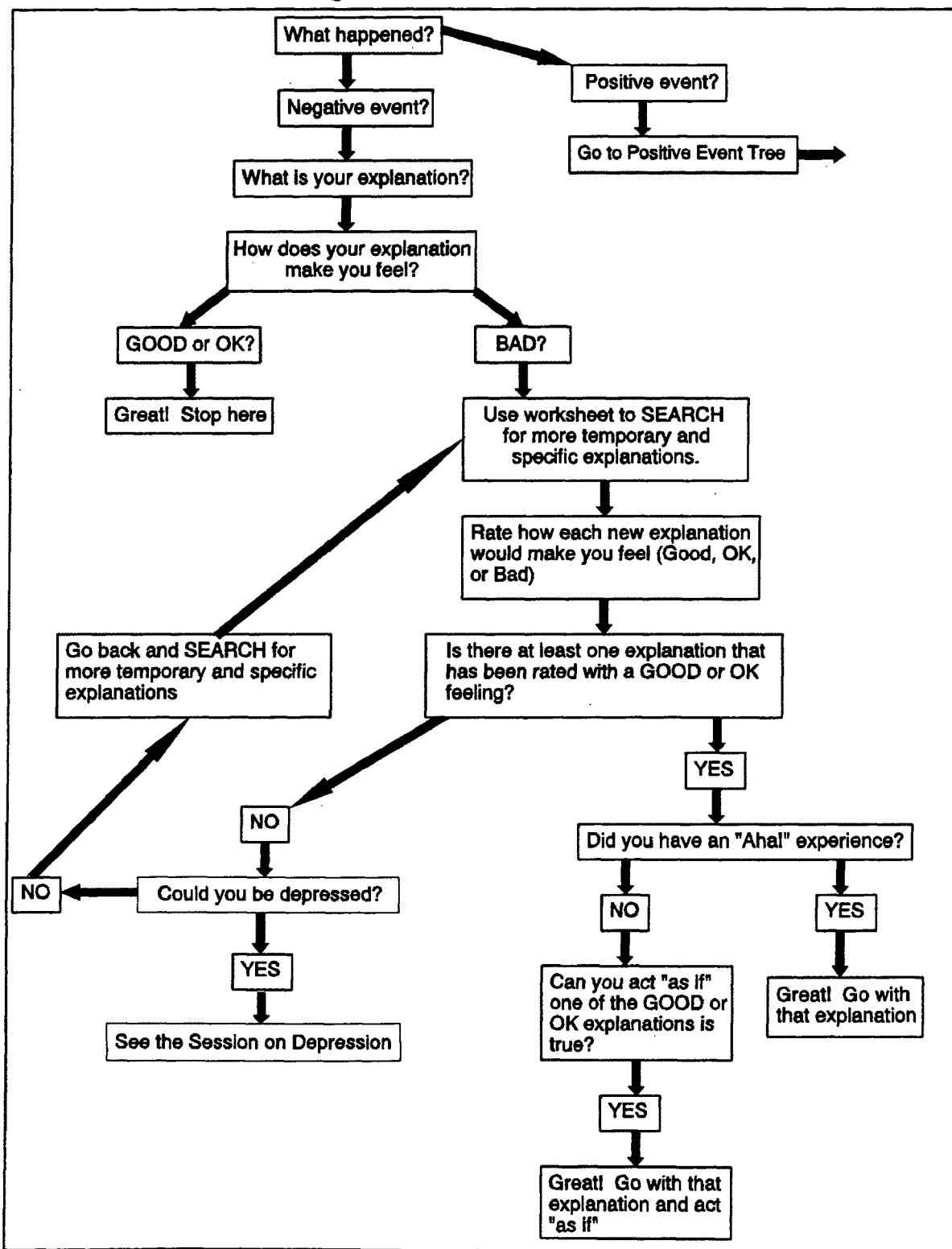
It probably became clear to you as you were doing the last exercise that there are **many** different explanations that you can come up with for every event. It is also true that these different explanations and reactions can influence how happy you are and it can also affect how likely it will be that you will stay on your path toward the completion of your life goals.

