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Religious Coping and Depression in Home Care Patients

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Religious Coping and Depression in Home Care Patients

by

Kirsten Ingheim

A Doctoral Project submitted in partial satisfaction
of the requirements for degree of
Doctor of Psychology

August 2007

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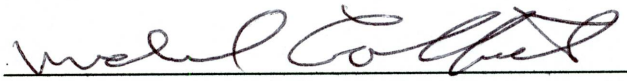

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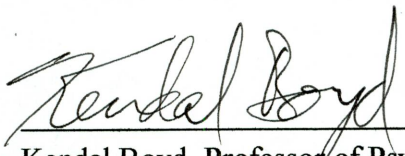

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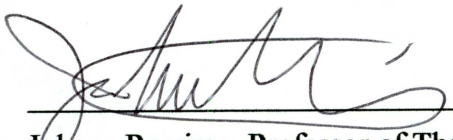

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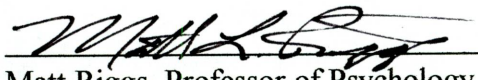

Matt Riggs, Professor of Psychology

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ABSTRACT OF THE DOCTORAL PROJECT

Religious Coping, Functional Status, Quality of Life,
and Depression in Home Care Patients

by

Kirsten Ingheim

Doctor of Psychology, Graduate Program in Psychology
Loma Linda University, August 2007
Michael Galbraith, Ph.D., Chairperson

This study examined the impact of a medical illness in 36 elderly male and female home health care patients with a primary diagnosis of heart disease, cancer, diabetes, or chronic obstructive pulmonary disease (COPD) and how they coped with their medical condition. Relationships between depression and religious coping, functional status, quality of life, and depression, as well as relationship between functional status and quality of life were investigated. In addition, a moderating effect of the relationship between functional status and depression by religious coping was explored. The participants completed the Religious Problem-Solving Scale (RPSS) (Collaborative, Deferring, and Self-Directing), the SF-12 Health Survey (Physical Health and Mental Health), the Duke Activity Status Index (DASI), and Beck Depression Inventory-II (BDI-II). The data were analyses by means of Pearson correlation coefficients and multiple regression analyses. The test results suggested that mental health was the only significant predictor of level of depression. Furthermore, the results indicated a strong relationship between functional status and physical health as well as mental health, suggesting that decreased physical functioning due to a medical illness diminished the quality of life. Finally, Collaborative and Deferring coping styles did not significantly moderate the relationship between Functional Status and Depression. However, the main effects of the

two coping styles were significant with medium-large (Collaborative) and medium (Deferring) effect sizes. Despite the small moderating effect of the two coping styles, these findings are still important and useful. They draw attention to clinical importance. Evaluation of patients' religious problem solving or coping style appears to be helpful in detecting depression, and identification of depression in home care patients makes determination of treatment needs possible and provides opportunities for improved quality of life for this population. The small sample size is a limitation of this study. Further study of religious coping styles as moderators of the relationship between depression and physical functioning in a large study with a more representative sample is recommended for clarification of the impact religious coping may have on depression and major health related stressors in home health care patients.

Statement of the Problem

Depression is a common mental disorder among the elderly (Miletich, 1997; Koenig, 1999; Bruce et al., 2002). As the population ages, depression is inclined to become increasingly prevalent, and there are several possible reasons for a high rate of depression among the elderly, such as loss of family and friends, and medical illness (Perry et al., 1998). Elderly people with medical illness are more susceptible to depression than the elderly without medical illness (Aromaa et al., 1994; McDaniel et al., 1995; Talbot & Nouwen, 2000; McKinney & Begany, 1994). It has been found that medical illness is common among the elderly. As one grows older, he/she becomes more susceptible to numerous diseases due to various reasons such as bodily deterioration, genetic heritage, and life style (Whitman et al, 1999). Medical illness frequently interferes with the daily life of the individuals it affects, and the effects are usually physical as well as emotional (Aromaa et al, 1994; McDaniel, 1995; Talbot & Nouven, 2000; McKinney & Begany, 2000).

Besides the effects of medical illness on physical and psychological well-being, depression has been found to have a negative impact on the quality of life in areas of emotional, social, cognitive, and physical functioning (Grassi et al., 1996; Jaarsveld et al., 2001; Dalton & Busch, 1995). Thus, for the elderly with a medical disease, susceptibility to depression is highly increased, and depression often leads to decreased quality of life (Boult et al. 1994; Dalton & Busch, 1995). However, since not everybody with a medical condition in late life experience depression at the same level (Koenig, 1998; Koenig et al, 2001a), some buffers appear to moderate the outcome of this relationship.

Religious coping plays a major role in the lives of some people. That is particularly true, as they grow older (Koenig, 1999). These individuals oftentimes turn to religion for solutions to their problems. How an individual perceives the role of religion in a stressful event such as dealing with a medical disease has been found to influence depression. Greater religiosity tends to be associated with less depression (Koenig et al., 2001a; Pargament et al., 1988).

Changes in the health care system in recent years have resulted in a rapid growth of the home health care health services (Bruce et al., 2002). This shift has largely taken place because of the belief that home health care is cheaper than either acute hospital care or nursing home care. In addition, it presents an opportunity for patients to receive care in their home environment (Brickner et al., 1997). However, for the medically ill, who are being discharged earlier from the hospital or nursing home, the ability to perform activities of daily living might not be sufficient for self-support. Decline in functional status of the medically ill with diagnoses such as heart disease, cancer, stroke, chronic obstructive pulmonary disease (COPD), and diabetes has created a great need for health care in the home (Fultner & Raudonis, 2000). Functional limitation, leading to difficulty leaving home for treatment and often to home-boundness, is a diminished ability to perform activities of daily living (Boult et al., 1994).

