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Gender Differences in Coping with Chronic Illness

A Thesis

Presented to

the Faculty of the Department of Psychology

East Tennessee State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Madhu Karnad

May 2001

Dr. Jon Ellis, Chair

Dr. Peggy Cantrell

Dr. Jim Bitter

Keywords: Adaptive Behaviors, Chronic Illness, Suicide

ABSTRACT

Gender Differences in Coping with Chronic Illness

by

Madhu Karnad

Suicide is the ninth leading of death in the United States. Therefore, it is important to discover adaptive life-maintaining characteristics in high risk populations. Many patients with life-threatening illnesses have frequent suicidal thoughts. The difference in reasons for living between men and women with and without chronic illness were investigated. The suicide ideation was determined by ratings on a 48 item Reasons For Living questionnaire. Degree of chronicity of illness and illness related issues were determined by a demographic questionnaire. Results showed that men commit suicide at a higher rate than women. Results of ANOVA'S indicated that individuals with chronic illness do not have fewer coping skills than individuals without chronic illness. Even though the present study did not indicate that chronic illness is one of the factors that precipitates suicide, research shows that in chronically ill patients depression is a major risk factor for suicide. Thus it is necessary for researchers to discover additional reasons for living for these individuals to keep them from committing suicide.

ACKNOWLEDGEMENTS

I would like to express my deep appreciation to Dr. Ellis for his guidance, encouragement, and kindness he has shown me throughout my training. Without his help and insight, this endeavor would have been impossible. I would also like to thank Dr. Cantrell and Dr. Bitter for their time and effort. Thanks Dr. Bailey for teaching me how to go about tackling this uphill task. I am also thankful for the love and support of my husband, Anand, without whom graduate school would have only been a dream.

I would like to thank my family and friends who have supported me the last two years. Special thanks to my mom who taught me to work hard and always do the best that I can. Amma, thank you for believing in me and loving me.

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CHAPTER 1

INTRODUCTION

The term "suicide" is applied to any death that is the direct or indirect result of a positive or negative act accomplished by the victim himself or herself (Durkheim, 1951). In 1995, 31,284 suicides were reported to the National Center for Health Statistics (NCHS, 1994). The age adjusted death rate for suicide was 11.1 per 100,000 making it the ninth leading cause of death in the United States. An additional two to eight times as many people parasuicide, or attempt to commit suicide, but do not succeed, each year (Ellis & Range, 1989; NCHS, 1994).

It is often argued that the number of suicides is greatly under-reported due to shame or embarrassment many families may feel if they reveal suicide has occurred as well as inaccurate reporting of suicide deaths as homicides or accidents by coroners. From 1970-1994, the overall number of deaths by suicide had increased by almost 38%. Because of such statistics, much research has been devoted to the study and prevention of suicide (U.S. Bureau of the Census [USBC], 1996).

Suicidal behavior has been described as a complex process with many steps or levels involving interactions of environmental, social, as well as intrapersonal variables. An individual first experiences suicidal ideation, forming thoughts and ideas about suicide. If certain variables or

experiences cause continued ideation, one may then contemplate committing suicide, viewing the act as a concrete possibility. As these variables, such as extreme life stress, depression, hopelessness, and loneliness persist, an individual may make a definitive plan to commit suicide. The final step of the process is the suicide attempt (Bonner & Rich, 1987).

Reasons for Living Inventory

The majority of research in the field of suicidology to date, has been directed to identifying characteristics of suicidal persons to enhance prediction of suicidal behavior (Beck, Resnick, & Lettieri, 1974; Kreitman, 1977; Neuringer, 1974). With a few exceptions (e.g., Goodstein, 1982) almost all of this work has been focused on identifying maladaptive attributes of suicidal persons. Little attention has been given to situational factors, and the question of whether suicidal persons lack important adaptive characteristics present among nonsuicidal individuals, and, if so, what these characteristics might be. Focusing on adaptive, life-maintaining, characteristics of nonsuicidal people, Linehan, Goodstein, Nielson, and Chiles (1983) developed the Reasons for Living Inventory (RFL) that would measure the presence of life-maintaining reasons for living in an individual.

The theoretical foundation for the development of the RFL is based on two independent studies done by Frankl

(1959) and Des Pres (1976) that examined characteristics of survivors of Nazi concentration camps. Despite being exposed to physical and emotional hardships many survivors reported that adaptive traits such as having hope for the future, and a sense of purpose in life made life worth living.

The RFL includes 48 items on which individuals rate the importance of each on a scale of 1 (not important at all) to 6 (very important) as reasons for living if they were contemplating suicide. A factor analysis of the 48 reasons revealed six primary factors of reasons for living: Child Related Concerns, Fear of Suicide, Fear of Social Disapproval, Survival and Coping Beliefs, Responsibility to Family, and Moral Objections. The RFL also differentiates between ideators and non-ideators, especially the Survival and Coping Beliefs, Responsibility to the Family, and Child Related Concerns scales (Connell & Meyer, 1991). The Fear of Suicide scale can differentiate between previous ideators and previous parasuiciders. Current ideators can be differentiated from current parasuicides by scores on the Child Related Concerns scale. The RFL has been shown by several studies (Osman, et al, 1993; Osman, Gregg, Osman, & Jones, 1992; Osman, Jones, & Osman, 1991) to be both a reliable and valid measure of an individual's reasons for living as well as suicidality through both total score and scores on the six subtests. The RFL has a high internal

consistency coefficient (+.70) for the entire inventory. The coefficient for the subscales ranged from +.79 to +.90. Test-retest reliability was ($r=.83$) (Osman et al., 1993; Osman et al., 1992). However, the RFL has been mostly administered to college students , and to very few random samples of the general public. Thus , there is not much information concerning the reliability and validity of the scale when administered to a chronically ill population.

Bonner and Rich (1987) indicated that students who engaged in suicidal ideation or behavior often reported having fewer adaptive reasons for living. This increases the likelihood of stressed individuals to turn to suicide instead of using their problem solving abilities during crises. Several categories of adaptive, life-maintaining characteristics have been identified and make up the six subscales of the RFL.

Survival and Coping Beliefs. The Survival and Coping Beliefs scale evaluates an individual's positive beliefs about the future, ability to handle the ups and downs of life, and the assignment of value to life. Scores on this scale are known to differentiate between those who currently practice suicidal behavior or have practiced suicidal behavior in the past from those who have not practiced suicidal behavior (Linehan et al., 1983). Suicide ideators have also been found to give less importance to survival and

coping beliefs than non-ideators (Connell & Meyer, 1991).

Responsibility to Family. The Responsibility to Family scale is a measure of how much an individual believes in his or her family's feelings, needs and company are important reasons for staying alive. Low scores indicate minimal importance to family related concerns and are significantly related to reports of previous or current suicidal behavior. Individuals who report never having had any suicidal ideation also report significantly higher feelings of responsibility to their family (Linehan et al., 1983). A study done by Ellis and Jones (1996) revealed that women attributed greater importance to Responsibility to Family as a reason to live than did men. This finding can be attributed to the many different roles men and women assume in the family arena. Women are the caretakers with whom the family especially the children, have more contact, and men find themselves assuming the role of the detached bread winner.

Love, commitment, and responsibility to family represent a category of reasons for not committing suicide on instruments such the RFL. Support of the family is thought to have an impact on suicidality. In a study investigating the relationship of ideator status and reasons for living in college students to childhood family support, Hirsch and Ellis (1995) found that students raised in non-

traditional family settings had significantly higher number of ideators, as well as overall levels of ideation. The authors indicated that traditional two-parent homes may offer a child a more nurturing environment with less stress than a non-traditional home with financial stress, emotional burdens, and loneliness. These findings suggest that traditional family structure develops good strong coping abilities in a child and these reasons for living are carried into adulthood.

Child Related Concerns. The Child Related Scale gauges the importance of an individual's concern for the well being of an individual's children as a reason to live. This subscale has the ability to differentiate between past suicide ideators, attemptors or non-or mild-ideators. It has also been shown to differentiate further between current ideators And current parasuicides (Linehan et al., 1983).

