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I am submitting herewith a dissertation written by Bruce Gordon Lynch entitled "An Examination of the Relationship Among the Commitment and Control Dimensions of Hardiness, the Appraised Impact and Frequency of Negative Life Events, and Optimistic Explanatory Style". I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Education.

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AN EXAMINATION OF THE RELATIONSHIP AMONG THE
COMMITMENT AND CONTROL DIMENSIONS OF HARDINESS,
THE APPRAISED IMPACT AND FREQUENCY OF NEGATIVE
LIFE EVENTS, AND OPTIMISTIC EXPLANATORY STYLE

A Dissertation
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Bruce Gordon Lynch
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DEDICATION

This dissertation is dedicated with love to my parents

Mrs. Joan Miriam Lynch

and

Mr. Charles Wesley Lynch

who have given me tremendous support, insights, and love.

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Abstract

The main purpose of the present study was to examine the relationship among the commitment and control dimensions of hardiness, negative life events, and explanatory style in undergraduate college students. Attempts were made to clarify the relationship between two widely, but predominantly separately, researched theories of cognitive coping styles--hardiness (Kobasa, 1979) and reformulated learned helplessness (Abramson, et al., 1978). Hardiness influences how people appraise events, and is related to psychological health. According to the learned helplessness reformulation, one's style of explanation can reflect optimism or pessimism, and influences psychological health when people experience adversity. But there have been inconsistent findings across the rare studies that have examined whether hardiness and reformulated learned helplessness measure overlapping constructs.

A second purpose of the study was to examine whether the method of assessing stressful life events influences the relationship between the commitment and control dimensions of hardiness and explanatory style. Because hardiness and explanatory style each describe how people appraise potentially stressful situations, confounding was expected with an appraisal-based measure of negative life events.

Participants completed the Attributional Style Questionnaire (Peterson et al., 1982), and two other

self-report instruments: the Short Form of the Hardiness Scale (Kobasa & Maddi, 1982) and the Life Experiences Survey (Sarason et al., 1978). The Life Experiences Survey was used to measure both the perceived impact and frequency of negative life events.

Hierarchical and simultaneous multiple regression analyses showed that only commitment significantly increased the variance accounted for in explanatory style. The finding that commitment was correlated with explanatory style but control was not provides support for the idea that the hardiness and reformulated learned helplessness theories describe overlapping, but also distinct, constructs.

Pearson correlation analysis was also conducted. The two life events measures were correlated with each other and with commitment, providing support for the notion that they both may be influenced by individual appraisals. Neither life events measure was related to explanatory style or control. The findings provided support for the buffering effect of optimistic explanatory style, but questions remain regarding potential protective mechanisms of hardiness.

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Chapter 1

Statement of Problem

The construct of hardiness was originally developed to describe personal characteristics associated with stress resistance (Kobasa, 1979). Numerous researchers have reported hardiness to be related to psychological health and to physical health (Funk, 1992). One of the ways that hardiness may help people maintain their health is by influencing people's perceptions of events. Researchers have found that people high in hardiness appraise potentially stressful situations less negatively than do people low in hardiness (Rhodewalt & Agustsdottir, 1984; Rhodewalt & Zone, 1989; Wiebe, 1991). Thus, it appears that hardiness is a coping style that consists, at least partly, of cognitive components.

The dimensions of hardiness include commitment, control, and challenge (Kobasa, 1982). Commitment means being invested in and believing in the importance of one's chosen activities. Control refers to the amount of personal influence one believes she or he can have over events that occur. Challenge describes a belief that change is a positive aspect of life. These dimensions make up a schema, or world view, that one uses to understand and cope with life events.

Like hardiness, the reformulated theory of learned helplessness (Abramson, Seligman, & Teasdale, 1978) describes

cognitive schemas that people use in efforts to explain and cope with the occurrence of negative life events. According to the learned helplessness reformulation, one's style of explanation can reflect optimism or pessimism. Numerous researchers have found optimistic explanatory style to be related to psychological health and to physical health following the experience of negative life events (Sweeney, Anderson, & Bailey, 1986). But there have been inconsistent findings across the rare studies that have examined whether hardiness and reformulated learned helplessness measure overlapping constructs (Hull, Van Treuren, & Propsom, 1988; Sweetman, Munz, & Wheeler, 1993).

Because both hardiness and reformulated learned helplessness theories attempt to explain how people respond to adversity, examination of the role of negative events may help explain the inconsistent research findings. There continue to be questions in both hardiness and reformulated learned helplessness research regarding (a) the specific role of negative life events, and (b) the relative merits of different methods of measuring life events. Peterson, Maier, and Seligman (1993) state that, in learned helplessness research, "the role of bad events has often not been investigated" (p. 178). In addition, Peterson, et al. (1993) state, "For instance, the importance (and/or frequency and/or intensity) of the bad events that produce helplessness might dictate the magnitude of ensuing deficits" (p. 179).

Wiebe and Williams (1992) recommend increased examination of how negative life events are measured in hardiness research. Reviewers of hardiness research state that few studies have supported the original theoretical prediction that hardiness moderates, or buffers, the potentially negative effects of stressful life events (Funk, 1992; Funk & Houston, 1987). Rather than being a stress resistance resource, hardiness may be a stable personality style that is present across both positive and negative life events, and is only reflecting the absence of neuroticism (Funk, 1992). Wiebe and Williams (1992) suggest that an alternative explanation for the inconsistent findings in hardiness research is that different methods of measuring stressful life events have been used across studies.

Three common methods of assessing life events are (a) assigning generalized, or objective, weights to reported life change events, regardless of whether the life change is positive or negative (Holmes & Rahe, 1967); (b) assigning weights based on each individual's appraisal of the impact of the reported events (Sarason, Johnson, & Siegel, 1978) and (c) counting the frequency of negative events, positive events, or total life change events. Negative life change events have been consistently found to be more highly correlated with psychological problems than are positive life change events (Derogatis & Coons, 1993; Wagner, 1990; Zuckerman, Oliver, Hollingsworth, & Austrin, 1986).

But there continues to be debate in the field regarding the relative merits of the types of life events measures. Some researchers state that including personal appraisals of an event in the individual's life blurs the distinction between the event and the personal characteristics of the individual (Dohrenwend, Dohrenwend, Dodson, & Shrout, 1984; Skodol, Dohrenwend, Link, & Shrout, 1990). Wiebe and Williams (1992) state, "Thus the use of appraisal-based measures may obscure stress buffering hardiness effects because they do not allow consideration of the mediational role of appraisals" (p. 245). Wagner (1990) reports that some life events researchers use frequency counts of events that are perceived as negative as an alternative to the more subjective appraisal-based weightings of the impact of negative events. Although the frequency count method still includes the person's perception of whether the event was negative or positive, it seems to be a more objective method than assessing the individual's appraisal of the extent of the event's impact. The method that is used to measure negative life events may affect the relationship between hardiness and explanatory style.

Purposes of the Study

The main purpose of the present study was to examine the relationship among the commitment and control dimensions of hardiness, negative life events, and explanatory style in

college students. The present study differed from the previous studies that compared hardiness and reformulated learned helplessness because assessment of negative life events was included. The study added to the literature by attempting to clarify the relationship between two widely, but predominantly separately, researched theories of cognitive coping styles--hardiness and reformulated learned helplessness.

A second purpose of this study was to examine whether the method of assessing stressful life events influences the relationship among the commitment and control dimensions of hardiness, negative life events, and explanatory style. The study included assessment of both the perceived impact of negative life events and the frequency of negative life events when examining hardiness and the learned helplessness reformulation.

Hypotheses

Three hypotheses were generated. These hypotheses are:

1. There will be a significant multiple correlation between the predictor variables of the commitment and control dimensions of hardiness, and the criterion variable of optimistic explanatory style.
2. The addition of perceived impact of negative life events into a multiple regression equation with commitment and control will not contribute significantly to the prediction of optimistic explanatory style.
3. The addition of frequency of negative life events into a multiple regression equation with commitment, control, and perceived impact of negative life events will contribute significantly to the prediction of optimistic explanatory style.

Chapter 2

Review of Literature

Stress Resistance Resources

Researchers have consistently found that people who experience negative life events are a greater risk for having psychological or physical problems than are people who do not experience negative life events (Derogatis & Coons, 1993). But correlations between negative life events and health outcomes have usually been found to be less than .40 (Rabkin & Struening, 1976; Sarason et al., 1978), suggesting that other factors may influence health outcomes.

During the past fifteen years there has been much interest in studying factors that may moderate, or buffer, the effects of environmental stressors. Such factors have been called stress resistance resources (Holahan & Moos, 1987). Internal locus of control (Dohrenwend & Dohrenwend, 1981; Johnson & Sarason, 1978), perceived availability of social support (Cohen & Hoberman, 1983), sense of coherence (Antonovsky, 1979), optimistic explanatory style (Seligman, 1990), and hardiness (Maddi & Kobasa, 1984) are factors that have been identified as contributing to people being resistant to the potentially negative effects of stressful life events. Explanatory style, as described by the reformulated theory of

learned helplessness, and hardiness have each been widely studied in efforts to further specify personal characteristics that may contribute to stress resistance.

Protective Mechanisms of Hardiness

Hardiness has been found in some studies to differentiate people who are resistant to the effects of stressful life events from those who respond to stressors by developing symptoms of psychological distress (Kashubeck & Christensen, 1992; Maddi & Kobasa, 1984) or physical illness (Kobasa, Maddi, & Kahn, 1982). Some researchers have used the terms high hardy and low hardy to describe different levels of hardiness in people, while other researchers have used the terms hardy and non-hardy. When reviewing literature in the present study, the terms hardy and non-hardy will be used.