Investigation of the mental health needs of home health care patients has been limited and neglected (Bruce et al., 2002). Recent research (Bruce et al., 2002) suggests that undetected and untreated depression in home health care patients is common, despite findings of major depression being twice as common in home care patients than in patients receiving primary care. Koenig (1999) believes that between 70 to 90% of cases

of depression were undiagnosed, probably due to symptoms such as fatigue and weight loss, being attributed to other medical problems by the physicians. For that reason, Koenig suggests that more research on late-life depression needs to be conducted. However, according to Koenig (1999), religion can play a major role in the health of elderly patients. He suggested that older medically ill patients with "a strong intrinsic faith" recover 70 to 100% more quickly from depression than older medically ill patients without " a strong intrinsic faith."

The purpose of this study is to investigate the impact of medical illness in home health care patients and how they cope with their medical condition. More specifically, the relationships between depression and religious coping, functional status, and quality of life will be examined as well as the relationship between functional status and quality of life. Furthermore, the study will attempt to determine if religious coping moderates the relationship between functional status and depression among the elderly, suffering from a medical disease. Cardiovascular disease, cancer, diabetes, and chronic obstructive pulmonary disease (COPD) have been found to be most prevalent among elderly home health care patients and will be the focus of this study (Munson, 1999). Besides being homebound because of the functional status limitations, other similarities among these four categories of patients are reported susceptibility to depression (Doerfler et al., 1997; Pennix et al., 1998; Talbot & Nouwen, 2000; Yohannes et al., 1998) and decreased quality of life (Hobbs et al., 2002; Gilbar et al., 2001; Blake-Mortimer, 1999; Breslin et al., 1998; Siddique et al., 2002). In view of the growing need for health care in the home and the lack of research of depression among elderly home health care patients (Bruce et al., 2002), elderly home health care patients will be the focus of this study.

Review of the Literature

Medical Disease and Home Care

A medical disease is a pathological condition of the body (Taber's Cyclopedic Medical Dictionary, 1993). It can be defined as "any deviation from or interruption of the normal structure or function of a part, organ, or system of the body as manifested by characteristic systems and signs" (Dorland's Illustrated Medical Dictionary, 2000). Living with a medical disease is a daily challenge, which often leads to impairment of organ systems and limitation of functional activities of daily living such as bathing, dressing, food preparation and decreased mobility (Boult et al., 1994). Boult defines functional limitation as a restricted capacity to perform activities that are imperative to daily living, leading to dependency and inability to leave the home. Among the most common medical conditions that lead to functional limitations in the elderly are cerebrovascular disease, coronary artery disease, cancer, diabetes, and chronic obstructive pulmonary disease (Boult et al., 1994; Lewis, 2001).

Home-boundness due to functional limitations often prohibits elderly with a medical disease from seeking medical treatment outside the home (Lewis, 2001). Homebound patients are confined to the home, because leaving home would require a considerable and taxing effort (Marrelli, 2001). The trend toward earlier discharges from hospitals and other acute care settings to home have increased the need for home health care, because some type of professional care may still be required (Lewis, 2001). Home health care is a health service provided by visiting nurses, physical therapists, occupational therapists, speech therapists, and social workers with support from lay caregivers. Topinkova (1994) stated that "professionals in the field of aging " and the elderly themselves prefer home

care to institutional care. Two reasons for this preference are the right of disabled individuals to continue to live on their own by choice and utilization of alternative less expensive services as home health care versus costly hospital care.

The impact of a home care program on hospital utilization was investigated by Landi et al. (1999). The participants were frail elderly patients with a primary diagnosis of cardiovascular disease, neurological disorder, cancer, pulmonary disease or diabetes mellitus. Findings of this study indicate that implementation of home care services decreased the average hospital stay considerably. The reduced utilization of hospital care resulted in lower total cost during the six months post intervention. The cost reduction amounted to 29% with an estimated saving of $1260 per patient during this period of six months, and the number of hospitalizations were reduced by 10%.

The adequacy of home care for elderly patients with congestive heart failure (CHF) and re-admissions of these patients were examined by Proctor et al. (2000). He reported that CHF is the most common disease among home care patients. The results of this study suggest that during the first two weeks after discharge, elderly people with CHF who were sicker, exhibited less compliance with the medical treatment, and received inadequate home care, were most likely to be re-admitted to the hospital. Proctor et al. (2000) concluded that home health care should be recognized as an important component in the period following discharge from an acute setting, particularly for patients with the diagnosis of a predictable and high cost medical illness that causes re-admissions, such as CHF among elderly patients. Landi et al. (1999) also implied that home health care could reduce the health care cost of frail elderly people.