Section Six: Your Reaction to Positive Events in Your Life

So far in this session we have been talking about how you react to negative events. Another way that thinking can affect how you feel is how you react to positive events in your life.

People's reactions to positive events often fall into particular patterns, just like reactions to negative events often do. However, there are some important differences between what an unhealthy thought style for negative events is, and what an unhealthy thought style for positive events is. In fact, they are **exact opposites**. Unlike for negative events, people who often think that positive things in their life happen for temporary and specific reasons are **more** likely to be depressed and quit their goals. The gist of this unhealthy thought style is that although something good happened, the person feels that it won't last long. When you **consistently** believe that good things won't last, or that it was a fluke in the first place, you are likely to start feeling depressed, or less likely to recover from your depression if you are already depressed. It is important to feel good when good things happen to you. Just as with negative events, when people are not feeling good about something positive that happened, it is usually because they are accepting a **knee-jerk** reaction, and are not looking to see if there are other possible explanations for what happened.

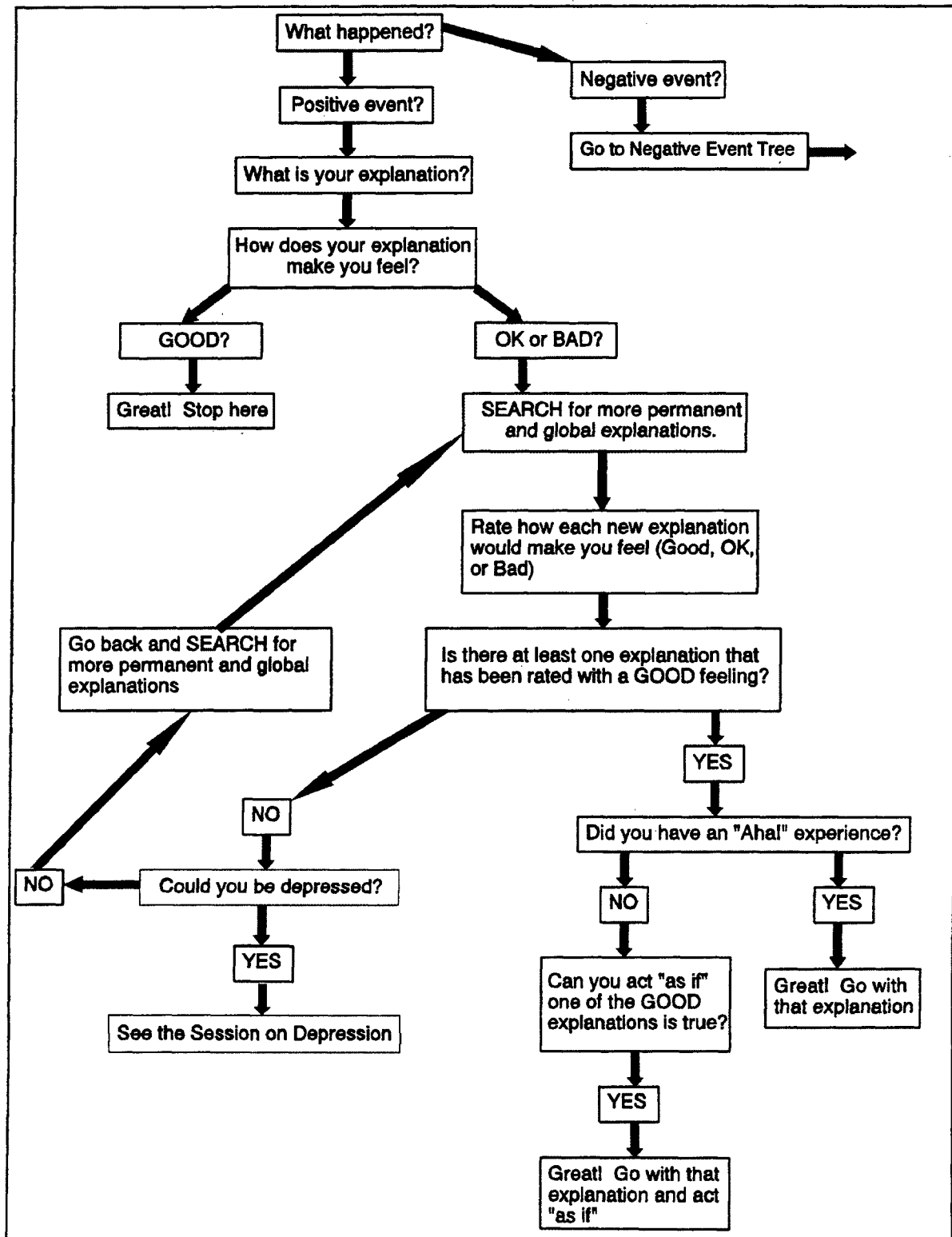
Decision Tree 1 - Negative Event



For example, imagine that you just succeeded in meeting one of your sub-goals. Let's say you have lined up an interview for a part-time job. You could respond to this by saying to yourself, "It was just luck. It's no big deal. Besides, I probably won't even get the job. They must need someone really badly if they are interviewing me." If this was your reaction to getting an interview, you would probably be feeling depressed, and maybe even that there is no point in going to the interview. On the other hand, if you responded to meeting your subgoal of a job interview by thinking, "Good for me. I reached my goal, and now I have the possibility of employment," you would probably be feeling good about yourself and your accomplishment. This good feeling is likely to make the interview go better, as well as increase the likelihood that you will try for another interview some other time. **Again, the key is to remember that your initial reaction to a situation is not always the most accurate or most fair assessment.**

The main danger is when people always have extreme thought reactions to the positive events in their life. When people **always** think that the good things that happen to them happen for temporary and specific reasons, they will have no hope for the future. When you experience a positive event, but don't feel good about it, or even feel bad about it, it is important to check out what kind of explanation you made for what happened. If your explanation was temporary and specific then you should try to change it by making it more permanent and global. You can use the same skills that you learned for changing your explanations for a negative event. The Decision Tree for Positive Events on the next page will guide you through the process of generating new explanations that will help you feel better.