Researchers have explored the mechanisms by which hardiness may function as a stress resistance resource. Rhodewalt and Agustsdottir (1984) state that hardy individuals are more likely than non-hardy people to perceive events as positive and to see themselves as in control. Wiebe (1991) and Allred and Smith (1989) report that hardy people perceive potentially threatening events less negatively than do non-hardy people. Rhodewalt and Zone (1989) report that non-hardy individuals appraise the impact of negative life events more negatively than do hardy people. In a recent

review of hardiness research, Wiebe and Williams (1992) state: "Researchers have demonstrated that high-hardy individuals generally report more positive perceptions of the same objective situation than do low-hardy individuals, and that these relationships are not completely attributable to neuroticism" (p. 247).

The differences between how hardy and non-hardy people appraise situations seem to influence coping styles. Hardy people engage in what Maddi and Kobasa (1984) call transformational coping. In transformational coping, potentially stressful situations are seen optimistically as opportunities for growth, and hardy people then respond by taking appropriate action. Sansone, Wiebe, Morgan, Palmer, and Rich (as cited in Wiebe & Williams, 1992) report that the appropriate action taken by hardy people is related to the context of the situation, and it can include being passive when available actions would not be beneficial. The ability to choose the appropriate coping strategy in a flexible manner, based on specific situational demands, has been identified as an important aspect of effective coping by researchers who have studied other cognitive coping styles (Antonovsky, 1990; Lazarus, 1990; Seligman, 1990).

There are also coping styles that do not function as protective mechanisms. According to Maddi and Kobasa (1984), non-hardy people engage in regressive coping. Regressive coping involves automatically trying to avoid or deny

potential stressors, and it is seen as less healthy than transformational coping. Researchers have found that people who are low in hardiness engage in denial and behavior disengagement (Carver, Scheier, & Weintraub, 1989). Ganellen and Blaney (1984) found that people who were lower on the commitment and challenge dimensions of hardiness reported having less social support, a finding that seems to support the negative effects of regressive coping.

The descriptions above of the mechanisms by which hardiness appears to help people deal with potential stressors support the notion that hardiness may be a cognitive coping style. Researchers have begun exploring relationships between hardiness and coping styles such as sense of coherence (Williams, 1990), optimistic world view (Scheier & Carver, 1985; Sweetman et al., 1993), and explanatory style (Hull et al., 1988; Sweetman et al., 1993). Further exploration of how hardiness compares with cognitive coping styles across different levels of negative life events may help answer some current criticisms of the original hardiness theory.

Current Issues in Hardiness Research

Hardiness has been widely researched during the past fifteen years, and certain criticisms of the original hardiness theory have emerged. One criticism concerns whether hardiness is a composite concept or consists of unrelated

dimensions. In studies of populations such as students, nurses, army officers, and lawyers, the commitment and control dimensions of hardiness, and composite hardiness, have been found to predict psychological or physical health more frequently than has the challenge dimension of hardiness (Hull, Van Treuren, & Virnelli, 1987). The authors also state that the dimensions of hardiness seem to be measuring distinct concepts. Hull et al. (1987) recommend studying the dimensions separately rather than using composite hardiness. In the present study, the separate dimensions of commitment and control will each be examined.

Another criticism of the original hardiness theory is that few studies have found that hardiness acts as a buffer in response to negative life events (Funk, 1992; Funk & Houston, 1987). There is consistently, across studies, a significant relationship between hardiness and psychological health, such as lack of depression (Hull et al., 1987) or lack of anxiety (Allred & Smith, 1989), or physical health (Schmied & Lawler, 1986). But fewer studies have found that the extent of negative/positive events experienced affects the hardiness/health relationship (Funk, 1992). In such studies, the buffering effect has been present more often in studies where psychological health has been used as an outcome measure than when physical health has (Funk, 1992). Hardiness may be a stable coping style that is present across both positive and negative events (J.J. Sanchez & T.V. Merluzzi, personal

communication, April 1994).

Some researchers suggest that, rather than being a coping style, hardiness may be a measure of the absence of neuroticism (Funk, 1992). The author states that the instruments that have been used in the majority of studies to measure hardiness consist almost entirely of items that reflect negative attitudes, where having more affirmative responses suggests less hardiness. In recent years, a new hardiness measure has been developed that includes more items that are worded to reflect positive attitudes. Although it appears that the Personal Views Survey (Hardiness Institute, 1985) is an improvement in some ways over previous hardiness instruments, less reliability and validity data are yet available when compared to the older scales--which are also being currently used (Ouellette, 1993).

It is also suggested that the lack of consistent stress buffering findings in hardiness research may instead be due to the different types of measures that are used across studies to assess negative life events (Wiebe & Williams, 1992). Stress buffering effects of hardiness may be concealed by the confounding of appraisal-based measures of negative life events with the appraisal-based coping mechanisms of hardiness. Researchers recommend continued comparisons of hardiness with other cognitive coping styles in order to help clarify the role of negative life events. Scheier and Carver (1987) recommend increased study of hardiness and learned

helplessness together.

Learned Helplessness--Original and Reformulation

The theory of learned helplessness (Overmier & Seligman, 1967) was originally developed to describe the behavior of animals who were repeatedly exposed to response/outcome non-contingency in a laboratory setting. Seligman (1975) proposed that the experience of trauma that one cannot control, and repeated environmental outcomes that occur independently of all of one's chosen responses, can lead to learned helplessness in children or adults. The cognitive set of learned helplessness can be transferred to new situations and can lead to lack of motivation and lack of effort, even in situations where it would be possible for the person to have some control (Abramson, Garber, & Seligman, 1980). By this process, learned helplessness can lead to depression via the person believing that he/she "cannot control the elements of his life that relieve suffering, bring gratification, or provide nurture" (Seligman, 1975, p. 93).

Abramson et al. (1978) revised the learned helplessness theory, in an effort to further specify factors that contribute to the development of learned helplessness. These authors state that when people experience non-contingency between their responses and an environmental outcome, they attribute a cause to the uncontrollable situation. The nature

of this causal attribution reflects pessimism or optimism, and influences expectations regarding new situations. The person may tend to be optimistic and maintain his/her self-esteem, or the person may lean toward being pessimistic and feeling helpless. The reformulation has been an improvement over the original learned helplessness theory because it now is "able to explain individual differences in response to uncontrollability, because people bring habitual explanatory styles to bear on the events they perceive" (Peterson et al., 1993, p. 141).

Abramson et al. (1978) propose that causal attributions for negative events are: (a) either permanent (stable) or temporary (unstable), (b) either pervasive (global) or situation specific, and (c) either internal or external. Seligman (1990) states that a pessimistic explanatory style for negative events, characterized by permanent, pervasive, and internal causal attributions, leads to learned helplessness and depression when the person experiences stress or failure. People with optimistic explanatory styles react to setbacks with only temporary feelings of hopelessness--and are able to maintain their self-esteem and keep trying.

Explanatory Style and Health

A person's optimistic or pessimistic explanatory style can have a significant impact on physical health as well as

depression. Scheier and Carver (1987) report that optimistic explanatory style is related to good physical health. The authors propose that adults with an optimistic coping repertoire are able to realistically use acceptance or resignation in uncontrollable situations, as well as to appropriately use active, problem solving coping strategies in controllable situations. In a number of studies pessimistic explanatory style has been found to be correlated with depressive symptoms in college students (Johnson & Miller, 1990; Peterson et al., 1982; Seligman, 1990). Sweeney et al. (1986) conducted a meta-analysis of studies of the learned helplessness reformulation. The authors report that pessimistic explanatory style is related to depression across populations such as college students, non-students, and depressed psychiatric patients.

Researchers have tested the theoretical prediction that optimistic explanatory style contributes to people maintaining their health after experiencing adversity. The occurrence of negative life events has been assessed in a variety of ways. Simulated negative events in a laboratory setting (Alloy, Peterson, Abramson, & Seligman, 1984), naturally occurring adverse events (Anderson, 1983), and, more rarely, life events self-report checklists (Johnson & Miller, 1990) have each been used to study explanatory style and depression. One criticism of reformulated learned helplessness research is that most of the studies have been cross-sectional, where it could be

argued that the occurrence of negative events influenced explanatory style. But there has also been support for the reformulated learned helplessness theory in longitudinal studies, where explanatory style and depression were assessed both before and after the negative events happened (Golin, Sweeney, & Schaeffer, 1981; Nolen-Hoeksema, Girgus, & Seligman, 1986).

Current Issues in Explanatory Style Research

There has recently been a debate in the field regarding the relative merits of explanatory style and two other measures of coping: locus of control (Rotter, Chance, & Phares, 1972), and self-efficacy (Bandura, 1986). Seligman (1992) states that locus of control is too general. The author reports that people who are depressed feel personally responsible when negative outcomes occur, but believe that the occurrence of positive events is due to external factors. While maintaining the value of a general locus of control construct, Rotter (1992) also acknowledges that "Although it has not been experimentally investigated, extreme internality could lead to debilitating guilt and self-blame following trauma or failure" (p. 128). Seligman (1992) describes self-efficacy as being more task specific than explanatory style, and thus less generalizable across situations.