Another group of patients that can benefit from home care are older patients with cancer. A longitudinal study over a period of 44 months by McCorkle et al. (2000) was conducted for assessment of the usefulness of home health care services. The survival rate among older post-surgical cancer patients receiving home health care services was compared with the survival rate among older post-surgical cancer patients, who were not recipients of home health care services. As a whole, the group receiving home health care intervention was found to have increased survival rates. Two years after discharge from the hospital, the survival rate for the intervention group of late-stage cancer was 67% compared with 40% of the control group of late stage. Reduced physical and psychological distress with improved function among the intervention group compared with the control group suggests benefit from home health care intervention. The intervention was a standardized protocol with comprehensive clinical assessment, monitoring, teaching, and skills training of patients and caregivers over four weeks immediately after discharge from hospital. The cancer sites were as follows: breast, colorectal, head/neck, lung, prostate, gynecologic, bladder/renal, and eso/pancreatic. (McCorkle et al., 2000).

As suggested by the research reported above, elderly patients with a medical illness such as cancer, diabetes, congestive heart failure, and chronic obstructive pulmonary disease benefit from home health care services immediately after discharge from hospital to home. These four categories of patients share not only home-boundness due to decreased functional status, but also proneness to depression. However, the impact of religious coping was not assessed.

Depression

Research has demonstrated an association between living with chronic medical conditions, such as cardiovascular disease, cancer, diabetes, and COPD and the incidence of depression in the elderly (Aromaa et al., 1994; Newport and Nemeroff, 1998; Talbot & Nouwen, 2000; Yohannes et al., 1998). The connection between medical illness and depression can occur biologically and psychologically. Depression can be an emotional result of medical illness as well as a cause of exacerbation of the symptoms of the medical condition. Depression affects feelings, thoughts, physical health, and behaviors. Symptoms of depression might be difficult to detect due to an overlap in how physical symptoms are expressed in the medical conditions. However, dysphoria and anhedonia in addition to at least four of the following symptoms: fatigue, appetite change, sleep disorder, low self-esteem or guilt, poor concentration, psychomotor retardation or agitation, and thoughts of suicide must be present for a diagnosis of depression (Young, 1997; Marble, 1997). Dysphoria is "a state of feeling unwell and unhappy" and anhedonia is "a psychological condition characterized by inability to experience pleasure in normally pleasurable acts" (Merriam-Webster's Collegiate Dictionary, 1998). Approximately 10% to 20% of patients with coronary artery disease experience severe and persistent mood disturbances (Doerfler et al., 1997). However, even mild and moderate levels of depression, as seen in cardiac patients, have an impact on functional disability and exacerbation of the cardiac symptoms (Doerfler et al., 1997).

Depression in older people, according to Livingston et al. (1999), is probably most consistently associated with physical illness and debility. The prevalence of depression among the physically ill is twice that of elderly, who are in good health. In particular,

older people, who are prone to depression because of functional limitations, often have poorer quality of life. In addition, this patient group is also most likely to not being able to leave their home. Therefore, they qualify for home health care (Boult et al., 1994; Marrelli, 2001).

However, the lack of recognition of depression in elderly home health care patients leads to a lack of treatment for depression (Bruce et al., 2002; Brown et al., 2001; Dalton & Busch, 1995). Marble (1997) suggests that approximately six million older people suffer from depression. One million is affected by major depression, whereas significant depressive symptoms influence another five million. Marble (1997) implies that only one tenth of the depressed elderly receives treatment because of lack of recognition of the disease. Koenig (1999) suggests that approximately 70% to 90% of late-life depression is undiagnosed. A study by Bruce et al. (2002) found that the majority of elderly depressed home health care patients (78%) did not receive treatment and a third received inappropriate treatment. According to a study by Dalton and Busch (1995), 40 of the participants had scores in the depressive range of the Geriatric Depression Scale. Of 11 depressed homebound elderly, only five were recognized as depressed. The authors emphasize that despite a lack of statistical significance due the small sample, the finding has clinical implications. Problems with not diagnosing depression in the elderly homebound can lead to diminished or lack of quality of life (Dalton & Busch, 1995).

Cardiovascular Disease

Cardiovascular disease is the leading cause of death in the United States. Approximately 959,000 persons died from this disease in 1996. Cardiovascular diseases include congestive heart failure, coronary artery disease, hypertensive heart disease,

rheumatic heart disease, vascular heart disease, infective endocarditis, congenital heart disease, cardiomyopathy, arrhythmias, conduction disorders, hypertension, peripheral vascular disease, and stroke (Koenig et al., 2001b). The three most common types of heart disease will be described below.

Congestive heart failure (CHF) is one of the most common forms of heart disease. It is a leading cause of disability, hospitalization, morbidity, and mortality and is often the result of other heart diseases such as coronary artery disease and hypertensive heart disease. A key symptom is the inability of the heart to pump sufficient blood out into the body, which causes blood to accumulate in the lungs, thus making it difficult to breathe (Koenig et al., 2001b).

Coronary artery disease (CAD) is caused by the presence of plaque arteriosclerosis in the coronary arteries which cause a narrowing in the vessel (Chandra & Hazinski, 1994). Lack of blood to the heart due to arteriosclerosis of the arteries causes angina (chest pain) or myocardial infarction. Angina pectoris is a transient pain due to a temporary lack of blood supply to the heart. The location of the pain may be in the center of the chest, spreading usually to the left shoulder, neck, jaw, or upper mid-portion of the abdomen. Acute myocardial infarction (heart attack) is the result of severe narrowing or blockage of a coronary artery, causing deprivation of blood to an area of the heart. The heart attack patient complains about severe, persistent pain or discomfort in the chest. The warning signs of a heart attack are discomfort in the chest, nausea, sweating, a feeling of weakness, and shortness of breath (Chandra & Hazinski, 1994).