Fear of Suicide. The Fear of Suicide scale is unique because it can distinguish suicide ideators who did not act on their suicidal ideations by committing suicide from suicide ideators who did act upon their suicidal ideations. Those ideators that did perform suicidal behaviors reported less fear of suicide. Thus, either the fear of suicide was reduced from having performed suicidal behavior, or a pre-existing lower fear of suicide enabled such individuals to

perform suicidal behavior (Ellis & Jones, 1996; Linehan et al., 1983). Ellis and Jones found fear of suicide to be significantly higher in women than in men. This finding explains the higher suicide completion rate per attempt by men but contradicts the significantly higher incidence of parasuicide in women. Fear of suicide may contribute to choice of suicide method, from extremely lethal means such as guns more often chosen by men, to less lethal methods such as overdosing on prescription drugs more often chosen by women.

Fear of Social Disapproval. Fear of Social Disapproval is another reason for individuals not to commit suicide. People who obtain higher scores on this subscale are less likely to threaten suicide. This is of clinical significance because such individuals are less likely to inform family/clinicians of suicidal feelings before performing such behaviors, thus enhancing the difficulty of interventional procedures (Linehan et al., 1983).

Moral Objections. The Moral Objections scale reflects the extent to which an individual's beliefs about moral and religious ramifications for suicide would prevent him or her from committing suicide. Suicide ideators report lower scores on this subscale than non-ideators (Connell & Meyer, 1991).

Characteristics of Suicidal Individuals

The relationship between hopelessness, depression, and suicidal ideation has been the focus of many studies over the last 20 years. Several studies have also examined the relationship between cognitive style and risk of suicide.

Beautrais, Joyce, and Mulder (1999) studied the relationship between cognitive style and suicide risk in young people in a case control study. Their study indicated that individuals making suicide attempts had elevated levels of hopelessness, neuroticism, introversion, low self-esteem, impulsiveness, and external locus of control. When allowances were made for intercorrelation among these measures, hopelessness, neuroticism, and external locus of control remained significant risk factors for serious suicide attempts. Low self-esteem, extroversion, and impulsiveness were not significantly associated with suicide attempt risk.

Schotte and Clum (1982) suggest that individuals prone to suicidal behavior or thoughts are emotionally and cognitively unable to effectively cope with higher levels of stress due to rigidity in thinking and poor problem solving ability. They also report that hopelessness is the best predictor of suicidal behavior at higher levels of stress, whereas at lower levels of stress depression appears to be the best indicator of such behaviors.

Another cognitive characteristic of suicidal individuals is low social desirability. Linehan and Nielson (1981) found that the Beck Hopelessness Inventory (Beck, Weissman, Lester, & Trexler, 1974) correlates negatively with the Edwards Social Desirability scale (Edwards, 1970). Also when desirability scores are controlled, the positive relationship found between hopelessness scores and self-reports of prior, current, and predicted suicidal behavior is reduced or even lost. Low social desirability scores correlated significantly with self-reports of prior suicidal behavior, and this relationship is not lost when hopelessness scores are controlled. This indicates that low social desirability not in combination with high hopelessness is predictive of suicidal behavior.

In another study of characteristics of suicidal individuals, Beck, Steer, Kovacs, and Garrison (1985) observed that when depressed patients believe that there is no solution to serious life problems that pose intolerable situations, hopelessness ensues. These patients view suicide as the only way out.

Bonner and Rich (1988) conducted a longitudinal study of college undergraduates. Based on previous research (Bonner & Rich 1987) measures of social/emotional alienation, adaptive resources of living, and cognitive rigidity were taken at the beginning of the semester and combined to define a vulnerability score. At midterm,

measures of midterm and cumulative negative life stresses were obtained from the same subjects. The combination of alienation, deficient adaptive resources, and life stress best predicted ideation scores.

A rigid cognitive style is characterized by inability to view an issue or event from many different angles and thus seeing only one possible outcome. In the case of suicidal individuals, the only solution is terminating one's life. Many suicidal individuals are not able to effectively problem solve by examining a problem from different angles, especially when under a great deal of stress (Ellis & Jones, 1996; Schotte & Clum, (1982). According to Neurenger (1974) this inflexibility is often due to hopelessness that can lead to suicidal behavior.

Theoretical Models of Suicide

Stress Theory

The stress theory of suicide (Osgood, 1985) is related to survival and coping abilities of an individual when exposed to stress. Stress is any event that is perceived by the individual as a threat to his or her well-being. Stress can adversely affect a person's physical and mental health and lead to suicidal ideation or behavior. (Osgood, 1985). The stress theory suggests that the steadily climbing suicide rate among men and women is due to the continuous presence of multiple stressors in a person's life and fewer

survival and coping beliefs present to adaptively respond and cope with the stressors.

Stressors may be real or imagined, physical or psychological such as death or divorce, independence, social status, income, social or familial relationships, substance abuse, and perceived failure in meeting life's goals (Osgood, 1985). Individuals with chronic medical problems who become suicidal due to an inability to adaptively cope with stress often share maladaptive characteristics such as few close social or familial relationships, substance dependence (such alcohol dependence or prescription drugs), and perceived failure in meeting life's goals.

Clarke's "Wedding-Cake" Model

The "wedding-cake" model (Clark, 1993), was appropriately named due to the progression of stages in a hierarchy of pyramid like steps. This model was derived from the belief that suicidal behavior is the result of a complex interaction of many factors but is often oversimplified and attributed to a single factor for the purpose of education. This simplification has impeded progress in suicide prevention and can be demonstrated by examination of a suicide rate that has slowly increased since 1945. This model attempts to address the fact that ideators lack the ability to face crucial or chronic life stressors. This crippling inability can be traced to

Erikson's (1963) Psychosocial Stage Theory that describes the failure to resolve crucial conflicts at different stages of the sociodevelopmental process. The individual begins to encounter difficulty in response to everyday stressors, which will eventually manifest tremendous tension that builds till the person has reached their tolerance threshold. This precipitates crisis. During this crisis the individual will express anger, refuse help, and begin communicating his or her suicidal ideations (Clark, 1993).

Rational Theory of Suicide

Some suicides are performed due to the individual's perception of the prognosis of a chronic, debilitating illness such as Alzheimer's Disease, cancer, or stroke. In such cases, loved ones (emotionally and financially), and, therefore, judge on a "rational " basis that suicide is the best option (Devons, 1996).

The diagnosis of chronic illness often comes as a great shock to an individual. Within a few moments everything about their life changes. The initial diagnosis maybe so disorienting that it is impossible for the person to fathom immediately the depth of change that will be required. Often these individuals wrestle with thoughts of an indefinite future ridden with incurable and long-standing illness. This diagnosis coupled with inadequate social support, poor coping skills, anxiety, and depression may

cause ideation. These theories help us understand from a patient's point of view how frustration builds up in one's life due to illness and how suicide seems to be the only way out.

Demographic Variables and Gender Differences in Suicide

Gender differences in suicide rates is an important issue to address. This issue has been investigated time and again by a number of researchers. Canetto and Lester (1993) systematically examined data on suicide mortality by one of the best predictors, gender.

Gender and Age

The data reviewed by Canetto and Lester (1993) indicate, with some exceptions, women are less likely to kill themselves than men. However, when mortality data are examined by age, there are indications that certain age groups of women are more susceptible to suicide than men. For example, Barclough (1988) examined women's and men's suicide mortality rates for those aged 15-24. He found that in several Asian, Caribbean, and South American countries female suicide rates exceeded those of males. Also no consistent relation was found between gender, age, and suicide mortality. In the United States female rates decrease after mid-life and male rates reach their highest levels late in life, the gender differential in rates the

least at in mid-life and the greatest during late life (McIntosh, 1992). It should be noted, however, that rates for middle-aged women are less than half those for middle-aged men (McIntosh, 1991). Lester (1982) looked at the distribution of suicide mortality rates by age for men and women in different countries as a function of the level of national economic development (defined by gross national product per capita). For females, the peak for death by suicide rose from 55-64 to 75 and older as the level of economic development of the nations increased, with the exception of the least developed nations, where the peak age was for those aged 15-24. For males, unlike females suicide mortality rates rose with all ages at all levels of economic development.

Gender and Social Class

The relation between gender, social class, and suicide mortality is difficult to assess because of the tendency to assign social class to married women on the basis of the social class of their husbands (Canetto & Lester 1993). In England suicide mortality was found to be more common among the upper classes (Stengel, 1964). Nayha (1997) reported that in Finland adult women who killed themselves were from a higher class than men who killed themselves. On the other hand, a Finnish study (Marttunen, Hillevi, Henriksson, & Lonngqvist, 1991) reported male mortality rates are high in

societies where women's social status is extremely low. In these societies, women's social, educational, vocational, and economic opportunities are severely restricted. Yet in many societies, suicide mortality is highest among the socially privileged. For example, in the United States, suicide is highest among white males, not among blacks or females (Canetto, 1992).