Decision Tree 2 - Positive Event



Section Seven: Overview

In this module we have covered a lot of material. Much of it may be new to you and might feel strange. You have been introduced to something that most people don't ever think about -- such as *how they think*. We would like to take a minute to go over what we have talked about so far. We began by trying to convince you that your first explanation for things that have happened is not always accurate. In fact, we have argued that there are times when you have to look beyond your personal perception of a situation in order to get an accurate picture of it. (Remember that people used to think the world was flat because that is how it *looks*.) It is important to get an accurate picture of a situation because how we think affects many aspects of our lives, (such as our health, happiness and our ability to pursue our life's goals). Remember, people have their own personal thought style and that these thought styles have some particular patterns. People who believe that negative events in their life happen for permanent and global reasons will probably feel bad about what happened. Further, people who **consistently** have that kind of reaction to negative events in their life may feel depressed and quit working toward their goals. On the other hand, people who believe that negative events happen for temporary and specific reasons are less likely to be depressed, and find it easier to continue working on their goals after a frustration or setback.

Whenever you notice that you are feeling an excess of some negative emotion (sadness, hopelessness) or are considering quitting your goal, use the Decision Tree and Worksheet. The appendix contains extra sheets that you can use whenever you think you might be having a negative, knee-jerk reaction to an event in your life.

We want to emphasize that your thought style has been with you for a long time, and it will not change overnight.

It will take time for you to get used to monitoring your thoughts, as well as time to learn how to generate alternative explanations and choose one that will make you feel better. It is likely to take two months to really learn the skills presented so far.

Section Eight: Why Is This Important?

Research has shown that how you think about the events you experience will affect **many** aspects of your life. Having a positive outlook is likely to make you **happier, healthier, and more likely to continue working toward your goals**, especially after facing setbacks. People with positive outlooks will tend to explain negative events as being caused by temporary and specific reasons. This is why we think it is important for you to learn about how you think. By going through the exercises in this section you may learn how you tend to react to events in your life. Hopefully the exercises have given you some new tools for modifying the way you think, which you can use whenever you consider it appropriate. You may find that if you use these tools to monitor the way you think, and modify your thoughts when they seem to be getting in your way, you will have a more optimistic view of your future, increasing your chances of health, happiness, and sticking to your life goals.