Hypertensive heart disease is a condition, caused by pumping of blood by the heart against increased vascular resistance due to hypertension. This can cause enlargement of

the heart that leads to decreased contractility and heart failure. Hypertension has been defined by the World Health Organization as a systolic pressure greater than 160 mm HG, a diastolic pressure greater than 90, or both. It is a major risk factor for myocardial infaction and stroke, and it affects up to 20% of the population in the industrial countries (Rubin & Faber, 1999).

Depression and Cardiovascular Disease

Investigations of the relationship between cardiovascular disease and depression over the past 30 years has indicated that cardiovascular diseases may be linked to clinical and even less severe cases of depression. This link is especially strong in the elderly (Aromaa et al., 1994). A longitudinal study, conducted from 1978 to 1981, by Aromaa et al. (1994) examined the association between depression and cardiovascular disease. The participants, 5,355 persons aged 40 and older, residing in 40 areas of Finland, were suffering from cardiovascular, respiratory, musculoskeletal or mental disorders. The instruments, utilized in this study, were the General Health Questionnaire and a short version of the Present State Examination, a standardized psychiatric interview schedule. The findings indicated a strong association between depression and various medical diseases, with the strongest associations existing between depression, congestive heart failure, and coronary artery disease. The authors suggested that depression might not only be a result of cardiovascular disease: rather, depression might be a risk factor for cardiovascular disease.

Depressive symptoms among patients with acute myocardial infarct (AMC) and congestive heart failure (CHF) were reported as results of a longitudinal study, conducted by Jaarsveld et al. (2001). The participants for this study were 89 AMC and 119 CHF

patients. Both groups experienced an increase in depression six and twelve months after being diagnosed (Jaarsveld et al., 1993). Another study on depression in patients with five different cardiac diseases discharged from the hospital and living at home, was conducted by Doerfler et al. (1997). The participants were mainly white males (82%). The results indicated low levels of depression for all the participants. However, there was considerable variability in depression score. Dysphoria, weight loss, irritability, hopelessness, insomnia, and decreased libido were reported by approximately 40% of the participants. The authors indicated that functional disability in cardiac patients is impacted by even low levels of depression.

In sum, cardiovascular disease, which includes heart disease, hypertension, peripheral vascular disease, and stroke, is the leading cause of death in the United States (Koenig et al., 2001b). The relationship between cardiovascular disease and depression has been investigated during the past 30 years and indicated a possible causal relationship (Aromaa et al., 1994). Studies within the last decade (Jaarsveld et al., 1993; Aromaa et al., 1994; Doerfler et al., 1997) confirm strong associations between depression and especially severe diseases such as congestive heart failure and coronary artery disease with angina.

Cancer

Cancer is the medical condition most likely of all to create the most fear in patients. It is usually associated with a conception of pain, disfiguration, and an early death. Cancer is the second leading cause of death with an increase of 20% in the past 30 years. In 1999, more than 1,500 persons died each day of cancer and approximately 3,300 new cases of cancer were daily diagnosed in the United States. Approximately 8.2 million

Americans are cancer survivors. The lifetime probability of contracting cancer for a man in the United States is 50% and 33% for a woman (Koenig et al., 2001b).

Lung, breast, prostate, colon, cervical, and upper gastrointestinal tract malignancies are the most common types of cancer. The most frequent cancer diagnoses for men are those of prostate, lung, and colon or intestine. Malignancies of breast, lung, and colon or intestine are the most frequent types of cancer experienced by women. Causes of cancer are both internal and external. Internal causes include hormones, immune conditions, and inherited mutations. Among external causes are radiation, chemicals, and viruses (Koenig et al., 2001b). The effects of cancer are diverse, for the most part local effects of either the primary tumor or metastases nature (Rubin & Faber, 1999). However, systemic effects of cancer are common. They are often the first clinical signs of a malignancy and therefore important to recognize. Frequent systemic symptoms include fever, fatique, anemia, anorexia and weight loss.

Neurological disorders, common in cancer patients, can include sub-acute motor neuropathy, amyotrophic lateral sclerosis, sensori-motor peripheral neuropathy, sensory neuropathy, and autonomic and gastrointestinal neuropathies. Dermatomyositis or polymyositus and Eaton-Lambert syndrome are skeleton muscle syndromes that can be associated with cancer. Seventy percent of men older than 50 years with dermatomuositis or polymyositis have cancer. Eaton-Lambert syndrome is a myasthenic disorder strongly associated with small cell carcinoma of the lung (Rubin & Faber, 1999).

Depression and Cancer

Psychological distress and depression are extremely common in patients diagnosed with cancer. Receiving a diagnosis of cancer causes emotional states of despair, anxiety,

and hopelessness, and it usually creates an immediate sense of loss and life threat (McDaniel et al., 1995). Depression and depressive symptoms in cancer patients are frequent natural responses to the physical symptoms the cancer patients endure. Massie and Holland (1990) indicate that at least 25% of hospitalized cancer patients meet the criteria for major depression. However, the prevalence rates for depression vary notably among different primary tumor sites with 50% of pancreas and oropharyngeal cancers displaying the highest rates. Prevalence of depression in cancer patients with other primary tumor sites was found to be as follows: breast from 10% to 26%, colon from 13% to 32%, gynecological from 23% to 25%, and lymphoma 17% (Newport and Nemeroff, 1998; McDaniel et al., 1995). Prevalence of depression in 86 home care advanced cancer patients, aged 38 to 87, was reported by 45% of the patients, assessed by the Hospital Anxiety Scale and the European Organization for Research Treatment of Cancer Quality of Life Questionnaire (Grassi, 1996). This indicates that regardless of tumor site, cancer patients are more likely to meet the criteria for depression than the general population (Newport & Nemeroff, 1998), and risk of suicide among cancer patients is twice that of the general population (McDaniel et al., 1995). For the general population, the lifetime risk for major depressive disorder is 20% to 25% for women and 7%to 12% for men. The point prevalence is 5% to 9% for women and 2% to 12 % for men (Newport & Nemeroff, 1998).