Recent reviewers of learned helplessness research recommend more study of how explanatory style is related to other cognitive personality variables (Peterson et al., 1993). The authors also recommend increased study of the specific role of negative life events in learned helplessness research, saying that this area has often not been examined in previous studies. Comparison with other cognitive coping styles, and clarification of the role of negative life events, appear to be important current issues in both hardiness and reformulated learned helplessness research. Perhaps understanding of each theory could be enhanced by further examination of how hardiness and explanatory style are related.

Hardiness and the Learned Helplessness Reformulation

Rodin and Salovey (1989) theorize that hardiness theory and the reformulated theory of learned helplessness describe overlapping personality constructs. Both theories describe how people's appraisals of potentially stressful life events influence psychological and physical health outcomes. The two theories also emphasize the importance of using flexible coping strategies based on the demands of particular situations. Hardiness and the learned helplessness reformulation have each been widely studied regarding how people respond to adversity. But in only two studies have researchers directly compared the two theories. Hull et al.

(1988) report findings suggesting that the commitment and control dimensions of hardiness are related to optimistic explanatory style. But Sweetman et al. (1993) did not find a relationship between hardiness and reformulated learned helplessness.

Scheier and Carver (1987) recommend increased study of hardiness and learned helplessness together. In neither of the previous studies comparing hardiness and explanatory style was there an assessment of the extent of negative life events experienced by participants. Examination of the role of negative life events may help explain the inconsistent research findings. In life events research, different methods of assessing negative life events have been used across studies. The method used to measure life events may influence the relationship between hardiness and the learned helplessness reformulation.

Life Events Research

Holmes and Rahe (1967) conducted pioneering research on the effects of stressful life change on health outcomes. The authors stated that stressful life change can include either positive or negative life change events. Based on normative data gathered by the authors of the common impact of certain events, generalized weights were assigned to the life change items used on the Holmes and Rahe checklist.

Sarason et al. (1978) revised how life events were assessed by including individual participants' ratings of the impact of reported events--in contrast to the use of generalized weights. This method has been found to correlate more strongly with health outcome measures than did the generalized weightings approach (Johnson & McCutcheon, 1980; Sarason et al., 1978).

Negative life change events have been found to be more strongly correlated with psychological and physical problems than are positive life change events (L. Cohen, 1988; Derogatis & Coons, 1993). But some researchers state that including people's appraisals of events results in confounding of personal characteristics with characteristics of the event itself (Skodol et al., 1990). Wagner (1990) reports that some researchers use frequency counts of negative events as a compromise between generalized life change weightings and the more subjective appraisal-based weightings of the impact of negative events.

Although the frequency count method still includes people's perceptions of events as negative or positive, it seems more objective than methods that include people's appraisals of the extent of impact of the events. The frequency count method has been found to predict psychological distress as well as does the generalized weighting approach (Zuckerman et al., 1986). There has been some inconsistency across studies that examined the relationship between the

frequency count and individualized weighting approaches. L.H. Cohen (1988) reports that using the frequency count approach often yields a similar correlation with psychological symptoms as does using the appraised severity approach. Mullis, Youngs, Mullins, and Rathge (1993) state that the frequency and individualized weighting approaches are correlated with each other. But the authors state that the frequency and averaged individualized weighting approaches are not correlated with each other, although they are equally strong in predicting self-esteem in adolescents. However, Zuckerman et al. (1986) report that using perceived impact of events results in better prediction of psychological distress than does using a frequency count.

Because hardiness and explanatory style each describe how people appraise potentially stressful situations, there may be confounding with appraisal-based measures of negative life events. In the present study, both a measure of the appraised severity of events, and a more objective measure that uses a frequency count of events seen as negative, will be used. It is expected that the frequency count approach will help explain the relationship between hardiness and explanatory style, but the appraisal-based approach will not.

Chapter 3

Method

Research Participants

Participants included 99 undergraduate students from introductory psychology classes at the University of Tennessee. Participating students received extra credit in their psychology classes. 57.1% of the participants were freshmen, 26.5% were sophomores, 9.2% were juniors, and 7.1% were seniors. The age range of the participant group was from 17 to 33 years old, with 91.9% of the participants being in the age range of 18 to 21. Women comprised 57.1% of the participant group, and 42.9% of the participants were men. The self-reported ethnic group representation among participants included 87.8% White, 5.1% African-American, 4.1% Asian-American, 2.0% American Indian, 0% Hispanic, and 1.0% Other. Of the 99 participants who completed the questionnaires, one person did not complete the demographic form.

Procedure

Announcements about the study were made by posting sign up sheets in areas designated by the University of Tennessee

Psychology Department, and by brief statements from teaching assistants in psychology classes. The sign up sheets included a brief description of the study, testing locations, and testing times. Seven testing administrations were conducted between January 23, 1995 and February 21, 1995, with the attendance ranging from 6 to 27 participants per administration. The number of participants attending a given administration was generally one half to two thirds the number of names on the sign up sheet for that administration.

Students who attended a group testing administration were each handed an envelope containing an informed consent form, a demographic questionnaire, and four self-report instruments. The informed consent form was read aloud by the investigator, and participants were told to keep the form. The self-report instruments had been put into the envelopes in random order. Students were told that consent to participate would be given by returning the completed questionnaires in the envelope to the principal investigator. An announcement was made that if students decided to withdraw or stop answering questions at any time, they would still receive the extra credit as long as they remained in the room during the testing time. Participants were instructed not to write their names on any of the sheets, in order to make the testing anonymous. They were reminded to read the directions carefully before answering each questionnaire, and were told to answer the questions honestly--being reminded that there are not right or

wrong answers, the right answers are the ones that fit for them.

It took participants less than one hour to complete the written materials. After placing their envelope with the completed questionnaires in a designated box at the front of the room, each participant was instructed to complete a voucher in another area of the room in order to receive course extra credit. The investigator signed each completed voucher, gave the student a copy, and turned each original voucher in to the psychology department. Anonymity will be assured because there is no way to match the name on a voucher with the questionnaires completed by that participant. Each participant was given a debriefing form, which also includes information about available counseling services, after turning in their envelope.

Independent measures

The four independent variables included measures of the student's level of commitment and control, self-reports of the perceived impact of recent negative life events, and self-reports of the frequency of recent negative life events. The Short Form of the Hardiness Scale (Kobasa & Maddi, 1982) was used to measure commitment and control; The Life Experiences Survey (LES; Sarason et al., 1978) was used to measure both the perceived impact and the frequency of recent

negative life events.

Short Form of the Hardiness Scale

The Short Form of the Hardiness Scale (Kobasa & Maddi, 1982), which has also been referred to as the Revised Hardiness Scale, consists of 36 items and includes three subscales: (a) commitment, (b) control, and (c) challenge. There are 12 items on the commitment subscale, 16 items on the control subscale, and 8 items on the subscale for challenge. The range of potential scores is 12-48 for commitment, 16-64 for control, and 8-32 for challenge. Lower scores on the subscales reflect higher levels of commitment, control, or challenge. Items included on the scales were drawn from the Alienation Test (Maddi, Kobasa, & Hoover, 1979), The Internal-External Locus of Control Scale (Rotter, Seeman, & Liverant, 1962, as cited in Ouellette, 1993), the California Life Goals Evaluation Schedules (Hahn, 1966, as cited in Oullette, 1993), and the Personality Research Form (Jackson, 1974, as cited in Oullette, 1993).

Internal consistency reliabilities for the Short Form of the Hardiness Scale, with a sample of 495 college students, have been reported to be .73 for the commitment dimension, .71 for the control dimension, but only .41 for the challenge dimension (Hull et al., 1987). Test re-test reliabilities of .79 for commitment with 67 subjects, .78 for the control

dimension with 59 participants, .64 for challenge with 64 participants, and .74 for composite hardiness with 59 subjects have been reported for the short form (Hull et al., 1987). The short and long versions of the Hardiness Scale have been correlated; Pearson correlation coefficients of .89 (Kobasa & Maddi, 1982) and .76 (Hull et al., 1987) have been reported.

Hull et al. (1987) have also reported evidence to support the validity of the Short Form of the Hardiness Scale. Convergent validity is supported by negative correlations of the commitment and control subscales with measures of depression. Positive correlations of the commitment and control dimensions with measures of self-esteem (Hull et al., 1987) and optimism (Scheier & Carver, 1985) also support the convergent validity of the short form. Sense of humor and SAT scores have been found to be unrelated to the commitment and control subscales; these findings demonstrate support for the discriminant validity of the Short Form of the Hardiness Scale (Hull et al., 1987).

Life Experiences Survey

The Life Experiences Survey (LES; Sarason et al., 1978) is a self-report checklist that consists of 60 items. The LES is a widely used measure of recent stressful life events (Wagner, 1990). Each item on the LES is a life change event, and respondents indicate whether they have experienced the

event during the past six months or one year. In addition, respondents indicate their perceptions of the impact the event had on their lives by choosing from a seven point Likert scale, ranging from "extremely negative" to "extremely positive".

By using the Likert scale responses, LES scores are calculated for the appraised severity of negative, positive, or total change events. Although it is not the common method of scoring the LES, scores can also be calculated for the frequency of negative, positive, or total change events. The range of potential scores is 0-60 for the frequency of negative events, and 0-240 for the perceived impact of negative events. Because the two methods of scoring were being compared, both were used in the present study. Higher scores reflect greater impact or frequency of negative events.

There has been support for the reliability of the LES from studies of college students. For a sample of 58 undergraduates, Sarason et al. (1978) report test re-test reliabilities of .88 for the negative change score, and .64 for the total change events score, over a five week time interval. For 34 undergraduates over a five week interval, the same authors report test re-test reliabilities of .56 for negative events and .63 for total events. Sarason et al. (1978) state that some variability in LES scores over a five week period would be due to the experience of new life events during the five weeks, not due to response inconsistency, and

the authors suggest that the LES is moderately reliable.