Gender and Employment

Available studies suggest that in most industrialized nations unemployment is associated with higher rates of suicide mortality for women and men (Pritchard 1988, 1990). Employed women have lower suicide mortality rates than women who are not employed, regardless of age and marital status (Cummings, Lazer, & Chisholm, 1975). Although in the US suicide mortality rates are lower in women than men, professional women, especially women physicians, have suicide mortality rates as high as professional men (Lester, 1992; Yang & Lester, 1995).

Gender and Personal Relationships

Suicide mortality rates are higher among the divorced and widowed for both women and men (Smith, Mercy, & Conn, 1988). Married women have been reported to have higher rates of mental disorder than married men, while never-married women have lower rates of mental disorder than

never-married men; and several studies have validated that marriage is a factor that offers greater protection from suicide mortality for men than women (Gove, 1972, 1979; Cummings & Lazer, 1981).

Higher suicide mortality among elderly widowers compared to widows may result from the men's reliance on their spouse as the sole source for emotional and social support. Because, women typically name other women as their confidants, losing a spouse may not disrupt a woman's support system to a degree that it might for a man (Canetto, 1992, 1995; Zarit, 1980).

Gender and Method

In the United States, women use poisons (27% versus 6%) and men firearms (65% versus 40%) as a choice of suicide method (Marks & Stokes, 1976; National Center for Health Statistics, 1990).

Gender difference in choice of method for suicide may be said to account for the difference in fatal/nonfatal outcomes for US men and women; however, even within each method, more acts by women are nonfatal and more of the acts by men are fatal. Therefore, choice of method alone cannot account for the gender difference in outcome (Canetto, 1992, 1995, Stillon, 1995).

Gender and Mental Disorder

The highest suicide rates are in individuals diagnosed with a mental disorder, and the most common disorders associated with suicide are affective and addictive disorders (Moscicki, 1994). Most studies of suicide mortality have shown that depression as a risk factor was higher in women than men (46% to 59%); and in men, alcohol abuse as a risk factor has been well documented (Asgard, 1990; Breed, 1972; Nuttall, Evenson, & Cho, 1980).

Research in Gender and Suicide

Manton, Blazer, and Woodbury (1987) found that suicide rates peaked for white men at mid-life and then again at 80. This was in contrast to rates for white women and for nonwhite men and women which peaked in young adult life. Across all age groups, the most common method used to commit suicide in the United states by both genders is by means of firearms. Firearms consistently account for nearly 60% of all suicide deaths. It is the method of choice for both men and women, followed by drugs and medications for women and hanging for men.

In contrast to completed suicides, lifetime prevalence of attempted suicide is significantly more frequent among women and girls regardless of race or ethnicity (Andrews & Lewinsohn, 1992). Gender has not been found to be significantly associated with incident attempts; however, various explanations have been proposed to account for the

differences in lifetime rates between males and females. It may be that women are better reporters of their health history and, therefore, are more likely to recall salient lifetime events such as attempted suicides (Moscicki, 1994).

Little information on methods of parasuicide is available from community studies. The most common method reported from hospital based studies is self-medication and drug overdose, accounting for over 70% of all attempts (Weissman, 1974). Andrews and Lewinsohn (1992) reported that the most common method used by adolescents to attempt suicide was ingestion of pills followed by cutting of wrists or other parts of the body.

Studies done by Bonner and Rich (1987, 1988) suggest that suicidal behavior is associated with a complex interplay of a number of independent factors. No single variable can predict the intensity of suicidal ideation as well as the combination of separate variables. Depression, hopelessness, few reasons for living, and substance abuse have been found to be consistent predictors, whereas cognitive distortions, loneliness, and life stress have been less consistent predictors of suicidal ideation. Although in this study gender differences were not studied in detail, research has consistently shown that females make more attempts than males by 3 to 1 (Frederick, 1985), while males appear to complete suicide more often. Among 15 to 19 year olds, the ratio of males to females of completed suicide as

4.2 to 1 (Shaffer & Fisher, 1981).

Rich, Kirkpatrick-Smith, Bonner, and Jans, (1992) specifically examined sex differences in suicide; they found that gender differences in coping beliefs, moral obligations, and commitment to family were minimal. Females had a greater fear of death and injury whereas men had a greater fear of social disapproval. Females also reported greater suicidal ideation with depression, and males reported ideation with feelings of loneliness and substance abuse. Males in general tend to employ more lethal methods such as firearms and hanging while females in general are likely to ingest drugs or cut their wrists.

Demographics research concludes that men commit suicide more often than women, yet women parasuicide more frequently than men. In 1994, there were 4.2 male suicide completions for every female completion (NCHS, 1996). Over 70% of all suicides in the US are committed by white men, with the highest suicide rates occurring among elderly white men (75.1/100,000 for men 85 years of age and over in 1991) (NCHS, 1994). Nonwhite men are also at risk, however, with risk being as high in the younger age groups (20-34 years) as it is in the oldest age groups (75-84 years), with lower rates shown in the middle age groups.

Chronic Illness and Suicide

Chronic conditions range from relatively mild , such as

partial hearing losses, to advanced, severe life-threatening disorders, such as cancer, coronary artery disease, renal failure, and diabetes. In the United States, arthritis in its various forms afflicts 40 million people, 13 million people have cancer, diabetes afflicts 16 million people, more than 4 million people have sustained a stroke, almost 14 million people have a history of heart attack, 29 million people have diagnosed hypertension, and estimates of the prevalence of high blood pressure run as high as 50 million (U.S. Bureau of the Census, 1996)

Problems and Psychological Responses Related to Chronic Illness

Quality of Life

Until recently, quality of life was not considered an issue of psychological importance. For many years, it was measured solely in terms of length of survival and signs of presence of disease, with virtually no consideration of the psychosocial consequences of illness and treatments (Taylor, Helgeson, Reed, & Skokan, 1991). Moreover, research shows that some illnesses and treatments represent a worse quality than death itself (Ditto, Druley, Moore, Danks, & Smucker, 1996). Because of findings such as these, quality of life now entails physical status and functioning, psychological status, social functioning, and disease or treatment related symptoms (Kaplan & Coons, 1992). Several reliable and valid

measures have been developed to measure quality of life. For example, the Sickness Impact Profile (SIP) (Bergner, Bobbitt, Carter, & Gilson, 1981) assesses functioning in three categories: physical, psychosocial, and other (sleep, eating, work, recreation). SIP scores appear to be responsive to changes in chronic diseases and treatments. Another widely used measure, the index of Activities of Daily living (ADL) (Katz, 1983) yields independent scores for six basic functions (bathing, dressing, toileting, mobility, continence, and feeding). Also in wide use, the RAND 36-Item Health Survey assesses physical functioning, social functioning, role limitations due to physical problems, role limitations due to emotional problems, mental health, vitality, pain, and perceptions of health (Vanderzee, Sanderman, & Heyink, 1996). In addition, quality of life measures have been developed for specific diseases such cancer e.g., the Cancer Inventory of Problem Situations (Schag, Heinrich, Aadland, & Ganz, 1990), rendering quality of life studies important for several different reasons. First, documentation of exactly how illness affects vocational, social and personal activities of daily living, provides an important basis for interventions designed to improve quality of life (Devins et al, 1990). Second, quality of life measures can help pinpoint which particular problems are likely to emerge for patients with particular diseases. Such a measure, for

example, might indicate that sexual dysfunction is a problem for patients with certain kinds of cancer, but depression is more prevalent in other kinds of cancer. Such information is helpful in deciding what interventions are required (Schag & Hein, 1984). Third, such measures address the impact of treatments on the quality of life. For example, in cancer care, one needs to assess whether treatment is more harmful than the disease itself, if the treatment has disappointing survival rates and produces adverse side effects (Aaronson et al, 1986). Fourth, quality of life measures make it possible to assess the impact of unpleasant therapies. This information makes it possible to compare therapies and administer those that ensure quality of life as well as longevity, when possible (Taylor et al., 1991). And finally, despite the continuing ambiguity over how best to assess quality of life, quality of life information can inform decision makers about care that will maximize the likelihood of long-term survival with the highest quality of life possible (Coons & Kaplan, 1992).