Risk factors for depression in cancer patients are severity of the cancer, pain, declining physical status and functional level, requirement for continuing treatment, and socioeconomic factors. In addition to psychosocial stressors in developing depression and depressive symptoms, biological stressors might contribute to the incidence of

depression. Biological factors include effects of cancer treatment such as radiation therapy and chemotherapy (Newport & Nemeroff, 1998). Drug induced depression in breast cancer patients has been associated with Tamoxifen. The results of assessment for depression of 250 breast cancer patients by one oncologist over a period of one year indicated clinical depression of 15% of the Tamoxifen group (155 participants), whereas 3% of the No-Tamoxifen group was found to be clinically depressed. It was suggested that Tamoxifen might play a double role in depression by itself and by blocking estrogen, resulting in lack of estrogen. Clinical depression may be a common side effect of Tamoxifen (Thompson et al., 1999). Psychosocial risk factors include history of premorbid coping skills, external locus of control, conforming personality style, and social isolation (Newport & Nemeroff, 1998).

In sum, prevalence of depression has been found to be more likely among cancer patients than the general population. However, depression has also been reported to be a risk factor for cancer. Recent research supports the assumption that depressed mood increases the risk of cancer (Pennix et al., 1998; Croyle, 1998).

Diabetes Mellitus

According to Lewis (2001), diabetes is one of the top chronic diseases prevalent among Americans 62 years and older. Diabetes mellitus is a condition with complex metabolic unbalance, characterized by insulin deficiency. There are two forms of diabetes, insulin dependent diabetes mellitus (IDDM) which is also known as type I or juvenile onset diabetes and non-insulin dependent diabetes mellitus (NIDDM) which is also referred to as type II or maturity onset diabetes (Rubin & Faber, 1999). Insulin, which is a hormone produced in the islets of Langerhans in the pancreas, regulates the

amount of glucose in the blood. Genetic and environmental factors might contribute to the development of IDDM as well as an auto-immunity factor. Impaired insulin secretion and reduced sensitivity to insulin characterize the non-insulin dependent diabetes mellitus (NIIDM). A major factor of this disorder is genetic, with 60% of patients having either a parent or a sibling suffering from NIDDM. Other factors involve the glucose metabolism, insulin resistance, and β-cell function. This disease is found to be more common in the elderly and the obese (Rubin & Faber, 1999).

Cardiovascular disease is a major cause of death among adults with diabetes. Diabetics also experience microvascular disease, which leads to decreased healing of ulcers, developed after trauma or infection, particularly in the extremities. This might result in toe, foot, below knee or above knee amputations. Major complications of diabetes are diabetic nephropathy, diabetic retinopathy, and diabetic neuropathy. Diabetic nephropathy causes kidney disease which is the most common reason for renal transplantation. Diabetic retinopathy is the most frequent cause of blindness in the United States. It causes peripheral sensory impairment of nerves, and it is the most common complication of diabetes. Symptoms are pain and abnormal sensations in the extremities. Loss of fine touch sensation and proprioception cause instability gait and increased risk for falls. Loss of pain detection causes risk for injury as burns (Rubin & Faber, 1999).

Depression and Diabetes Mellitus

Depression has been associated with diabetes. It has been found that depression is more prevalent among adult diabetes patients than the general population (Talbot & Nouwen, 2000). The stress of living with a chronic debilitating disease and resulting biochemical changes have been found to be responsible for depression in diabetes

patients (Talbot & Nouwen, 2000). Approximately 13 million Americans have diabetes. Daily management of this disease can be demanding and can create chronic stress and depression (Bailey, 1996). Evidence of relationship between depression and diabetes has been demonstrated with clinical depression being two to three times more likely to be prevalent in individuals with diabetes than the general population (Egede et al., 2002; Anderson et al., 2001; Bailey, 1996). Findings of a meta-analysis of 42 studies indicated prevalence of depression in diabetes patients twice that of the non-diabetic comparison group. Of the 42 studies, 20 included a non-diabetic comparison group. However, the prevalence of comorbid depression differed between diabetic women (28%) and diabetic men (18%), between uncontrolled (30%) and controlled (21%) studies, between clinical (32%) and community (20%) samples, and between assessment by self-report questionnaires (31%) and standardizes diagnostic interviews (11%) (Anderson et al., 2001).

Risk factors for depression in diabetic patients include poor metabolic control, poor diet, poor compliance to medication regimen, psychosocial demands, and psychosocial factors related to diabetes (Egede et al., 2002; Talbot & Nouwen, 2000). Depression has been associated with hyperglycemia and increased risk for diabetic complications while relief of depression is associated with improved blood glycose levels in diabetic patients (Talbot, 2000; Anderson et al., 2001).