Validity of the LES is supported by correlations of negative life events scores with anxiety, depression, an locus of control in college students (Sarason et al., 1978). Lakey and Heller (1985) compared LES self-report scores with reports by friends of the participants. The authors conclude that social desirability response bias does not seem to account for the relationship between psychological distress and negative life events. These findings by Lakey and Heller (1985) provide additional support for the validity of the LES with college students.

Dependent measure

Attributional Style Questionnaire

The Attributional Style Questionnaire (ASQ; Peterson et al., 1982) will be used to measure optimistic/pessimistic explanatory style. The ASQ is a self-report instrument which consists of 12 hypothetical events, 6 good events and 6 bad events. The ASQ measures causal explanations, or attributions, for the hypothetical events. There are three subscales of the ASQ: (a) internal/external, (b) stable/unstable, and (c) global/specific. However, the composite optimism/pessimism scores, which are derived from summing the three ASQ subscale scores, have proven to be more

reliable and valid than the subscales (Tennen & Herzberger, 1985). The range of potential composite scores is -18 to +18. Higher composite scores reflect more optimistic explanatory style.

Peterson et al. (1982) report internal consistency coefficients for composite scores to be .75 for good events and .72 for bad events, using Cronbach's coefficient alpha with a sample of 130 college students. In a sample of 100 college students, Peterson et al. (1982) report test re-test reliabilities for ASQ composite scores to be .70 for positive events and .64 for negative events at a five week interval. Peterson et al. (1982, p. 296) state that "these are respectively high" compared with test re-test reliabilities of other measures of cognitive style. Golin, Sweeney, and Schaeffer (1981) used autocorrelations in reporting that the ASQ is a stable measure with college students over a one month period.

In a review of research studies using the ASQ, Tennen and Herzberger (1985) state, "there is now a large literature supporting the criterion and construct validity of the ASQ" (p. 23). Although the majority of studies using the ASQ have used depressive symptoms as a variable, Tennen and Herzberger (1985) also support use of the ASQ with other measures of psychological distress. In addition, Tennen and Herzberger (1985) state that there has been more extensive validation of the ASQ with different populations than there has been with

alternative measures of attributional style. Schulman, Seligman, and Amsterdam (1987) assessed the transparency of the ASQ, and the authors report that responses do not seem to be influenced by social desirability.

Data Analysis

Multiple regression and Pearson correlation analysis were used in the present study to analyze the data. Reviewers of hardiness research recommend the use of multiple regression (Hull et al., 1987). For the multiple regression the criterion, or dependent, variable was optimistic/pessimistic explanatory style. The four predictor, or independent, variables were the commitment and control dimensions of hardiness, perceived impact of negative life events, and frequency of negative life events.

A hierarchical multiple regression analysis was used to test the hypotheses. Tabachnick and Fidell (1989) state that hierarchical regression is used when the goal of the research is model testing and explanation rather than model building. In hierarchical regression, the researcher chooses, based on theory and the hypothesized relationships among the variables, the order in which the independent variables are entered into the regression equation (Wampold & Freund, 1987). The purpose of using hierarchical regression was to examine the increase in variance in the dependent variable accounted for by each

independent variable over that accounted for by the independent variables that were previously entered into the regression equation (Wampold & Freund, 1987).

In the present study, the order in which variables were entered into the regression equation was: (1) commitment, (2) control, (3) perceived impact of negative events, (4) frequency of negative events. Wampold and Freund (1987) recommend first entering those variables that are most important to the purpose of the research. In order to examine the relationship between hardiness and explanatory style before exploring the impact of negative life events on that relationship, the two variables which reflect dimensions of hardiness were entered before the two life events variables. The commitment variable was entered before the control variable because, in the study that found differences in explanatory style between people high in hardiness and people low in hardiness (Hull et al., 1988), the differences in explanatory style were larger for the commitment dimension of hardiness than for the control dimension. Because the perceived impact of negative events variable was not expected to significantly increase the variance accounted for by the prediction equation, that variable was entered before the frequency of negative life events variable, which was expected to contribute to the prediction of explanatory style.

Simultaneous multiple regression analysis was also conducted. The purpose of simultaneous regression analysis is

to determine the amount of additional variance in the dependent variable explained by each independent variable when entered last into the regression equation--after the effects of all of the other independent variables have been accounted for (Keppel & Zedeck, 1989). T-tests and correlation analysis were conducted to examine the relationships of each of the four demographic variables to the independent variables and dependent variable.

Alpha of .05, power of .80, and medium effect size were used for the data analysis. Alpha of .05 "has come to serve as a convention for a (minimum) basis for rejecting the null hypothesis in most areas of behavioral and biological science" (Cohen, 1988, p. 12). Cohen (1988) states "It is proposed here as a convention that, when the investigator has no other basis for setting the desired power value, the value .80 will be used" (p. 56). Cohen (1988) defines effect size as "the degree to which the phenomenon is present in the population" or "the degree to which the null hypothesis is false" (p. 9), and states that a large effect size is often too big for psychology research. A sample size of 85 students is required for a multiple regression analysis involving four independent variables, based on Cohen's (1988, pp. 452-453) research table entitled " λ Values of the F Test as a Function of Power, u , and v ".

Chapter 4

Results

Scoring the Questionnaires

Scores were calculated for all of the questionnaires from the 99 participants, including the rare instruments where the participant left an item unanswered. Five participants omitted an item and one participant double answered an item on the forced choice part of the control subscale of The Short Form of the Hardiness Scale. The six items were each scored as 2.5, which is the average of the scoring options of 1 and 4. Four participants omitted a question and one participant double answered a question on the Attributional Style Questionnaire. ASQ scores were calculated based on the completed questions on those questionnaires where an item was left blank. On the double answered ASQ question, the average was used as the score for that person's answer.

After an outlier was identified, the results of one participant, the outlier, were excluded from the analyses. One participant's explanatory style results were not used in the analyses due to the person responding based on the expected effects of the events, rather than the expected causes as was specified in the Attributional Style Questionnaire's instructions.

Means and standard deviations (see Table 1) were calculated for each of the variables: explanatory style ($m=2.9390$, $sd=2.3345$, $n=97$), the commitment dimension of hardiness ($m=16.7449$, $sd=3.5123$, $n=98$), the control dimension of hardiness ($m=37.1122$, $sd=8.3588$, $n=98$), perceived impact of negative life events ($m=11.8061$, $sd=8.8407$, $n=98$), and frequency of negative life events ($m=6.4184$, $sd=4.3929$, $n=98$). Lower scores on the commitment and control scales reflect higher levels of commitment or control. For the other variables, higher scores reflect more optimistic explanatory style, and greater perceived impact or frequency of negative life events. The range of scores for each of the variables (see Table 1) was -2.83 to 8.840 for explanatory style, 12 to 28 for commitment, 16 to 55 for control, 0 to 45 for perceived impact of negative events, and 0 to 24 for frequency of negative events.

Pearson Correlations

Pearson correlation analyses were conducted (see Table 2). Commitment was significantly correlated with explanatory style ($r=-0.35560$, $p=0.0004$). The negative direction of the correlation indicates that people who have a higher level of commitment tend to have a more optimistic explanatory style. Neither control ($r=-0.07922$, $p=0.4405$), perceived impact of negative life events ($r=-0.03653$, $p=0.7224$), nor frequency of

Table 1

Means, Ranges, and Standard Deviations of Explanatory Style,
Hardiness, and Life Events

	N	R	Mean	SD
Explanatory Style	97	-2.8/ 8.8	2.9390	2.3345
Hardiness				
Commitment	98	12-28	16.7449	3.5123
Control	98	16-55	37.1122	8.3588
Life Events				
Perceived Impact of Negative Events	98	0-45	11.8061	8.8407
Frequency of Negative Events	98	0-24	6.4184	4.3929

Table 2

Pearson Correlation Coefficients

	COMMT	CONTL	LEPI	LEFR
EXST	-0.35560**	-0.07922	-0.03653	-0.06186
COMMT		0.42957**	0.22050*	0.20744*
CONTL			0.06963	0.07086
LEPI				0.91634**

* $p < .05$. ** $p < .01$.

Abbreviations: EXST= Explanatory Style

COMMT= Commitment

CONTL= Control

LEPI= Perceived Impact of Negative Events

LEFR= Frequency of Negative Events

negative life events ($r=-0.06186$, $p=0.5472$) was significantly correlated with explanatory style. Some of the independent variables were significantly correlated with each other. Perceived impact of negative events and frequency of negative events were highly correlated ($r=0.91634$, $p=0.0001$). Perceived impact of negative events was correlated with commitment ($r=0.22050$, $p=0.0291$), and frequency of negative events was also correlated with commitment ($r=0.20744$, $p=0.0404$). Students who reported greater impact or frequency of negative life events tended to have a lower level of commitment. Neither perceived impact of negative events ($r=0.06963$, $p=0.4957$) nor frequency of negative events ($r=0.07086$, $p=0.4881$) was correlated with the control dimension of hardiness. The commitment and control dimensions of hardiness were correlated ($r=0.42957$, $p=0.0001$). The positive direction of the correlation gives support for the idea that students with higher levels of commitment also tend to have higher levels of control.