Denial

The diagnosis of a chronic illness is often accompanied by denial that is a defense mechanism by which people avoid the implications of the illness. In extreme cases the patient will even deny the illness despite the clear-cut diagnosis. It is a common reaction to chronic illness that has been observed among heart patients (Krantz, 1980) stroke (Powell, Diller, & Gyrnbaum, 1976) and cancer patients (Meyerowitz, 1983).

Now, however, psychologists are recognizing the potential benefits as well as the liabilities of denial. Immediately after the initial diagnosis of an illness denial becomes a protective function. It can keep a patient from having to come to terms with the full range of problems posed by the illness at a time when he or she may be least able to do so (Hackett & Cassem, 1974). Denial can also reduce the experience of unpleasant side effects of treatment as well as the terror associated with chronic disease until the patient gets more accustomed to the diagnosis and its realistic implications. Conversely, during the rehabilitative phase of the illness, denial can have adverse effects if it actively interferes with the ability to absorb important information about treatment and self-management programs (Lazarus, 1983).

Anxiety

Immediately after the diagnosis of a chronic illness, anxiety is also a common response. Many patients are overwhelmed by the of potential changes in their lives and by the prospect of death. Anxiety may also rise intermittently throughout the disease process. For example, every twinge of chest pain is likely to cause anxiety in a patient recuperating from a heart attack. Similarly many cancer patients are constantly vigilant to the changes in their physical condition which brings on acute anxiety (Hughes, 1987).

Anxiety is not only a problem because it is intrinsically distressing but because it can interfere with overall functioning and coping skills. For example, highly anxious patients cope more poorly with radiation therapy for cancer and benefit less from behavioral treatments designed to reduce physical distress associated with chemotherapy (Burish, Carey, Reid, & Krozely, 1983).

Several kinds of events reliably increase anxiety. Anxiety is high when people are waiting for test results, receiving diagnosis, awaiting invasive medical procedures, and anticipating or experiencing adverse side effects of treatment (Anderson, Karlsson, Anderson, & Tewfik, 1984). Anxiety is also high when people expect substantial lifestyle changes to result from an illness or its treatment, when they experience concern over recurrence, and

when they lack information about the nature of the illness and its treatment. Although anxiety directly attributable to the disease may decrease over time, anxiety over possible complications, the disease's implications for the future, and its impact on work and leisure time activities may actually increase with time (Taylor et al., 1991).

Depression

Depression is a common and often debilitating reaction to chronic illness. Up to one third of all medical patients with chronic disease report at least moderate symptoms of depression and up to one quarter suffer from severe depression (Rodin & Voshart, 1986). Although there is evidence that depression may occur somewhat later in the adjustment process than denial or severe anxiety, it can also occur intermittently (Taylor et al., 1991).

Depression may be a delayed reaction to chronic illness, nonetheless it is important not only for the distress it produces but also it may have an impact on the symptoms experienced and on the overall prospects for rehabilitation or recovery. Depressed patients have longer hospital stays and are more often discharged from hospitals to nursing homes. They show less motivation to undergo rehabilitation, they are less likely to progress during rehabilitation, and are less likely to restore their quality of life to previous levels (Niemi, Laaksonen, Kotila, &

Waltimo, 1988)

Depression over illness and treatment has also been linked to suicide among the chronically ill and the elderly. For example, one out of every long-term dialysis patient over the age of 60 stops treatment resulting in death (Neu & Kjellstrand, 1986). The rate among cancer patients is approximately one-and-a-half times greater than that among non-ill adults (Louhivuori & Hakama, 1979), and the rate of suicide among men with AIDS has been estimated at more than 36 times the national rate for their age group (Mazurk et al., 1988). Unlike anxiety that ebbs and flows during the course of a chronic illness, depression can be a long-term reaction. For many illnesses, it may last a year or more following the onset of the disorder (Lustman, Griffith, & Clouse, 1988).

Assessment of depression in the chronically ill can be problematic. Many of the physical signs of depression, such as fatigue, sleeplessness, or weight loss, may also be symptoms of the disease or side effects of the treatment. If depressive symptoms are attributed to aspects of illness or treatment, their significance may be less apparent, and consequently depression may go untreated. These issues are especially problematic for illnesses that can affect brain functioning, such as cancer, stroke, diabetes, AIDS, and epilepsy (Holland & Massie, 1987).

Another barrier to properly diagnosing and treating

depression among the chronically ill is that there are no standards for diagnosing depression in these populations. Depression often goes undiagnosed because many people believe that one is supposed to feel depressed after the diagnosis of chronic illness (Greer, 1983).

There may be a reciprocal sustaining relationship between physical impairment and depression. Being disabled contributes to high levels of depression, which in turn increases the extent of the disability experienced. Chronic levels of disability lead to higher levels of anxiety, distress, and thoughts of suicide. Depression increases with severity of illness and the extent of pain in particular predicts depression (Hawley & Wolfe, 1988). Chronically ill patients who are experiencing other negative life events, social stress, and lack of social support experience higher levels of depression. There is some evidence that physical factors predict depression somewhat better earlier in chronic illness, whereas psychological factors may better explain depression later. One study of stroke patients found that the location of stroke damage predicted depression in the first 6 months, whereas later on cognitive impairment, physical ability, social support, changes in body image and self-esteem, and adverse mood effects of therapeutic drugs were stronger determinants of depression (Morris & Raphael, 1987)

Coping with Chronic Illness

Despite the fact that most patients with chronic illness suffer at least some adverse psychological reactions as a result of the disease, most of them do not seek formal psychological treatment for these symptoms. Instead they draw on their internal and social resources for solving problems and alleviating the psychological distress they are feeling.

Coping Strategies and Chronic Illness

Few investigations have looked systematically at coping strategies among chronically ill patient groups. In one such study by Dunkel-Schetter, Feinstein, Taylor, and Falke (1992), cancer patients were asked to identify the aspect of their cancer they found to be the most stressful. The results indicated that fear and uncertainty about the future was most common (41%), followed by limitations in physical abilities, appearance, and lifestyle (24%), followed by pain management (12%). Patients were then asked to indicate the coping strategies they used to deal with these problems. The five strategies identified were Social Support/Direct Problem-Solving (e.g., "I talked to someone to find out more about the situation"), Distancing (e.g., "I didn't let it get to me"), Positive Focus (e.g., "I came out of the experience better than I went in"), Cognitive Escape/Avoidance (e.g. "I wished that situation would go

away"), and Behavioral Escape/Avoidance (e.g., efforts to avoid the situation by eating or sleeping).

The strategies identified in this investigation are not substantially different from those employed to deal with other stressful events. One notable difference, though, is that the chronically ill report fewer active coping strategies such as positive focus and escape/avoidant strategies. This discrepancy may reflect the fact that some chronic diseases such as cancer raise many uncontrollable concerns that active coping strategies cannot directly address. One might find that in coping with the aftermath of MI, for example, confrontative coping and problem solving would emerge as people attempt to modify their habits and lifestyle with the hope of reducing subsequent risk. The use of avoidant coping is associated with increased psychological distress and, thereby, may be a risk factor for adverse responses to illness (Felton, Revenson, & Hinrichsen 1984).

Similarly, Weisman and Worden (1976) found poor adjustment to be associated with fatalism, passive acceptance, withdrawal from others, self-blame, and efforts to forget the disease. Correspondingly, lower psychological distress is found to be associated with positive confrontative responses to stress, with a high internal locus of control, and with the belief that one can personally direct control over an illness.

People who employ multiple strategies may cope better with the stress of chronic disease than those who engage in a predominant coping style. The rationale behind this finding is that coping strategies may be most effective when they are matched to the particular problem for which they are most useful. If people have multiple coping strategies, they may be more able to engage in this matching process than those who have a predominant coping style (Taylor et al., 1991).

Beliefs about the Nature of the Illness

One of the problems that often arises in the adjustment to chronic illness is that when patients feel better they no longer monitor themselves closely and fail to take their medications regularly. Thus it is important for health care providers to probe patients comprehension of their illness to check for significant gaps and misunderstandings in their knowledge that may interfere with proper self-management (Nerenz & Leventhal, 1983).