Chronic strains, associated with diabetes and its debilitating effects, have been related to depression, a sense of mastery, and self-esteem. A study by Bailey (1996) examined the relationship between depression and four chronic strains of diabetes: complications, regimen demands, effect on daily life, and metabolic control. Highly

educated participants, aged 21 to 81, with a majority being white female comprised the sample of 120. The results of this study demonstrated a relationship between depression and complications, regimen demands, and effect of daily life (Bailey, 1996). A reciprocal interaction between depression and diabetes might exist, because depression might not only be a result of diabetes but it might also be a risk factor for onset of type 2 diabetes and development of diabetic complications (Talbot, 2000).

In sum, individuals with diabetes are two to three times more likely to suffer from clinical depression than the general population (Egede et al., 2002; Anderson et al., 2001; Bailey, 1996). Risk factors for depression in diabetes patients include poor diet, poor compliance to medication regimen (Egede et al., 2002; Talbot & Nouwen, 2000) and chronic strain such as complications, regimen demands, effects on daily life, and metabolic control (Bailey, 1996).

Chronic Obstructive Pulmonary Disease (COPD)

COPD is a major cause of morbidity and disability among the elderly. Approximately 16% of individuals over the age of 65 are affected by respiratory impairment, causing decreased physical functioning (Peruzza et al., 2002). COPD consists primarily of chronic bronchitis and emphysema and is a progressive, degenerative process with no cure (Rubin & Faber, 1999). Chronic bronchitis is defined as chronic cough without a detectable cause for more than half the time over a period of two years. Emphysema is a chronic lung disease with enlargement of the bronchioles (Rubin & Faber, 1999). The major origin of chronic bronchitis and emphysema is cigarette smoking since a majority of chronic bronchitis and emphysema patients are smokers. The symptoms are shortness of breath, cough, sputum production, and

wheezing due to airflow obstruction, air trapping, hyperinflation, and impaired gas exchange. In advanced stages of COPD patients also exhibit poor exercise tolerance, loss of appetite, weight change, and fatigue. Risk factors for development of COPD include a family history of pulmonary diseases, smoking, and contact with allergens, irritants, and infection (Rubin & Faber, 1999).

Depression and Chronic Obstructive Pulmonary Disease (COPD)

Almost half of the 20 million Americans diagnosed with chronic obstructive pulmonary disease (COPD) suffer from depression (McKinney & Begany, 1994; Gift & McCrone, 1993). A study by Yohannes et al. (1998) found prevalence of depression in COPD patients to be 46%. The participants were 96 outpatients, aged 70 to 93 years, with symptomatic irreversible COPD. The Brief Assessment Schedule Depression Cards (BASDEC) questionnaire was utilized for assessment of depression in this study.

Dysthymia, adjustment disorder with depressed mood, and major depression are three types of depressive symptoms described by McKinney and Begany (1994). According to the authors, dysthymia is the most common type of depressive disorder among COPD patients. It is characterized by a mood of general depression and irritability, and it must have at least two of the following symptoms: insomnia or hypersomnia, under- or overeating, fatigue, low self-esteem, feelings of hopelessness, and difficulty concentrating or decision making, lasting for up to at least two years.

Adjustment disorder with depressed mood is another common disorder in COPD patients. Its characteristics are depressed moods with crying, irritability, and a feeling of hopelessness. The third and least common depressive disorder is a major depression with persistent depression, irritability, and a feeling of hopelessness. In addition, four of the

following symptoms must be present on a daily basis for at least two weeks: agitation, sleep disturbance, loss of interest in usual interests, significant changes in weight or appetite, feelings of worthlessness, inability to concentrate, thoughts of death or suicide (McKinney and Begany, 1994). Although depression is common in the elderly COPD patients as well as young adults with COPD, the elderly are more inclined to develop COPD, and the elderly sick are more susceptible to depression (Yohannes et al., 1998).

In sum, depression is a significant problem in the elderly with a chronic medical illness (Talbot & Nouwen, 2000; McDaniel et al., 1995; Aromaa et al., 1994; McKinney & Begany, 1994; Doerfler et al., 1997; Jaarsveld et al., 1993; Massie & Holland, 1990). Depression and depressive symptoms are complicating factors to medical illness, however, often undiagnosed and thus untreated (Dalton & Busch, 1995; McKinney & Begany, 1994). Dalton and Busch (1995) suggested that despite 27.5% home health care patients scoring in the depressive range of the Geriatric Scale, the home health care nurses failed 100% of the time to document depression-related nursing diagnoses. In spite of lack of statistical significance due to the small sample size, the authors emphasized the clinical implications of this study. In order to provide proper care, it is critical that depression is correctly identified and managed.

Quality of life

Functional limitations as well as depression of the medically ill influence quality of life (Boult et al. 1994; Dalton & Busch, 1995). Swenson and Clinch (2000) suggest that quality of life is a perceived functional effect by the patient and note that quality of life has been considered interchangeable with health status and functional status. According to Jaarsveld et al. (2001), the World Health Organization (WHO) defines quality of life as

an individual's perception of how well he or she is doing according to his or her goals, expectations, standards, and concerns which are influenced by his or her culture and value systems. Quality of life is a broad, global construct, encompassing realms such as, physical, psychological, and social functioning. The impact of medical illness and depression on the quality of life has been the focus of investigation, particularly in recent years (Jaarsveld et al., 2001; Grassi et al., 1996).