Hierarchical Multiple Regression

Hierarchical multiple regression analysis (see Table 3) showed that the commitment dimension of hardiness contributed significantly to the prediction of explanatory style ($F=13.52$, $p=0.0004$). The significant finding provided support for the first hypothesis of the study. The control dimension of

Table 3

Summary of Hierarchical Regression Analysis for Variables
Predicting Explanatory Style

	DF	Sum of Squares	F-value	p-value
Model	4	73.0480	3.73	0.0073
Error	92	450.1313		
Corrected	96	523.1793		
Total				
COMMT	1	66.1576	13.52	0.0004
CONTL	1	3.6987	0.76	0.3869
LEPI	1	0.9167	0.19	0.6661
LEFR	1	2.2750	0.46	0.4970

Abbreviations: COMMT= Commitment

CONTL= Control

LEPI= Perceived Impact of Negative Events

LEFR= Frequency of Negative Events

hardiness, when entered into the regression equation after commitment, did not contribute significantly to the prediction of explanatory style ($F=0.76$, $p=0.3869$). The latter result did not support the first hypothesis. As predicted by the second hypothesis, perceived impact of negative life events did not account significantly for additional variance in explanatory style when entered after commitment and control in the regression equation ($F=0.19$, $p=0.6661$). Frequency of negative life events did not add to the prediction of the dependent variable when entered into the regression equation after the other three independent variables ($F=0.46$, $p=0.4970$). That finding did not support the third hypothesis of the study. The overall multiple regression model significantly predicted explanatory style ($F=3.73$, $p=0.0073$). The R-Square value was 0.139623, suggesting that variables that were not included in the regression equation account for much of the variance in explanatory style.

Effects of Demographic Variables

The relationships of each of the demographic variables to the dependent variable and to the other independent variables were explored. T-tests showed significant differences between the mean scores of women and men on the commitment dimension of hardiness (mean for women=16.018, mean for men=17.756, $p=0.0224$). The differences provide support for the notion that

college women have higher levels of commitment than do college men. Significant differences between men and women were not found for the variables of explanatory style (mean for women=3.105, mean for men=2.661, $p=0.3598$), control (mean for women=37.304, mean for men=36.805, $p=0.7744$), perceived impact of negative events (mean for women=12.054, mean for men=11.659, $p=0.8294$), or frequency of negative events (mean for women=6.696, mean for men=6.146, $p=0.5451$). Age was significantly correlated with the commitment dimension of hardiness ($r=-0.24785$, $p=0.0144$). The negative direction of the correlation gives support for the idea that older students tend to have higher levels of commitment. Age was not correlated with explanatory style ($r=0.07226$, $p=.4841$), control ($r=-0.08739$, $p=0.3947$), perceived impact of negative events ($r=-0.15900$, $p=0.1198$), or frequency of negative events ($r=-0.17226$, $p=0.0916$). Analysis of variance showed that there were not significant differences across ethnic group or school year on the dependent variable or on any of the four independent variables for the sample in the present study.

Adding gender as a fifth independent variable in the multiple regression equation did not contribute significantly to the prediction of explanatory style ($F=0.00$, $p=0.9797$). The multiple regression model that included gender yielded an R-Square of 0.139211 ($F=2.91$, $p=0.0175$). Adding age to the multiple regression equation as a fifth independent variable also did not significantly add to the variance accounted for

in explanatory style ($F=0.03$, $p=0.8689$). Including age in the multiple regression model resulted in an R-Square of 0.139466 ($F=2.92$, $p=0.0174$). For both the model containing gender and the model containing age, the commitment dimension of hardiness continued to be the only independent variable that significantly predicted explanatory style.

Simultaneous multiple regression analysis using the four original independent variables showed that commitment also adds significantly to the prediction of explanatory style when entered after the other three independent variables ($F=13.66$, $p=0.0004$). Consistent with results of the hierarchical multiple regression analysis, neither control ($F=0.75$, $p=0.39$), perceived impact of negative life events ($F=0.64$, $p=0.4254$), nor frequency of negative life events ($F=0.46$, $p=0.4970$) added significantly to the prediction of explanatory style during a simultaneous multiple regression analysis.

Examination of Statistical Assumptions

Analyses were conducted on the original four independent variable multiple regression model to explore whether any assumptions were violated. After reviewing the plots of the variables, it was determined that two observations could possibly be described as outliers. The scoring of the questionnaires was re-checked for the two observations. Studentized residuals and influence statistics were computed

in order to further check for outliers and for observations that could be influencing the regression line (Freund & Littell, 1991). It was decided to discard one observation, because doing so resulted in the dependent variable being normally distributed.

The statistics included in the results section are those calculated with the observation removed from the data set. The analyses yielded results similar to those found with the observation included, with the same significant and non-significant correlations being obtained.

Shapiro Wilks tests for normality yielded results supporting the notion that three of the four independent variables did not have statistically normal distributions. Skewness values of 1.00 for commitment, 1.39 for perceived impact of negative life events, and 1.43 for frequency of negative events were obtained. The skewness values, and reviews of the distribution plots, led to the conclusion that the three independent variables had moderately skewed distributions. One possible explanation for the skewness is that the structure of each test limits how low one can score. Because the distributions were not severely skewed, and the residuals and dependent variable each had a normal distribution, it was decided that transforming the variables was not necessary. Tabachnick and Fidell (1983) state that, "Probably, however, the researcher need only be concerned with

flagrant violations of assumptions" (p. 77). The authors recommend the use of data transformation when appropriate, but also state, "So, although there are a number of good theoretical reasons for transformation, in practice the advantages may be slight" (Tabachnick & Fidell, 1983, p. 84).

Plotting each independent variable separately with the dependent variable yielded results supporting the assumption that the model is linear rather than curvilinear. Review of the plots also resulted in support for the assumption that each independent variable shares common variance with the dependent variable.

The Shapiro Wilks test for normality yielded a value of 0.6439. Because the value is greater than .1, the assumption that the residuals are normally distributed is supported. A review of the plot of residual versus predicted values suggested that the variance is constant across all observations--ruling out the potential problem of heteroscedasticity. None of the assumptions appear to be clearly violated.

Because some of the independent variables were correlated with each other, tests were conducted to detect the potential effects of multicollinearity. Variance inflation factors were calculated. Only the variation inflation values for perceived impact of negative events (5.97) and frequency of negative events (5.93) were greater than the value of $1/1-R^2$ (1.16), which is suggested as a measure of the existence of

multicollinearity (Freund & Littell, 1991). However, neither the perceived impact nor frequency variables contributed to the prediction of the dependent variable. Variation inflation values for commitment (1.28) and control (1.23) were comparable to 1.16. Collinearity diagnostics involving adjustment of the intercept were also conducted. All condition index values were less than thirty, confirming the notion that multicollinearity is not a problem in the multiple regression equation (Freund & Littell, 1991). In addition, none of the interaction terms, consisting of independent variables that were correlated with each other, contributed significantly to the prediction of explanatory style when added as a fifth independent variable.

Chapter 4

Discussion

Commitment and Explanatory Style

The results support a new explanation regarding the relationship between the commitment dimension of hardiness and explanatory style in college students. There is partial support for the hypothesis that there would be a significant multiple correlation between the predictor variables of the commitment and control dimensions of hardiness and the criterion variable of optimistic explanatory style. The finding that students with higher levels of commitment tend to have a more optimistic explanatory style provides support for the idea that hardiness theory and the reformulated theory of learned helplessness describe overlapping constructs.

The results build on the previous research of Hull et al. (1988), who found that college students high in commitment had a more optimistic explanatory style than students who were low in commitment. The present study may be providing stronger evidence of commitment and optimistic explanatory being similar coping styles, because the use of multiple regression rather than analysis of variance has been recommended in hardiness research (Hull et al., 1987).

The results of the current study differ somewhat from the findings of Sweetman et al. (1993), who found that composite explanatory style was not correlated with composite hardiness. A possible explanation for the inconsistent findings is that college students were included as participants in the present study, while Sweetman et al. (1993) studied lawyers. Another explanation is that Sweetman et al. (1993) used composite hardiness, which includes the dimensions of challenge and control as well as commitment. Hull et al. (1988) also did not find composite hardiness related to explanatory style. An argument can be made that the results of the present study may be more valid, because researchers (Hull et al., 1987) have recommended examining the dimensions of the Short Form of the Hardiness Scale separately rather than combining them into a composite score.

Control and Explanatory Style

While commitment was related to optimistic explanatory style in the present study, the control dimension of hardiness did not contribute significantly to the prediction of explanatory style. The latter finding does not provide support for part of the first hypothesis. It is also somewhat inconsistent with results from Hull et al.'s (1988) study, where differences in explanatory style across levels of control were present--although not as strong as the

differences for commitment. In previous hardiness research, commitment has been related to health outcomes more often than has control (Hull et al., 1987).

The findings that control and explanatory style are not related in either the multiple regression or Pearson correlation provide support for the notion that explanatory style and control are not similar coping styles. That result strengthens an argument for assertions by Seligman (1992) and Peterson et al. (1993) that locus of control and explanatory style are measuring constructs that are somewhat distinct. Optimistic explanatory style reflects expectations regarding future events that take into account characteristics of the event as well as the individual (Seligman, 1990). Locus of control describes the individual's general belief regarding whether control over her/his environment is internal or external, without considering the characteristics of a given event.