APPENDIX G

Section 2: What did I just tell myself? Is it true?

Goal: By the end of this section you will be able to identify depressive thought styles and you will have a way to change them.

In the last session of this workshop, you were introduced to the connection between thoughts and feelings. When people get depressed they tend to think about themselves and their experiences in consistent ways. They often have negative thoughts about the way things are going which causes them to become more depressed. They filter out all of the positive and joyful aspects of their lives.

Take Clark for example. When he was having difficulty getting himself to pay his bills, he was thinking about himself in a very negative way. He was thinking that because he made one mistake, he was horrible at managing his money. This belief caused Clark to feel defeated before he even started. This way of thinking occurs frequently in people who are experiencing depression. Negative thoughts come in a variety of forms but the end result is the same: You end up feeling bad about yourself and life.

Stopping negative thoughts helps you to feel better, to have more energy, to complete the tasks you have chosen for reaching your goals, and to feel like life is meaningful and worth living. You will begin to understand that how you think is closely linked to how you feel. The good thing about the relationship between thoughts and feelings is that you can control how you think and consequently, how you feel. The trick is learning to think differently.

The problem with learning to think differently when you are depressed is that negative thoughts come quickly and

automatically -- sometimes so quickly you aren't aware that you are thinking them. But whether these thoughts are noticed or not, they have a powerful effect on your mood and how you feel about yourself. How do you learn to think differently so that when life is frustrating and negative things happen, you don't get depressed? If you have been working on the change from the last session, you are off to a good start. Using that worksheet will help you learn to find different explanations for the things that go wrong.

During the last session, you learned how to search for different explanations when negative things happen and that accepting permanent and global explanations is not always realistic. You also learned that finding more temporary and specific explanations for negative events can make you feel better. We are going to use this same process with a slightly different twist in order to highlight how explanations and depression go together.

In recent years, scientists have learned that when people are depressed, they begin to think in specific ways. As you may have guessed, these ways of thinking involve making permanent and global explanations for bad events, and temporary and specific explanations for good ones. For example, imagine someone who develops a UTI (clearly a negative event in anyone's life). Table 19 presents explanations for this negative event which a person might make when depressed and when not depressed.

Table 20 -- Explanations For Why a Person Gets a UTI

Explanations when not Depressed	Explanations when depressed
<ol style="list-style-type: none"> 1. I have not been drinking enough liquids lately so I might be a little dehydrated. 2. I have been really busy lately and may not have been sterilizing my catheter as well as I could. 3. I have been stressed out too much lately which has made me more likely to get UTIs. 	<ol style="list-style-type: none"> 1. I never take good care of myself. 2. I am too lazy to clean my catheter. 3. I get sick too easy. My immune system is weak.

Hopefully these examples can help you see how explanations can lead to depression. However, there is another part of depressive thinking that you may or may not have noticed in the examples above. In addition to seeing negative events as permanent and global, when you are depressed you are likely to see yourself as the cause of these events and begin to blame yourself for **all** of the negative things that happen to you. This self-blaming or self-criticism is a major part of depression and is very destructive.

We call the self-blaming, self-critical explanations **personal explanations**. In the last session, you focused on finding temporary and specific explanations for negative events. In this session, we are going to focus on providing explanations that are less personal which hopefully will get you off the hook when you are feeling down. Remember, you

are likely to become a harsh a critic of yourself when you are depressed but your criticisms may not be very realistic.

Just as you did in the last session, practicing making less personal explanations for negative events is helpful (see ex. 20, on p. 76). Imagine that you apply for a job and you don't get it. On the lines below list in the left-hand column as many explanations as you can that are personal and list the non- personal explanations in the right-hand column. The non-personal reasons for not getting the job should have nothing to with you. Imagine everything possible about other people and the situation that might contribute to not being hired.

Exercise 24 -- Non-Personal Explanations

Non-personal Explanations	Personal Explanations
Example: They had over 100 applicants for one position	Example: I was not qualified.