The quality of life of patients with cardiovascular diseases has been examined in numerous studies. A study by Hobbs et al. (2002) investigated the quality of life of 5961 patients with chronic cardiac and medical disorders. The participants completed the SF-36 Health Questionnaire, which is a multidimensional scale measuring eight health dimensions. Findings from this study suggest that patients with heart failure experienced significant loss of all aspects of quality of life. The impact of paroxysmal atrial fibrillation on quality of life of 73 patients was examined by Van Den Berg et al. (2000). For assessment of quality of life, the SF-36 questionnaire was completed by the participants. These findings indicate significant impairment in all areas of quality of life due to their heart disease. Todero et al. (2002) examined the quality of life of 102 home care patients with heart failure and found that fatigue, shortness of breath, and depression were among the most common symptoms, which suggested significant impairment in most aspects of quality of life. A study by Jaarsveld et al. (2001) investigating acute myocardial infarction, congestive heart failure, and quality of life, found that significant decreased quality of life was reported by the participants, especially in social and role functioning. Other studies (Swenson & Clinch, 2000; Goldsmith et al., 2001; Martensson

et al., 1998) also support the relationship between cardiac disease and impaired quality of life as well.

The relationship between quality of life and cancer has been investigated extensively. Gilbar et al. (2001) conducted research on possible differences in relation to depression and depressive symptoms between individuals with and without cancer. Four self-administered questionnaires were used to compare of quality of life. The findings suggested significant differences in quality of life between the cancer group and the control group. A study by Grassi et al. (1996) examined the prevalence of depression and its relationship with quality of life in 86 home care patients with various types of advanced cancer. The results indicated that 45% of the participants reported depressive symptoms. The instruments for this study were Hospital Anxiety Scale and Depression Scale (HAD) and European Organization for Research Treatment of Cancer (EORTC-QlQ-30). Among other studies suggesting negative impact of a cancer diagnosis on quality of life are those of Clark et al. (1997) and Blake-Mortimer et al. (1999).

The effects of COPD on daily life leading to decreased quality of life of patients with COPD have been investigated as well. A study by Anderson (1995), examining the effect of COPD on quality of life of 126 patients with COPD, suggested that depression, self-esteem, social support, and age impacted quality of life. Instruments for this study were interviews and Dyspnea Visual Analogue Scale (DVAS) for self-reported dyspnea intensity. The impact of COPD on the functional status and quality of life of 60 elderly patients as compared to 58 healthy elderly controls was the focus of research conducted by Peruzza et al. (2003). The patients with COPD exhibited decreased quality of life, decreased exercise tolerance, and decreased mood.

Another study, conducted by Breslin et al. (1998), investigated the relationship between fatigue, pulmonary function, exercise tolerance, and quality of life in 41 patients with COPD. Mental as well as physical fatigue was found to impact quality of life. Prevalence and depression in patients with COPD were the focus of a study by Lacasse et al. (2001). Their findings suggested a significant association between depression and COPD.

The impact of diabetes on the quality of life was demonstrated in a study by Siddique et al. (2002). The participants consisted of 482 individuals with diabetes and 422 non-diabetic individuals. They completed the SF-12 Health Survey, which assessed a physical and a mental health component. The results of this study indicated significantly poorer physical quality of life as well as poorer mental health quality of life among diabetic individuals with motility-related gastrointestinal symptoms. A Swedish study by Wandell and Tovi (2000), assessing quality of life of 177 diabetic patients and using the Swedish Health-Related Quality of Life Survey (HRQoL), showed poorer quality of life in seven of the 13 areas assessed by the HRQoL. These 7 areas included general health perceptions, physical functioning, satisfaction with physical health, role limitations due to physical health, pain, sleep problems, and role limitations due to emotional health.

Diabetes is associated with visual impairment and vision loss. Sinclair et al. (2000) examined the visual acuity and quality of life among 385 patients with diabetes mellitus and 385 non-diabetic individuals. The SF-36 Health Survey was used for assessment of quality of life. The findings of this study demonstrated significant visual impairment among the diabetic patients which in turn influenced their quality of life. Depression has been associated with diabetes. A study by Ciechanowski et al. (2000) included 367

patients with types 1 and 2 diabetes. They completed four questionnaires, the Hopkins Symptom Checklist-90, the Diabetes Knowledge Assessment, the Summary of Diabetes Self-Care, and the SF-12 Health Survey. Depression was found to be associated with the physical as well as the mental health component of quality of life of the diabetic patients.

The impact on quality of life of medical diseases such as cardiovascular diseases, cancer, COPD, and diabetes mellitus, has been the focus of extensive research and has been summarized above. This impact might be affected by how patients employ coping tactics. However, individual coping may vary.

Coping Strategies

Living with a medical illness is a challenge, often with the emotional consequence of depression. However, not all medically ill individuals develop depression. The prevalence of depression and depressive symptoms varies greatly among patients with medical illness, and identification of depressed medically ill patients is of extreme importance for control and alleviation of depression which may lead to an improvement in their quality of life (Koenig, 1998; Jaarsveld et al., 2001).

Coping with a major stressful situation is a complex process. It includes appraisals of the situation by the person experiencing the event and acting upon the appraisals. Coping has been defined by Folkman and Lazarus (1980) as the cognitive and behavioral attempts to manage, tolerate, or reduce external and internal demands and conflicts among them. There are two forms of coping, problem-focused and emotion-focused coping. Problem-focused coping pertains to an attempt of management of stress caused by the person-environment relationship, whereas emotion-focused coping attempts to

manage the emotions of the person experiencing the stress (Folkman & Lazarus, 1980; Bickel, 1998).