Beliefs about the Cause of the Illness

A study done by Bulman and Wortman (1977) suggests that self-blame can lead to guilt, self-recrimination, or depression. Self-blaming patients may be poorly adjusted to their illness because of the focus on things they could have or should have done to prevent it. Self-blame for chronic

illness is wide-spread. Patients frequently perceive themselves as having brought on their illnesses through their own actions. In some cases, these perceptions are correct. Poor health habits such smoking, improper diet, or lack of exercise can produce heart-disease, stroke or cancer. In some cases the patient's self-blame can be inappropriate when the disease is caused by a genetically based defect (Bulman & Wortman, 1997).

Beliefs about Controllability of Illness

There is evidence that patients with feelings of control are often highly successful in promoting good adjustment, in reducing psychological and emotional distress caused by the illness and its treatment. Cancer patients who believed that they had control over their illness adjusted better than those without such beliefs (Helgeson, 1992). Similar results have been reported for patients suffering from rheumatoid arthritis (Tennen, Affleck, Urrows, Nanni, & Levine, 1994), AIDS (Taylor et al., 1991), and spinal cord injuries (Schultz & Decker, 1985). Even for patients who are physically or psychosocially badly off, adjustment is facilitated with high perceptions of control. Control appears to be helpful not only in coping with acute disorders and treatments but also with long-term debilitation that may result from chronic illness.

Suicidal Ideation in the Chronically Ill

When assessing a person's risk for suicide physicians must keep in mind that the rates of suicide are higher in patients with medical illness than in healthy persons and increases as the illness progresses (Farberow, Banzler, Cutter, & Renolds, 1971). Additional risk factors for suicide include advanced age, male sex, diagnosis of cancer or AIDS, depression, hopelessness, delirium, exhaustion, chronic pain, preexisting psychopathology, and a personal or family history of suicide (Rabins, 1992).

Many patients with life-threatening illnesses have frequent suicidal thoughts. Such thoughts occur in as many as 45% of cancer patients and are associated with the loss of control and anxiety about the future. Fifty-nine percent of these patients received a diagnosis of depression and were found to have increased levels of pain and limited social support. Most of these patients presented the desire for suicide as a rational choice, the only choice they had (Block & Billings, 1994).

The current standard of practice in patients who exhibit pervasive hopelessness, the persistent desire to die, hallucinations or delusions in depressed patients should be viewed as indicators of high risk for suicide (Endicott, 1984).

Suicide Research in the Chronically Ill

Suicide ideation is more common in the chronically ill. Chronic illness may be defined as a physical or mental condition not cured by medical intervention requiring periodic monitoring and supportive care to reduce the degree of illness and to maximize the person's functioning and responsibility for self-care (Cluff, 1981). Suicide ideation is significantly more common in elderly persons with either chronic mental or physical illnesses. The sick elderly, especially those with three or more ailments, tend to experience more frequent suicide ideations (Skoog, 1996). Similarly, suicide ideation is more frequent in elderly persons with mental illness, and especially among those with major depression (Skoog).

A population based study of 204 consecutive suicides in San Diego County, California was done to see if suicides over the age of 60 were different than younger suicides, and to ascertain if female and male suicides over 60 differ. The sample included 49 cases aged 60-88, 94 cases aged 31-59, and 61 cases aged 16-30. The older group (age over 60) consisted of 20 females and 29 males. Comparisons were done in demographic and diagnostic areas. There were no significant differences between male and female suicides over the age of 60. Only minor differences were found among the groups in patterns of mental disorders. Older suicides

were significantly more likely to be married or, if not married, widowed than either of the two younger groups. They were also significantly more likely to be stressed by medical illness compared to younger suicides. There were no significant differences between female and male suicides over 60 (Carney, Rich, Burke, & Fowler, 1994).

Another population based investigation of 283 suicides in San Diego county was done in 1991 by Rich, Warstadt, Nemiroff, Fowler, and Young to examine the relationships between suicide, age, and the frequency of specific stressors at various stages of the life cycle. Information about the suicides was gathered from family members, spouses, employers, and physicians by trained interviewers using a structured format. Hospital, physician, therapist, school, and police records were also included when possible. Life events information was also reviewed by the investigators to determine stressors if any for each case. They found that 95% of the subjects had one or more stressors. The authors found that the most predictable patterns of the three most common stressor groups were; conflict-separation-rejection, economic problems ,and medical illness. The only significant difference found between the sexes was that more men than women tested economic problems as a stressor.

The American Society of Clinical Oncology recently reported the incidence of suicide among cancer patients.

Eight practicing medical oncologists with 10-24 years of active practice were polled. Only 10 episodes of suicide were identified, nine of which were men. Seven patients used a gun, one overdosed on drugs, and the method of suicide was not identified in two patients, which included one woman. These data suggest that suicide among cancer patients is an uncommon event, that is usually done by men, and it is frequently done with a gun.

In 1994 Rodin studied depression in patients with end-stage renal disease (ESRD). Even though depressive symptoms arose as the disease progressed, the author discovered that patients with more severe medical illness, a prior history of depression, and low social support were more at risk to develop a major depression that sometimes lead to suicide.

Suris, Parera, and Puig (1996) investigated emotional distress and suicidal ideation among adolescents (3,129 students aged 14-19 years) with and without chronic illness. One hundred and sixty two adolescents with chronic conditions (100 females and 62 males) included those with diabetes, asthma, cancer, and seizures. No differences in prevalence of emotional distress or suicidal ideation was found among the four categories of disease. Compared to the control group (383 females and 482 males), a significantly greater proportion of females with chronic illness reported having suicidal thoughts and expressed depressive symptomatology. In contrast, no significant differences

were found for males.

Risk factors for suicide include depression, severe insomnia, and chronic illness. A study done on assessing suicide risk in post-stroke patients indicated that post-stroke depression is often accompanied by suicidal ideation, even though suicides among this population is rare. When depression is untreated, it becomes severe and prolonged causing poststroke patients to eventually commit suicide (Garden, Garrison, & Jain, 1990).

King, Hampton, Bernstein, and Schichor (1996) investigated college students (n =308) on whether the acceptability of suicide would vary as a function of circumstance of the suicide, religious affiliation, history of past attempts, and whether suicide was contemplated for oneself or another. Results showed that the highest acceptability of suicide for themselves and others was in the circumstances of terminal or chronic illness and depression. Students affiliated with organized religion were less accepting of suicide than those without such an affiliation. Previous suicide attempts were associated with greater acceptance of suicide for oneself or for others. They were more likely to accept suicide for others than for themselves.

A review done by Drake, Gates, Whitaker, and Cotton (1985) summarized and integrated all the available empirical studies conducted on risk factors associated with suicide

among schizophrenics. The literature reviewed suggests that young male schizophrenics were most vulnerable to self-destruction especially during the early years of the illness. A clinical course of the disease characterized by many exacerbations and remissions increased risk. These patients were found to experience severe functional deterioration yet retain a non-delusional awareness of the effects of the chronic illness. Changes in the course of the disease precipitated suicide. The period following relapse was found to be a particularly vulnerable time. Suicide among this clinical population occurred more frequently during periods of depression and hopelessness than during episodes of intense psychosis. Signs of severe agitation and excessive treatment dependence during hospitalization were also considered serious risk factors. Previous suicidal behavior also increased the risk of completing suicide.

The majority of the studies of psychological disorders in patients with chronic or terminal illness have focused mainly on elderly patients or patients with AIDS or cancer. There is no evidence from appropriately designed psychological studies that chronic or terminal illness at any age is an independent risk factor for suicide outside the context of psychological distress (Barracough, 1971; Clark, 1993; Rich et al., 1986).

Statement of the Problem

At any given time, 50% of the population has some chronic condition. Taken together, the medical management of these chronic disorders accounts for three quarters of the nation's health spending not including nursing home care (Hoffman, Rice, & Sung, 1996). The chronically ill account for 90% of home care visits, 83% of prescription drug use, 80% of the days spent in hospitals, 66% of doctors visits, and 55% of visits to hospital emergency rooms. These conditions are not confined to the elderly. More than one third of young adults age 18 to 44 have at least one chronic condition.