One dimension of hardiness being correlated with explanatory style while another is not is supportive of the proposition that hardiness may not be a unitary construct. The correlation between commitment and control in the present study is similar to that commonly found in hardiness research (Funk, 1992). The .43 correlation coefficient provides support for the notion that commitment and control are related constructs. However, the finding that commitment is correlated with explanatory style while control is not

supports the idea that there are also differences between the two hardiness dimensions. Because explanatory style is correlated with one of the two hardiness dimensions, it appears that hardiness and explanatory style may be explaining overlapping, but also distinct, constructs.

The Role of Negative Life Events

One way that the present study differed from previous research comparing reformulated learned helplessness theory and hardiness theory was by including a separate assessment of negative life events. In addition to being correlated with optimistic explanatory style when entered first in a hierarchical multiple regression equation, commitment also contributed to the prediction of explanatory style when entered last in a simultaneous multiple regression. The latter finding gives support to the conclusion that commitment accounts for variance in explanatory style even after the effects of negative life events have been taken into account.

As hypothesized, the addition of perceived impact of negative life events into a hierarchical regression equation with commitment and control did not contribute significantly to the prediction of explanatory style. But there was not support for the hypothesis that the addition of frequency of negative life events into a multiple regression equation with commitment, control, and perceived impact of negative events

would contribute significantly to the prediction of explanatory style. The two methods used in the present study to assess negative life events did not produce results which could be used to clarify the relationship between hardiness and explanatory style. Because hardy people appraise situations less negatively than do non-hardy people (Rhodewalt & Zone, 1989), the perceived impact method was not expected to add to the prediction of explanatory style when entered after commitment in a regression equation. One interpretation of the fact that frequency of negative events also did not contribute to the prediction of explanatory style is that the frequency method may also be influenced by appraisals.

Hardiness and Negative Life Events

Implications for hardiness theory can be drawn from the high correlation between the two methods of assessing negative life events. The commitment dimension of hardiness is correlated with each of the life events measures. It was expected that hardiness would be correlated with the appraisal based life events measure, but not with the frequency method. Results from the current study support the conclusion that students who report greater frequency and impact of negative life events tend to have lower levels of commitment. In the present study, commitment is not a coping style that is present independently of the extent of negative life events.

One interpretation of the finding is that the theorized buffering effect of hardiness is not supported. That conclusion would fit with accumulating evidence across other hardiness studies (Funk, 1992). It is possible that experiencing greater numbers and/or greater intensity of negative life events lowers a college student's level of commitment.

However, the fact that the findings are correlational precludes the assumption of causality. It is also possible that students with lower levels of commitment appraise life events more negatively than do students with higher commitment. There has been consistent support for the idea that hardiness influences appraisals (Rhodewalt & Agustsdottir, 1984; Wiebe, 1991). Given the fact that the two life events measures are highly correlated with each other, perhaps the frequency method is also influenced by individual appraisals. If so, it would be important in hardiness research to instead use negative life events assessment methods that may not produce confounding and obscure a potential buffering effect.

The other dimension of hardiness, control, is not correlated with either life events measure in the present study. That aspect of hardiness appears to be a stable coping style, which is present across differing extents of negative life events. In previous studies, some scientists have reported that locus of control is related to life events

(Sarason et al., 1978), and other researchers have suggested that internal locus of control may contribute to stress resistance (Dohrenwend & Dohrenwend, 1981). However, without having included a measure of psychological distress in the present study, it is difficult to interpret whether or not control functions as a protective mechanism against the potential effects of negative events. Students with high levels of control may feel overly responsible when negative events occur, which could contribute to psychological distress. Being able to consider situationally specific demands has been identified as an important part of effective coping (Antonovsky, 1990).

Explanatory Style and Negative Life Events

The findings that neither life events measure helps predict explanatory style, and that neither life events measure is related to explanatory style in Pearson correlations, have implications regarding reformulated learned helplessness theory and research. The results provide support for the buffering effect of optimistic explanatory style--that it is a coping style that protects people from the potentially negative effects of stressful life events. In the college student participants tested, explanatory style is present independently of the frequency or perceived severity of negative life events experienced. Although one limitation of

the present study is that a measure of psychological distress was not included, previous research has consistently supported the relationship between optimistic explanatory style and psychological health (Sweeney et al., 1986).

It appears that life events checklists, which have been used more rarely in reformulated learned helplessness research than other ways of assessing adversity, may be a method that warrants increased use in the field. Their use may provide explanatory style researchers with more ways to identify people who have experienced types of adversity.

Frequency and Perceived Impact of Negative Events

The high correlation between the two life events measures may contribute to the debate about the relative merits of different types of life events questionnaires. The means of the two methods were different, providing support for the notion that the correlation was not due to a lack of severe impact events. In addition, perceived impact and frequency of negative life events were similar in their correlations with the other variables. The finding confirms the results of researchers (Cohen, 1988; Mullis et al., 1993) who reported that the two life events measures are similar. One difference in the current study is that the measures were not compared on their relative correlations with a measure of psychological distress.

Results from the present study do not support the validity of considering the frequency method to be more objective than the perceived impact method. Both are self-report questionnaires and involve an evaluation by the individual of whether a given event had a positive or negative impact on her/him. Researchers in search of more objective life events assessment may benefit from using interview methods such as those employed by Hammen et al. (1987), although there is a trade-off in that extra knowledge and evaluation is required of the researcher. In addition, Tausig (1982) has proposed eliminating items on life events questionnaires that reflect personal characteristics rather than aspects of the event in order to reduce confounding with psychological health outcome measures.

Demographic Variables

The finding that college women have significantly higher levels of commitment than do college men contributes to the existing information about hardiness and gender. Some researchers have found gender differences in hardiness research (Funk, 1992; Schmied & Lawler, 1986; Sheppard & Kashani, 1991), but there has not been consistency regarding the nature of the differences. Some other hardiness researchers have not found gender differences (Parkes & Rendall, 1988; Rhodewalt & Zone, 1989).

Within the limit of 92% of the participants being in the age range of 18-21, the finding that older students tend to have higher levels of commitment may have implications regarding hardiness and developmental theory. Erikson (1963) states that people in late adolescence face the developmental task of identity versus role diffusion. Perhaps as students' identities develop, they feel a greater sense of commitment in areas of their lives such as choice of majors, career identity, and relationships. Results from the present study are consistent with those from a study by Schmied and Lawler (1986) with an older population. A study of composite hardiness using the Personal Views Survey, and with a mean age of 23.7 for the participants, found the opposite age effects--younger students had higher levels of commitment (Parkes & Rendall, 1988).

Analysis of other demographic results suggests that among college students there are not differences between ethnic groups on commitment, control, explanatory style, or either life events measure. Another possible explanation is that the number of non-white students, 12%, was too low for differences to be noticed. The findings also provide support for the idea that there are not gender differences or age effects on explanatory style, control, or either life events measure.

Limitations of the Study

The use of undergraduate college students as participants limits the generalizability of the results to other populations. The present study is correlational, and the direction of causality can not be assumed.

The relatively low standard deviation for explanatory style scores is a possible reason that there were not more significant results in the multiple regression and Pearson correlations. However, the standard deviation of 2.33 is comparable to those found in previous research with the Attributional Style Questionnaire (Peterson & Seligman, 1984). Also, the explanatory style mean of 2.94 in the present study is near the average range of 3-5 for the ASQ (Seligman, 1990).

Because three of the independent variables did not have statistically normal distributions, it is possible that some of the correlations were artificially deflated or inflated. However, the distributions were only moderately skewed, and the residuals and dependent variable were each normally distributed. Transforming the variables in efforts to eliminate the skewness would have been an option, but there are tradeoffs involving potential difficulty interpreting the meaning of the new scores (Tabachnick & Fidell, 1983).

The relatively low R-squared value gives support to the notion that much of the variance in explanatory style is accounted for by factors other than the four independent

variables or demographic variables. Defining the best regression model to explain explanatory style was not a purpose of the current study. The goals of the present study involved clarifying relationships among the variables.

Recommendations

A newer hardiness instrument may be able to provide valid comparison of composite hardiness and optimistic explanatory style. Although there is still concern about the challenge dimension, initial reliability and validity studies give support for the notion that the Personal Views Survey (PVS; Hardiness Institute, 1985) may be able to provide a better measure of composite hardiness than the Short Form of the Hardiness Scale used in the present study (Oullette, 1993). If the challenge dimension is improved, and studies continue to support the psychometric properties of the newer instrument, using the PVS in a future study to compare composite hardiness and explanatory style may be beneficial.

Hardiness (Hull et al, 1987) and optimistic explanatory style (Sweeney et al., 1986) have each been found to be related to psychological health. Therefore, comparison in a future study of how each is related to a measure of psychological distress, such as depression or anxiety, after experiencing adversity may further clarify the relationship between the two constructs.

Future researchers who compare hardiness and explanatory style may benefit from including additional variables. Including a measure of positive life events, or measures of coping styles such as sense of coherence (Antonovsky, 1979) or hope (Snyder, 1995; Snyder et al., 1991), could be beneficial in explaining the relationship between hardiness and explanatory style.

In addition, future researchers may want to include life events measures that are not as influenced by personal appraisals as those used in the present study. Using interviews, or revised self-report measures that have less confounding with personal characteristics, may result in more objective measurement of events.

Conclusions

It appears that hardiness theory and the reformulated theory of learned helplessness describe overlapping, but distinct, constructs. The commitment dimension of hardiness examines the extent of investment one has toward chosen activities in one's life. Finding a sense of meaning in life can reflect investment in areas such as one's family, community, career, volunteer/recreational activities, friends or other relationships, or philosophical/spiritual beliefs. The sense that life has meaning seems to be the aspect of hardiness that is related to optimistic explanatory style.