Are you aware of any difference in your own explanations depending on whether or not you are depressed? If you were feeling down and got the news you did not get the job, would you think of the personal explanations or the explanations that are not personal?

Thus far, you been introduced to the idea that explanations can be permanent, global, and personal; they can also be temporary, specific, and non-personal. When people feel somewhat discouraged, they tend to explain negative events with permanent, global, and personal explanations. If you have been working on finding alternative reasons for negative events, you have a good start on using your ability to change your thoughts to help eliminate depression. But depression can be a nasty opponent. When you are depressed, simply listing different explanations may not help you feel better. Why might this be so? Let's look at Clark's example from earlier in this session to answer this question.

Last time Clark paid bills he made a mistake. His initial explanation for the mistake was "I am lousy at managing money." When thinking of alternative explanations he listed the following: 1) I was in a hurry when I wrote the checks; 2) I was interrupted by the phone and lost my

train of thought; 3) the bill I made a mistake on did not clearly indicate which amount should be paid. When he looked over these other explanations, he could see that each of them was true. By listing them, Clark realized that the bill was unclear. He felt somewhat better with this explanation. Unfortunately, he still felt like he was lousy at managing money. For Clark, who normally manages his money fine, this feeling is the depression talking. If he weren't feeling depressed, the alternative explanation would have made him feel better. However, because he is now feeling somewhat down, he needs to do more to improve his state of mind.

As you get better at finding different kinds of explanations for the things that happen to you, you can also begin talking yourself through negative thoughts. Sometimes you have to convince yourself that your initial thoughts, which are coming from your depression, are not necessarily correct. Have you ever watched a political debate on television? During the debate, one candidate states why he or she is right about some issue and why the opponent is wrong. When the first candidate is through, the second candidate is given an opportunity to make a rebuttal or response. In the rebuttal, the second candidate points out errors in the first candidate's ideas. When you are depressed, you need to respond to your negative thoughts and explanations with a rebuttal.

Below is a worksheet Clark used to rebut a couple of his negative thoughts. First, he wrote down the event that caused the thoughts to start. Then he wrote down what he was thinking right after the event. Next, he evaluated whether his thought included explanations that were permanent, global, or personal. Finally, he responded to his initial thought by focusing on making his explanations more temporary, specific, and non-personal. Look at how Clark did this and then try to do it yourself.

Table 21

Event	Negative Thoughts	Type	Rebuttal
Missed an appointment.	I am very disorganized. I can't do anything right.	personal global permanent	I missed the appointment because no transportation was available. I am organized most of the time and I do many things right.
Unable to reach something at the grocery store.	I am a failure. I will never be able to get the food I need to eat a healthy diet.	personal global permanent	Grocery stores are not very accessible. It's ok for me to ask an employee for assistance. Then I can get what I need.

Now it's your turn. Think of an event you might experience and a negative thought you might have afterwards. Write these down in the first two columns. Then, look at the thought you wrote down and determine whether or not there are any permanent, global, or personal explanations in it. If there are, write down a rebuttal with more temporary, specific, and non-personal explanations. Rebutting negative thoughts will become easier the more you practice.

Everybody experiences negative thoughts at times. Whether you are depressed or not, these thoughts will probably make you feel bad. In addition, the more negative thoughts you have, the more likely it is that you will become

Exercise 25 -- Rebutting Negative Thoughts
Rebuttal Worksheet

Event	Negative Thought	Type	Rebuttal
		permanent global personal	
		permanent global personal	
		permanent global personal	

depressed. Using this worksheet will help you have fewer negative thoughts. Because it takes a while to learn how to do it, try to use the worksheet for at least a month. At the end of each day or whenever you have time, think back

over the day and record events and negative thoughts. Then, write down a rebuttal for each thought. If you practice doing this for a month, it will become automatic. Soon, when frustrations occur, you will respond without the negative thoughts that feel bad. By using this technique, you can learn to **prevent** many of those times when you feel depressed. If you are depressed now, you can use this tool to help yourself feel better. Generally, people who use this worksheet when they feel depressed, begin to notice an improvement in a few days. Many report feeling much better within a week or two. So, try to use it now and then practice with it over the next month or two. You will probably see positive changes in your life.