The purpose of this study will be to examine gender differences in coping with chronic illness using the 48-item Reasons for Living Inventory developed by Linehan et al. (1983). There is relatively little published literature about psychological issues affecting patients with end-stage lung, cardiac, renal, and neurologic disease. The high and continually growing rate of people with chronic illness resulting in suicide in both men and women and the dearth of information regarding suicide rates and chronic illness lends importance to an investigation such as this. In patients with advanced chronic illness (very low survival rate and very poor quality of life), psychological distress, particularly depression, is a major risk factor for suicide

and for requests to hasten death (Chochinov et al, 1995). Thus, there is every likelihood that at some time everyone will hear a physician say that a condition is chronic and cannot be cured; it can only be managed. This chronic condition will ultimately be the cause of our death.

Based on the literature discussed earlier, the following hypothesis were made:

H1: Based on the total RFL score, women will report higher reasons for living than men.

H2: Based on the total RFL score, individuals without chronic illness will report higher reasons for living than individuals with chronic illness.

H3: Based on the total RFL score, women with chronic illness will report higher scores on the Fear of Suicide subscale of the RFL than men with chronic illness.

H4: Based on the total RFL score, women with chronic illness will report higher scores on the Survival and Coping Beliefs subscale of the RFL than men with chronic illness.

H5: Based on the total RFL score, women with chronic illness will report higher scores on the Responsibility and Family subscale of the RFL than men with chronic illness.

H6: Based on the total RFL score, women with chronic illness will report higher scores on the Moral Objections subscale of the RFL than men with chronic illness.

H7: Based on the total RFL score, men with chronic illness will have fewer reasons for living than women with

chronic illness.

H8: Based on the total RFL score, men with chronic illness will report higher scores on the Fear of Social Disapproval subscale of the RFL than women with chronic illness.

H9: Based on the total RFL score, women with chronic illness will report higher scores on the Child Related Concerns subscale of the RFL than men with chronic illness.

CHAPTER 2

METHOD

Participants

Participants were obtained from undergraduate classes at East Tennessee State University where they received extra credit, according to course policy, for voluntary participation in the study.

Measures

Participants received a packet containing a demographic questionnaire and the 48-item Reasons for Living inventory (See Appendix). A page of written instructions preceded each copy of the inventory asking participants to complete the inventory regarding their personal reasons for living.

The Reasons for Living Inventory consists of 48 items that participants rate on a Likert-type scale of one (Not at all Important) to six (Very Important). These 48 items comprise six distinct subscales: Survival and Coping Beliefs, Responsibility to Family, Child Related Concerns, Fear of Suicide, Fear of Social Disapproval, and Moral Objections.

The Reasons for Living Inventory (Linehan et al., 1983) has been shown by several studies (Osman, Gifford, et al., 1991; Osman, Jones, et al., 1991; & Osman, Gregg, et al., 1992) to be both a reliable and valid measure of an

individual's reasons for not committing suicide, as well as an individual's suicidality, through both total RFL score and scores on the six subtests. The RFL has a high internal consistency and test-retest reliability. Internal consistency for the entire inventory and for each subscale was assessed by the Cronbach coefficient alpha. The coefficient for the entire inventory was 0.70, and coefficients for subscales ranged from 0.79 to 0.90. Test-retest reliability for the inventory was also quite high and significant ($r=.83$) (Osman, Gregg, et al., Osman, Jones, et al.). In terms of validity, the RFL has been shown to differentiate between suicidal and non-suicidal individuals, as well as suicide attemptors and non-attemptors, in both a shopping mall sample and a clinical population of psychiatric inpatients (Linehan et al., 1983). Research involving a college population (Connell & Meyer, 1991) revealed that the RFL's subscales distinguished between suicidal and non-suicidal individuals, and that non-suicidal individuals had greater Survival and Coping Beliefs, greater Responsibility to Family and Moral Obligations.

Procedure

Approval from the Institutional Review Board (IRB) with an "Exemption Status" was first established. Students were asked to participate as subjects in the study during their regularly scheduled classes. The general

purpose of the study was explained to the students. Students were also notified regarding the procedures for addressing distress and discomfort felt during the study. All participants received verbal instructions from the researcher before the RFL inventory was completed. Upon completion of the study, which took approximately 30 minutes, the researcher was ready to answer any questions and provide any information on where students would obtain crisis and counseling services if needed. If a student subject should appear to be in distress any time during the study, one of the clinical psychologists in the department was called upon or the Counseling Center was contacted. All subjects were also offered a summary of findings upon completion of data analysis.

Experimental Design

The research design used in this study is a 2 (Gender) X 2 (Chronic Illness) independent groups factorial design with unequal cell sizes. The independent variables examined are gender (male, female) and chronic illness (ill or not ill). The dependent variables are the six subscales on the RFL and the total RFL score. Results will be analyzed using a one-way analysis of variance (ANOVA) for each of the six dependent variables to test for significant differences. An overall alpha level of $p < .05$ will be used to test for significance of each hypothesis.

CHAPTER 3

RESULTS

Of the 48 men and 112 women who participated in this study, 42 participants reported a diagnosis of chronic illness. The independent variables examined were gender (male and female) and chronic illness (ill or not ill). A one-way analysis of variance (ANOVA) was performed to examine differences on the total RFL scores and the RFL subscale scores.

Hypothesis 1, which stated that women would report higher reasons for living than men as measured by the total RFL score was confirmed, $F(1,154) = 13.25$, $p < .001$. (See Table 1). See Table 2 for RFL mean scores for men and women.

Hypothesis 2 which stated that based on the total RFL score, individuals without chronic illness would report higher reasons for living than individuals with chronic illness was not confirmed (See Table 1). See Table 3 for RFL mean scores for illness.

TABLE 1
ANOVA: REASONS FOR LIVING (RFL) TOTAL SCORE

Source of Variation	Sum of Squares	<u>Df</u>	Mean Square	<u>F</u>	<u>P</u>
Main Effects	5.801	2	2.901	6.795	0.001
Sex	5.657	1	5.657	13.254	0.000
Illness	0.830	1	0.830	1.945	0.165
2-Way Interactions					
Sex	1.433	1	1.433	3.358	0.069
Illness	1.433	1	1.433	3.358	0.069
Explained	5.813	3	1.938	4.540	0.004
Residual	65.733	154	0.427		
Total	71.547	157	0.456		

TABLE 2
RFL MEAN SCORES FOR MEN AND WOMEN

Subscale	Men (<u>n</u> =49)	Women (<u>n</u> =109)
Surv. and Cop. Beliefs	4.80 (.75)	4.93 (.76)
Resp. to Family	4.01 (1.29)	4.54 (1.01)
Child Rel. Concerns	3.56 (1.72)	4.00 (1.89)
Fear of Suicide	1.90 (0.92)	2.68 (1.14)
Fear of Soc. Disapp.	2.68 (1.62)	2.99 (1.54)
Moral Objections	3.96 (1.19)	4.41 (1.21)
Total RFL Score	3.95 (.64)	4.26 (.73)*

Note: Scores range from 1 to 6

* p < .001

TABLE 3
RFL MEAN SCORES FOR THE ILLNESS GROUPS

Subscale	Ill (<u>n</u> =42)	Not Ill (<u>n</u> =118)
Surv. and Cop. Beliefs	4.78 (.77)	4.93 (.75)
Resp. to Family	4.42 (1.13)	4.36 (1.13)
Child Rel. Concerns	3.84 (2.02)	3.87 (1.79)
Fear of Suicide	2.39 (1.22)	2.46 (1.10)
Fear of Soc. Disapp.	2.71 (1.68)	2.96 (1.52)
Moral Objections	4.39 (1.12)	4.22 (1.25)
Total RFL Score	4.14 (.72)	4.18 (.72)

Note: Scores range from 1 to 6

Hypothesis 3 which stated that, based on the total RFL score, women with chronic illness would report higher scores on the Fear of Suicide subscale of the RFL than men with chronic illness was not confirmed (See Table 4).

TABLE 4
ANOVA: RFL FEAR OF SUICIDE SUBSCALE

Source of Variation	Sum of Squares	<u>Df</u>	Mean Square	<u>F</u>	<u>P</u>
Main Effects	17.956	2	8.978	7.597	0.001
Sex	17.829	1	17.829	15.088	0.000
Illness	0.346	1	0.346	0.293	0.589
2-Way Interactions					
Sex	0.157	1	0.157	0.133	0.716
Illness	0.157	1	0.157	0.133	0.716
Explained	21.645	3	7.215	6.106	0.001
Residual	177.258	150	1.182		
Total	198.903	153	1.300		

Hypothesis 4 which stated that, based on the total RFL score, women with chronic illness would report higher scores on the Survival and Coping Beliefs subscale of the RFL than men with chronic illness was not confirmed (See Table 5).