The belief that negative events are temporary, situation specific, and not caused by oneself may help people maintain a view of their world as having sustainable meaning--which may help people maintain their sense of commitment. Or the relationship may occur in the other direction--a sense of commitment may help people maintain an optimistic explanatory style when negative events occur. Questions remain about the role of negative and/or positive life events.

A sense of commitment may be more important than how much personal control one feels over their environment, based on the lack of relationship between control and explanatory style. An important aspect of optimistic explanatory style seems to involve knowing when it is unrealistic to expect to have control over a situation. People with optimistic explanatory styles may be able to maintain hope even when they do not feel personal control in a particular situation (Seligman, 1990).

The question of what enables certain people to maintain psychological and physical health under adverse life conditions continues to hold much interest and relevance in our world today. Continued development of valid and reliable assessment tools, and continued exploration of the reciprocal interaction between personal characteristics and environmental factors, are important tasks for researchers. Information derived from such tasks can be used to help children and adults develop effective stress resistance resources.

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Appendices

RESEARCH PARTICIPANTS REQUESTED

Students from Psychology 110 classes will receive course extra credit for participation in a dissertation study titled: "An Examination of the Relationship Among the Commitment and Control Dimensions of Hardiness, the Appraised Impact and Frequency of Negative Life Events, and Optimistic Explanatory Style".

Participation in this study will take a total of about one hour of your time. You will be asked to complete three self-report questionnaires. The questionnaires consist of questions regarding certain events that may have occurred in your life recently, whether or not you agree with certain attitudes, and what you think would cause certain hypothetical events to occur. Results of the testing will be anonymous.

If you are interested in participating, please sign up and plan to attend one of the testing dates and times on the attached sheets. If you participated previously in this study, you cannot participate again.

If you have questions or would like additional information, please call Bruce Lynch, a doctoral student in the Counselor Education and Counseling Psychology Unit, or Dr. William Poppen, at 974-5131.

INFORMED CONSENT

This form is a means of requesting your participation in a research study conducted by Bruce G. Lynch, a doctoral student in the Counselor Education and Counseling Psychology Unit at the University of Tennessee, Knoxville. The purpose of this research is to explore the relationship between two ways of assessing how college students view their world, and how the relationship may be influenced by life events they have recently experienced. If you participate in this study and complete the questionnaires, you will benefit by receiving course extra credit. You will be asked to complete a background information form and then three questionnaires, which will take a total of about one hour of your time. The questionnaires consist of questions regarding certain events that may have occurred in your life recently, whether or not you agree with certain attitudes, and what you think would cause certain hypothetical events to occur.

Since your name will not be included on the background information form or on any of the questionnaires, the results of this participation will be anonymous. There will be no way to connect the name on a course extra credit voucher with the questionnaires completed by that participant. The completed questionnaires will be stored in a locked file in room 108 Claxton, and then destroyed after the data is analyzed. Your participation in this study should not put you at any greater discomfort than is usually associated with filling out psychological questionnaires. No risks are foreseen. If you have questions about the questionnaires or the research, you are encouraged to contact the investigators. Your consent to participate will be given by returning the envelope containing the completed questionnaires. There is no penalty for not participating.

Statement of Permission

I understand that this research is being conducted by Bruce G. Lynch, a doctoral student in the Counselor Education and Counseling Psychology Unit at the University of Tennessee, Knoxville, under the supervision of Dr. William A. Poppen. I have read the above description. I agree to participate in the research titled "An Examination of the Relationship Among the Commitment and Control Dimensions of Hardiness, The Appraised Impact and Frequency of Negative Life Events, and Optimistic Explanatory Style", with the understanding that my consent to participate will be given by deciding to return the completed questionnaires to Bruce G. Lynch. I further understand that my participation in this research is on a voluntary basis. If I have any questions regarding my participation, either now or later, I can contact the persons listed below.

Bruce G. Lynch
Counselor Education and
Counseling Psychology Unit
108 Claxton Education Building
University of Tennessee
Knoxville, TN 37996-3400
Phone: (615) 974-5131

Dr. William A. Poppen
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Knoxville, TN 37996-3400
Phone: (615) 974-5131

Demographic Questionnaire

1) Age: _____

2) Gender: Female _____ Male _____

3) Race/Ethnic Group:

African-American/Black _____

Asian-American _____

White _____

Hispanic _____

American Indian _____

Other _____

4) What year are you in school?

Freshman _____

Sophomore _____

Junior _____

Senior _____

Graduate student _____

Debriefing Form

Hardiness theory, and the reformulated theory of learned helplessness, have each been widely studied in efforts to describe how people explain and cope with the occurrence of negative life events. But there have been inconsistent findings across the rare studies that have examined whether hardiness and reformulated learned helplessness measure overlapping constructs. The purpose of the present study is to examine whether the self-reported frequency and/or perceived impact of negative life events influences the relationship between hardiness and optimistic explanatory style.

Sometimes people experience uncomfortable feelings and memories after completing psychological questionnaires. If you begin to feel distressed, we encourage you to contact a mental health professional. If you are experiencing any distress or anxiety and wish to consult a counselor, here is a list of mental health agencies which are available to students at the University of Tennessee, Knoxville.

Student Counseling Services Center 974-2196

Psychological Clinic 974-2161

Student Health Service (offers general health services as well as
mental health consultation) 974-3135

Contact of Knoxville, Inc. (24 hour crisis hot line) 523-9124

Short Form of the Hardiness Scale

The items below consist of attitudes with which you may or may not agree. As you will see, many of the items are worded very strongly. This is so you can decide the DEGREE to which you agree or disagree. Please indicate your reaction to each item.

Please read the items carefully. Be sure to answer all on the basis of the way you feel now. Don't spend too much time on any one item.

1. I wonder why I work at all.

Not at all true A little true Quite true Completely true

2. Most of my life is wasted in meaningless activity.

Not at all true A little true Quite true Completely true

3. If you have to work, you might as well choose a career where you deal with matters of life and death.

Not at all true A little true Quite true Completely true

4. I find it difficult to imagine enthusiasm concerning work.

Not at all true A little true Quite true Completely true

5. I find it hard to believe people who actually feel that the work they perform is of value to society.

Not at all true A little true Quite true Completely true

6. The human's fabled ability to think is not really such an advantage.

Not at all true A little true Quite true Completely true

7. The attempt to know yourself is a waste of effort.

Not at all true A little true Quite true Completely true

8. I am really interested in the possibility of expanding my consciousness through drugs.

Not at all true A little true Quite true Completely true

9. Life is empty and has no meaning in it for me.

Not at all true A little true Quite true Completely true

10. I long for a simple life in which body needs are the most important things and decisions don't have to be made.
- Not at all true A little true Quite true Completely true
11. The most exciting thing for me is my own fantasies.
- Not at all true A little true Quite true Completely true
12. One who does one's best should expect to receive complete economic support from one's society.
- Not at all true A little true Quite true Completely true
13. There are no conditions which justify endangering the health, food, and shelter of one's family or of one's self.
- Not at all true A little true Quite true Completely true
14. Pensions large enough to provide for dignified living are the right of all when age or illness prevents one from working.
- Not at all true A little true Quite true Completely true
15. Politicians control our lives.
- Not at all true A little true Quite true Completely true
16. Most of my activities are determined by what society demands.
- Not at all true A little true Quite true Completely true
17. Those who work for a living are manipulated by the bosses.
- Not at all true A little true Quite true Completely true
18. No matter how hard you work, you never really seem to reach your goals.
- Not at all true A little true Quite true Completely true
19. No matter how hard I try, my efforts will accomplish nothing.
- Not at all true A little true Quite true Completely true
20. I tend to start right in on a new task without spending much time thinking about the best way to proceed.
- Not at all true A little true Quite true Completely true

21. My work is carefully planned and organized before it is begun.

Not at all true A little true Quite true Completely true

22. I like to be with people who are unpredictable.

Not at all true A little true Quite true Completely true

23. It upsets me to go into a situation without knowing what I can expect from it.

Not at all true A little true Quite true Completely true

24. Before I ask a question, I figure out exactly what I know already and what it is I need to find out.

Not at all true A little true Quite true Completely true

25. I very seldom make detailed plans.

Not at all true A little true Quite true Completely true

INSTRUCTIONS: Please indicate which of the two statements provided in each item listed below BETTER represents your attitude.

1. a. In the long run, people get the respect they deserve in this world.
 b. Unfortunately, an individual's work often passes unrecognized no matter how hard he tries.
2. a. The idea that most teachers are unfair to students is nonsense.
 b. Most student's don't realize the extent to which their grades are influenced by accidental happenings.
3. a. Without the right breaks one cannot be an effective leader.
 b. Capable people who fail to become leaders have not taken advantage of their opportunities.
4. a. Becoming a success is a matter of hard work; luck has little or nothing to do with it.
 b. Getting a good job depends mainly on being in the right place at the right time.

5.
 - a. In my case getting what I want has little or nothing to do with luck.
 - b. Many times we might just as well decide what to do by flipping a coin.
6.
 - a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
 - b. Getting people to do the right thing depends upon ability; luck has little to do with it.
7.
 - a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
 - b. There is really no such thing as "luck".
8.
 - a. With enough effort we can wipe out political corruption.
 - b. It is difficult for people to have control over things politicians do in office.
9.
 - a. Many times I feel that I have little influence over the things that happen to me.
 - b. It is impossible for me to believe that chance or luck plays an important role in my life.
10.
 - a. What happens to me is my own doing.
 - b. Sometimes I feel that I don't have enough control over the direction my life is taking.
11.
 - a. Most of the time I can't understand why politicians behave the way they do.
 - b. In the long run the people are responsible for bad government on a national as well as on a local basis.