TABLE 5
ANOVA: RFL SURVIVAL AND COPING SUBSCALE

Source of Variation	Sum of Squares	<u>Df</u>	Mean Square	<u>F</u>	<u>P</u>
Main Effects	2.189	2	1.095	1.922	0.150
Sex	1.328	1	1.328	2.332	0.129
Illness	1.346	1	1.346	2.363	0.126
2-Way Interactions					
Sex	1.410	1	1.410	2.476	0.118
Illness	1.410	1	1.410	2.476	0.118
Explained	2.369	3	0.790	1.386	0.259
Residual	85.429	150	0.570		
Total	87.798	153	0.574		

Hypothesis 5 which stated that, based on the total RFL score, women with chronic illness would report higher scores on the Responsibility and Family subscale of the RFL than men with chronic illness was not confirmed (See Table 6).

TABLE 6
ANOVA: RFL RESPONSIBILITY TO FAMILY SUBSCALE

Source of Variation	Sum of Squares	<u>Df</u>	Mean Square	<u>F</u>	<u>P</u>
Main Effects	12.986	2	6.493	5.332	0.006
Sex	12.786	1	12.786	10.501	0.001
Illness	0.126	1	0.126	0.104	0.748
2-Way Interactions					
Sex	4.013	1	4.013	3.295	0.071
Illness	4.013	1	4.013	3.295	0.071
Explained	13.199	3	4.400	3.613	0.015
Residual	182.645	150	1.218		
Total	195.844	153	1.280		

Hypothesis 6 which stated that, based on the total RFL score, women with chronic illness would report higher scores on the Moral Objection subscale of the RFL than men with chronic illness was not confirmed (See Table 7).

TABLE 7
ANOVA: RFL MORAL OBJECTIONS SUBSCALE

Source of Variation	Sum of Squares	<u>Df</u>	Mean Square	<u>F</u>	<u>P</u>
Main Effects	10.268	2	5.134	3.556	0.031
Sex	9.644	1	9.644	6.679	0.011
Illness	0.004	1	0.003	0.003	0.959
2-Way Interactions					
Sex	3.034	1	3.034	2.101	0.149
Illness	3.034	1	3.034	2.101	0.149
Explained	10.581	3	3.527	2.443	0.066
Residual	222.362	154	1.444		
Total	232.943	157	1.484		

Hypothesis 7 which stated that based on the total RFL score, men with chronic illness would have fewer reasons for living than women with chronic illness was not confirmed (See Table 1).

Hypothesis 8 which stated that, based on the total RFL score, women with chronic illness would report higher scores on the Fear of Social Disapproval subscale of the RFL than men with chronic illness was not confirmed (See Table 8).

TABLE 8
ANOVA: RFL FEAR OF SOCIAL DISAPPROVAL SUBSCALE

Source of Variation	Sum of Squares	<u>Df</u>	Mean Square	<u>F</u>	<u>P</u>
Main Effects	5.300	2	2.650	1.075	0.344
Sex	3.808	1	3.808	1.545	0.216
Illness	2.670	1	2.670	1.083	0.300
2-Way Interactions					
Sex	0.476	1	0.476	0.193	0.661
Illness	0.476	1	0.476	0.193	0.661
Explained	5.930	3	1.977	0.802	0.495
Residual	379.645	154	2.465		
Total	385.575	157	2.456		

Hypothesis 9 which stated that, based on the total RFL score, women with chronic illness would report higher scores on the Child Related Concerns subscale of the RFL than men with chronic illness was not confirmed (See Table 9).

TABLE 9
ANOVA: RFL CHILD RELATED CONCERNS SUBSCALE

Source of Variation	Sum of Squares	<u>Df</u>	Mean Square	<u>F</u>	<u>P</u>
Main Effects	9.892	2	4.946	1.454	0.237
Sex	9.820	1	9.820	2.886	0.091
Illness	0.915	1	0.915	0.269	0.605
2-Way Interactions					
Sex	3.368	1	3.368	0.990	0.321
Illness	3.368	1	3.368	0.990	0.321
Explained	9.962	3	3.321	0.976	0.406
Residual	510.434	150	3.403		
Total	520.396	153	3.401		

There was one significant difference found that was not hypothesized and may be of interest. Gender differences were found on the RFL Fear of Suicide subscale between MEN and WOMEN $F(7,597) = 0.000$ $\underline{p} < 0.001$ (See Table 4) and on the RFL Responsibility to Family subscale between MEN and WOMEN, $F(5,3320) = 0.006$ $\underline{p} < 0.001$ (See Table 6).

CHAPTER 4

DISCUSSION

This study was designed to examine gender differences in coping with chronic illness and identify the different adaptive reasons for living in men and women affected by chronic illness. The majority of the studies of psychological disorders in patients with chronic illness have focused mainly on elderly patients or patients with AIDS or cancer. There is relatively little published literature about psychological issues affecting patients with end-stage renal, lung, cardiac, and neurologic disease. The high and continually growing rate of people with chronic illness resulting in depression often leading to suicide makes it imperative to examine, study, and gain insight into suicidal behaviors and find more effective interventions to help this particular population.

Hypothesis 1, which stated that women would report higher reasons for living than men as measured by the total RFL score, was confirmed. This finding is consistent with most current research, which makes sense intuitively when considering that women may have more reasons for living due to their family and social commitments. Men often rely on their spouses as the sole source of emotional and social support, whereas women typically name other women as confidants and mostly have a support system outside the

family circle.

Hypothesis 2 was not confirmed. Hypothesis 2 stated that individuals without chronic illness would report higher reasons for living than individuals with chronic illness. This was probably due to the mean age of the population used, and also due to the nature of illnesses found in a college population. The illnesses that occurred most commonly among the participants were allergies, asthma, and migraine headaches. These illnesses are chronic and can be debilitating, but on the other hand these conditions can be treated effectively in order to give patients much relief. It is encouraging to see that these participants are adaptive in the face of their illnesses and do not let their illness limit their lives.

Hypothesis 3 was not confirmed. Hypothesis 3 stated that women with chronic illness would report higher scores than men with chronic illness on the Fear of Suicide subscale of the RFL as measured by the total RFL score. This finding is inconsistent with current research, showing that females have a greater fear of death and injury. Males in general tend to employ more lethal methods such as firearms and hanging while females in general are likely to ingest drugs or cut their wrists.

Hypothesis 4 was not confirmed. Hypothesis 4 stated that women with chronic illness would report higher scores than men with chronic illness on the Surviving and Coping

Beliefs subscale of the RFL as measured by the total RFL score. This finding is also consistent with current research that shows that gender differences in coping beliefs were minimal. This finding to me is encouraging because it shows that men do not feel as isolated as before and have developed more meaningful supportive relationships.

Hypothesis 5 was not confirmed. Hypothesis 5 stated that women with chronic illness would report higher scores than men with chronic illness on the Responsibility and Family subscale of the RFL as measured by the total RFL score. This finding is also consistent with current research that shows that gender differences in responsibility to family was minimal. This is possibly because a lot of the participants did not have children. This could also indicate that those male participants who do have children are taking more of an interest in child rearing. Current research does support this ongoing trend of men acquiring more androgynous skills that furthers adaptiveness.

Hypothesis 6 was not confirmed. Hypothesis 6 stated that women with chronic illness would report higher scores than men with chronic illness on the Moral Objections subscale of the RFL as measured by the total RFL score. As found in Hypothesis 4 and 5 current research also supports this finding because gender differences in matters of moral obligations were minimal too.

Hypothesis 7 was not confirmed. Hypothesis 7 stated that men with chronic with illness would have fewer reasons for living than women with chronic illness as measured by the total RFL score. This result was not shown in this sample due to the low incidence of chronic illness (25%), and the fact that there more than twice as many female participants (69.4%) as male participants (30.6%).

Hypothesis 8 was not confirmed. Hypothesis 8 stated that men with chronic illness would report higher scores than women with chronic illness on the Fear of Social Disapproval subscale of the RFL as measured by the total RFL score. This finding is not consistent with current research and refutes historical trends that show that women had a greater fear of death and injury, whereas men had a far greater fear of social disapproval.

Hypothesis 9 was not confirmed. Hypothesis 9 stated that women with chronic illness would report higher scores than men with chronic illness on the Child Related concerns subscale of the RFL as measured by the total RFL score. This is very interesting and encouraging for me because these scores lean towards men being more adaptive and engaging in family activities such as child rearing.

Limitations

As most research projects, this study had several limitations. One limitation of this study was the small

number of subjects and the disproportionate number of men (48) and women(112). Results obtained from studies using a small number of subjects may be less likely to produce significant gender differences. Another limitation of this study was the use of college students instead of an appropriate clinical population. Only 25% of this population had chronic illness. Due to this limitation one must be cautious when generalizing the results of this study to individuals in the general population. A final limitation of this study was the demographic homogeneity of participants. The majority of respondents in this study were young (mean age 19.6 years) and Caucasian (89.7%). This may have influenced the results in that maturation and cultural differences may affect an individual's reasons for staying alive.

Future Research

The results of this study demonstrate that gender differences in suicide mortality reflect differences in coping. These results warrant the need for additional research that investigates the reasons for living among men and women. Even though the present study did not indicate that chronic illness is one of the factors that precipitates suicide, research shows that in chronically ill patients depression is a major risk factor for suicide. It is

necessary for researchers to discover additional reasons for living for these individuals to keep them from committing suicide in the face of debilitating and painful disease. This knowledge of adaptive coping strategies will be useful in treating individuals with chronic illness.

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APPENDICES

APPENDIX A
Demographic Questionnaire

Please fill in the blank, or circle the correct answer. Do not put your name on this page or any of the remaining pages.

Age: _____

Sex: 1. Female
2. Male

Marital status: 1. Single
2. Married
3. Separated
4. Divorced
5. Widowed

Do you have children? Yes or No.

Race: 1. Asian
2. African-American
3. Hispanic
4. White
5. Other

Do you have a chronic illness? Yes or No.
A chronic illness is defined as a physical or mental condition not cured by medical interventions, requiring periodic monitoring and care, to reduce the degree of the illness in order to maximize the person's functioning.

If you do have a chronic illness, fill in the name of the illness.

Examples of chronic illness are;
Seizures, Chronic Fatigue Syndrome, Irritable Bowel Syndrome, Chronic pain, Allergies, Arthritis, Diabetes, Obesity, Auto-Immune Diseases (Lupus), Cancer, AIDS, Renal failure, Cardiovascular disease, PTSD, Bipolar Disorder, and Schizophrenia.

How long ago were you diagnosed with a chronic illness?

1. Less than one year
2. More than one year
3. More than five years
4. More than ten years

To what extent does your illness interfere with your daily activities?

1. To a small degree
2. To a moderate degree
3. To a large degree

Are you in a lot of pain? Yes or No.

Do you take medications? Yes or No.

If yes how many medications do you take daily?

- 1 - 3
- 3 - 5
- 5 - 7

Do you experience any adverse side effects from the medications you take? Yes or No. If yes what are they?

Do you have medical insurance? Yes or No.

Do you have family and/or social support? Yes or No.

If yes, do you have family members or friends that you can talk to about your illness and its effects on you?

Do you participate in individual psychotherapy? Yes or No.

Do you participate in group therapy? Yes or No.

Do you belong to a support group? Yes or No.

Have you ever thought of committing suicide due to your illness? Yes or No.

If yes, have you ever tried to kill yourself before? Yes or No.

If yes, How?

APPENDIX B

Reasons for Living Inventory

RFL-48

Many people have thought of suicide at least once. Others have never considered it. Whether you have considered it or not, we are interested in the reasons you would have for not committing suicide if the thought were to occur to you or if someone were to suggest it to you.

On the following pages are reasons people sometimes give for not committing suicide. We would like to know how important each of these possible reasons would be to you at this time of your life as reasons to not kill yourself. Please rate this in the space at the left of each question.

Each reason can be rated from 1 (Not At All Important) to 6 (Extremely Important). If a reason does not apply to you or if you do not believe that the statement is true, then it is not likely to be important to you and you should put a 1. Please use the whole range of choices so as to not rate only at the middle (2,3,4,5) or only at the extremes (1,6).

In each space put a number to indicate the importance to you of each reason for living.

1 = Not at all important (as a reason for living, as a reason for u killing myself, or does not apply to me, or I do not believe this at all).

2 = Quite unimportant

3 = Somewhat unimportant

4 = Somewhat important

5 = Quite important

6 = Extremely important (as a reason for living, as a reason for not killing myself, I believe this very much, and it is very important).

We are interested in your REASONS FOR LIVING. Therefore even if you never have or firmly believe you would never seriously consider killing yourself, it is still important that you rate each reason for living.

In each space, put a number to indicate the importance to you of each statement as a reason for living (or reason for not killing yourself if you were to ever consider it).

In each space put a number to indicate the importance to you of each item for not killing yourself.

1 = Not at all important

4 = Somewhat important

2 = Somewhat unimportant

5 = Quite important

3 = Somewhat unimportant

6 = Extremely important

- _____ 1. I have a responsibility and commitment to my family.
- _____ 2. I believe I can learn to cope with my problems.
- _____ 3. I believe I have control over my life and destiny.
- _____ 4. I have a desire to live.
- _____ 5. I believe only God has the right to end life.
- _____ 6. I am afraid of death.
- _____ 7. My family might believe I did not love them if I took my own life.
- _____ 8. I do not believe that things get miserable or enough that I would rather be dead.
- _____ 9. My family depends upon me and needs me.
- _____ 10. I do not want to die.
- _____ 11. I want to watch my children as they grow.
- _____ 12. Life is all we have and is better than nothing.
- _____ 13. I have future plans I am looking forward to carrying out.
- _____ 14. No matter how badly I feel, I know that it will not last.

- | | |
|--------------------------|-------------------------|
| 1 = Not at all important | 4 = Somewhat important |
| 2 = Somewhat unimportant | 5 = Quite important |
| 3 = Somewhat unimportant | 6 = Extremely important |

- ____ 15. I am afraid of the unknown.
- ____ 16. I love and enjoy my family too much and could not leave them.
- ____ 17. I want to experience all that life has to offer and there are many experiences I haven't had yet which I want to have.
- ____ 18. I am afraid that my method of killing myself would fail.
- ____ 19. I care enough about myself to live.
- ____ 20. Life is too beautiful and precious to end it.
- ____ 21. It would not be fair to leave the children for others to take care of.
- ____ 22. I believe I can find other solutions to my problems.
- ____ 23. I am afraid I am going to hell.
- ____ 24. I have a love of life.
- ____ 25. I am too stable to kill myself.
- ____ 26. I am a coward and do not have the guts enough to do it.
- ____ 27. My religious beliefs forbid it.
- ____ 28. The effect on my children could be harmful.
- ____ 29. I am curious about what will happen in the future.

- | | |
|--------------------------|-------------------------|
| 1 = Not at all important | 4 = Somewhat important |
| 2 = Somewhat unimportant | 5 = Quite important |
| 3 = Somewhat unimportant | 6 = Extremely important |

- ____ 30. It would hurt my family too much (if I took my own life) and I would not want them to suffer.
- ____ 31. I am concerned about what others would think of me.
- ____ 32. I believe everything has a way of working out for the best.
- ____ 33. I could not decide where, when, and how to do it.
- ____ 34. I consider it morally wrong.
- ____ 35. I still have many things left to do.
- ____ 36. I have the courage to face life.
- ____ 37. I am happy and content with my life.
- ____ 38. I am afraid of the actual "act" of killing myself (the pain, blood, violence).
- ____ 39. I believe killing myself would not really accomplish or solve anything.
- ____ 40. I have hope that things will improve and future will be happier.
- ____ 41. Other people would think I am weak and selfish if I killed myself.
- ____ 42. I have an inner drive to survive.
- ____ 43. I would not want people to think I did not have control over my life.

1 = Not at all important

4 = Somewhat important

2 = Somewhat unimportant

5 = Quite important

3 = Somewhat unimportant

6 = Extremely important

____ 44. I believe I can find a purpose in life, a reason to
live.

____ 45. I see no reason to hurry death along.

____ 46. I am so inept that my method would not work.

____ 47. I would not want my family to feel guilty
afterwards (if I killed myself).

____ 48. I would not want my family to think I was selfish
or a coward.

VITA

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