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
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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 something about other people or circumstances?

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

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

Will never again 1 2 3 4 5 6 7 Will always be present
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 1 2 3 4 5 6 7 Influences all
particular situation 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 something about other people or circumstances?

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

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

Will never again 1 2 3 4 5 6 7 Will always be present
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 1 2 3 4 5 6 7 Influences all
particular situation 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 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 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 TOWARDS 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?

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

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

Will never again 1 2 3 4 5 6 7 Will always be present
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 1 2 3 4 5 6 7 Influences all
particular situation 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 something about other people or circumstances?

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

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

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

40) Is the cause something that just influences applying for a position, or does it also influence other areas of your life?

Influences just this 1 2 3 4 5 6 7 Influences all
particular situation 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?

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 this 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

The Life Experiences Survey

Listed below are a number of events which sometimes bring about change in the lives of those who experience them and which necessitate social readjustment. Please check those events which you have experienced in the recent past and indicate the time period during which you have experienced each event. Be sure that all check marks are directly across from the items they correspond to.

Also, for each item checked below, please indicate the extent to which you viewed the event as having either a positive or negative impact on your life at the time the event occurred. That is, indicate the type and extent of impact that the event had. A rating of -3 would indicate an extremely negative impact. A rating of 0 suggests no impact either positive or negative. A rating of +3 would indicate an extremely positive impact.

Section 1

	0 to 6 mo	7 mo to 1 yr	extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
1. Marriage			-3	-2	-1	0	+1	+2	+3
2. Detention in jail or comparable institution			-3	-2	-1	0	+1	+2	+3
3. Death of spouse			-3	-2	-1	0	+1	+2	+3
4. Major change in sleeping habits (much more or much less sleep)			-3	-2	-1	0	+1	+2	+3
5. Death of close family member:									
a. mother			-3	-2	-1	0	+1	+2	+3
b. father			-3	-2	-1	0	+1	+2	+3
c. brother			-3	-2	-1	0	+1	+2	+3
d. sister			-3	-2	-1	0	+1	+2	+3
e. grandmother			-3	-2	-1	0	+1	+2	+3
f. grandfather			-3	-2	-1	0	+1	+2	+3
g. other (specify)			-3	-2	-1	0	+1	+2	+3
6. Major change in eating habits (much more or much less food intake)			-3	-2	-1	0	+1	+2	+3
7. Foreclosure on mortgage or loan			-3	-2	-1	0	+1	+2	+3
8. Death of close friend			-3	-2	-1	0	+1	+2	+3
9. Outstanding personal achievement			-3	-2	-1	0	+1	+2	+3
10. Minor law violations (traffic tickets, disturbing the peace, etc.)			-3	-2	-1	0	+1	+2	+3
11. Male: Wife/girlfriend's pregnancy			-3	-2	-1	0	+1	+2	+3
12. Female: Pregnancy			-3	-2	-1	0	+1	+2	+3
13. Changed work situation (different work responsibility, major change in working conditions, working hours, etc.)			-3	-2	-1	0	+1	+2	+3
14. New job			-3	-2	-1	0	+1	+2	+3
15. Serious illness or injury of close family member:									
a. father			-3	-2	-1	0	+1	+2	+3
b. mother			-3	-2	-1	0	+1	+2	+3
c. sister			-3	-2	-1	0	+1	+2	+3
d. brother			-3	-2	-1	0	+1	+2	+3
e. grandfather			-3	-2	-1	0	+1	+2	+3
f. grandmother			-3	-2	-1	0	+1	+2	+3
g. spouse			-3	-2	-1	0	+1	+2	+3
h. other (specify)			-3	-2	-1	0	+1	+2	+3
16. Sexual difficulties			-3	-2	-1	0	+1	+2	+3
17. Trouble with employer (in danger of losing job, being suspended, demoted, etc.)			-3	-2	-1	0	+1	+2	+3
18. Trouble with in-laws			-3	-2	-1	0	+1	+2	+3
19. Major change in financial status (a lot better off or a lot worse off)			-3	-2	-1	0	+1	+2	+3
20. Major change in closeness of family members (increased or decreased closeness)			-3	-2	-1	0	+1	+2	+3
21. Gaining a new family member (through birth, adoption, family member moving in, etc.)			-3	-2	-1	0	+1	+2	+3
22. Change of residence			-3	-2	-1	0	+1	+2	+3
23. Marital separation from mate (due to conflict)			-3	-2	-1	0	+1	+2	+3
24. Major change in church activities (increased or decreased attendance)			-3	-2	-1	0	+1	+2	+3

	0 to 6 mo	7 mo to 1 yr	extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
25. Marital reconciliation with mate			-3	-2	-1	0	+1	+2	+3
26. Major change in number of arguments with spouse (a lot more or a lot less arguments)			-3	-2	-1	0	+1	+2	+3
27. <i>Married male</i> : Change in wife's work outside the home (beginning work, ceasing work, changing to a new job, etc.)			-3	-2	-1	0	+1	+2	+3
28. <i>Married female</i> : Change in husband's work (loss of job, beginning new job, retirement, etc.)			-3	-2	-1	0	+1	+2	+3
29. Major change in usual type and/or amount of recreation			-3	-2	-1	0	+1	+2	+3
30. Borrowing more than \$10,000 (buying home, business, etc.)			-3	-2	-1	0	+1	+2	+3
31. Borrowing less than \$10,000 (buying car, TV, getting school loan, etc.)			-3	-2	-1	0	+1	+2	+3
32. Being fired from job			-3	-2	-1	0	+1	+2	+3
33. <i>Male</i> : Wife/girlfriend having abortion			-3	-2	-1	0	+1	+2	+3
34. <i>Female</i> : Having abortion			-3	-2	-1	0	+1	+2	+3
35. Major personal illness or injury			-3	-2	-1	0	+1	+2	+3
36. Major change in social activities, e.g., parties, movies, visiting (increased or decreased participation)			-3	-2	-1	0	+1	+2	+3
37. Major change in living conditions of family (building new home, remodeling, deterioration of home, neighborhood, etc.)			-3	-2	-1	0	+1	+2	+3
38. Divorce			-3	-2	-1	0	+1	+2	+3
39. Serious injury or illness of close friend			-3	-2	-1	0	+1	+2	+3
40. Retirement from work			-3	-2	-1	0	+1	+2	+3
41. Son or daughter leaving home (due to marriage, college, etc.)			-3	-2	-1	0	+1	+2	+3
42. Ending of formal schooling			-3	-2	-1	0	+1	+2	+3
43. Separation from spouse (due to work, travel, etc.)			-3	-2	-1	0	+1	+2	+3
44. Engagement			-3	-2	-1	0	+1	+2	+3
45. Breaking up with boyfriend/girlfriend			-3	-2	-1	0	+1	+2	+3
46. Leaving home for the first time			-3	-2	-1	0	+1	+2	+3
47. Reconciliation with boyfriend/girlfriend			-3	-2	-1	0	+1	+2	+3
Other recent experiences which have had an impact on your life. List and rate.			-3	-2	-1	0	+1	+2	+3
48. _____			-3	-2	-1	0	+1	+2	+3
49. _____			-3	-2	-1	0	+1	+2	+3
50. _____			-3	-2	-1	0	+1	+2	+3

Section 2: Student Only

51. Beginning a new school experience at a higher academic level (college, graduate school, professional school, etc.)	-3	-2	-1	0	+1	+2	+3
52. Changing to a new school at same academic level (undergraduate, graduate, etc.)	-3	-2	-1	0	+1	+2	+3
53. Academic probation	-3	-2	-1	0	+1	+2	+3
54. Being dismissed from dormitory or other residence	-3	-2	-1	0	+1	+2	+3
55. Failing an important exam	-3	-2	-1	0	+1	+2	+3
56. Changing a major	-3	-2	-1	0	+1	+2	+3
57. Failing a course	-3	-2	-1	0	+1	+2	+3
58. Dropping a course	-3	-2	-1	0	+1	+2	+3
59. Joining a fraternity/sorority	-3	-2	-1	0	+1	+2	+3
60. Financial problems concerning school (in danger of not having sufficient money to continue)	-3	-2	-1	0	+1	+2	+3

VITA

Bruce Gordon Lynch was born in Philadelphia, Pennsylvania on December 15, 1957. He attended schools in Wheeling, West Virginia from fifth grade until high school graduation. In 1980, he received a Bachelor of Arts in Psychology from Ohio Wesleyan University, Delaware, Ohio. He worked for six years as a mental health counselor on the Georgetown University Hospital Mental Health Care Unit in Washington, D.C. After that, he entered the doctoral program in Counseling Psychology at the University of Tennessee, Knoxville in the fall of 1986.

During the course of his doctoral program, he worked part time first as a graduate assistant at the UT Withdrawals and Readmissions office, and then as a graduate assistant counselor at the UT Student Counseling Services Center. He completed a cognate area in Child and Family Studies. After completing a pre-doctoral internship in 1992 at the University of Georgia Counseling and Testing Center, he continued working at the UGA Center in different roles for the next two years.

He returned to UT in 1994, and concentrated on finishing his dissertation while working again as a graduate assistant counselor at the UT Student Counseling Services Center. His work at the UT and UGA Counseling Centers included conducting individual and group psychotherapy with college students, and doing outreach, testing and supervision. The doctoral degree was received August, 1995.