Despite our individual differences, we tend to have norms and standards within which we operate, and this includes norms and standards for coping with traumas. Coping strategies involved in a severe, stressful event are numerous, and there is no single approach to coping that is superior to other approaches. It depends on the person and the situation. Some examples of coping strategies are distancing, escape-avoidance, social support, perceived stress, optimism, and positive thinking (Taylor et al., 2000). There are also positive and negative coping patterns and active versus passive control styles in dealing with a loss. Unsuccessful coping with stress might threaten one's health. Whether coping is successful or unsuccessful depends on whether there is a reduction of physiological arousal as indicated by increased heart rate, pulse, and skin conduction. Unsuccessful coping with major stressful life events might cause the onset of a serious illness or exacerbate an existing disease. Successful coping depends on internal resources, coping styles, personal attributes, external resources, as time and social support (Taylor et al., 2000).

Research has suggested that religion is a construct which might predict or modify health behaviors. It often plays a major role in coping with a serious health problem. Religious coping has been found to have an effect on mental as well as medical illness (Koenig et al., 2001a).

Religious coping is the focus of this study; specifically how patients use religious coping to deal with chronic medical diseases and their effects. People often turn to religion for comfort when uncontrollable circumstances occur. It gives consolation, hope,

and meaning for individuals who are aware of their human limitations. Furthermore, religious coping is readily available to the person who has already integrated religion as part of his life (Pargament, 1997). Tix and Frazier (1998) define religious coping as the use of cognitive or behavioral techniques that emerge from one's religion or spirituality during stressful life events.

Religious Coping

In times of hardship, people often turn to their religion for relief from their difficult situation. Defining religion is an intricate task because religion means different things to different people. The following definition is an attempt by Koenig et al. (2001b) to capture the overall meaning and purpose of religion:

> Religion is an organized system of beliefs, practices, rituals, and symbols designed (a) to facilitate closeness to the sacred or transcendent (God, higher power, or ultimate truth / reality) and (b) to foster an understanding of one's relationship and responsibility to others in living together in a community (page 18).

Religious coping has been one way in which people have coped with critical life events/situations. Religious coping is not new; however, the study of the concept of religious coping has been undertaken relatively recently in the scientific literature.

According to Pargament (1997), there are three good reasons to study religion and coping. We learn about coping, religion, and the practical implications. We learn about both the dark sides, e.g., confusion and disillusion, and the encouraging sides, e.g., persistence and courage, of the human condition. Nevertheless, crises are often resolved without religiousness if an individual does not have a religious orientation and these strategies can be successful. When religious coping is being employed, people are searching for meaning within their lives during a period of crisis. However, many people

are looking toward religion for meaning within their lives in general and not only in periods of crisis. According to Pargament, the general purposes of religion are spiritual, growth, comfort, meaning, problem solving, hope, self-esteem, intimacy, restraint, and release. Religious figures such as Abraham, Jacob, Paul, and David are examples of individuals who employed religious coping in crisis situations. Pargament (1997) mentions how other religious figures such as Confucius, Muhammad, and Luther coped with crisis in their lifetimes and suggests that religious coping still has its place among coping strategies today.

The impact of religious coping during stressful life events was investigated by Tix and Frazier (1998). In this longitudinal study, the effects of religious coping among individuals confronting the common stressful situation of a kidney transplantation was examined to determine the roles of religion during stressful times. The results suggested that religious coping was associated with better psychological adjustment for individuals during traumatic life events. The authors encourage further study of the potential benefits of religious coping (Tix & Frazier, 1998). Results, reported by Fabricatore et al. (2000), supported the findings of Tix and Frazier. The impact of personal spirituality on well-being and the role of personal spirituality as a moderator of the stress experienced by both major life events and minor hassles were examined. The findings indicated that both dimensions of subjective well-being, satisfaction with life, and affective well-being, were predicted by stressors and personal spirituality was a moderator of the relationship between stressors and life satisfaction. The authors suggested further study of religion and spirituality to answer questions regarding how an individual's religiousness or spirituality helps in stressful life situations.

Pargament describes three styles of religious coping: Self-Directing, Deferring, and Collaborative. The Self-Directing style is an approach to coping, where people rely on themselves rather than God. It is not an anti-religious style but a coping style for people with a greater sense of personal control over their lives. The Deferring style is a passive approach to coping, where people defer the responsibility for resolving the problem to God. The emphasis is on dependence on God being in control of the problem and the solution. In the Collaborative approach to coping, the individual and God participate in the coping process. God and the individual both contribute to the solution of the problem or crisis (Pargament, 1997).

Religious Problem-Solving Scale with the three sub-scales of religious coping was developed to assess religious problem solving (Pargament, Kennell, Hathaway, Grevengoed, Newman, & Jones, 1988). These three scales focus on the individual's relationship to God in two important areas: locus of responsibility for the coping or problem-solving process and level of activity in this process. The findings indicated three styles with different approaches to problem solving as well as differences in relating to measures of religiousness and competence. Both Deferring and Collaborative coping styles related directly to religiousness. However, the Deferring style suggested extrinsic religious orientation and control by God whereas the Collaborative style implied intrinsic religious orientation (Pargament, 1988). The Self-Directing style emphasized the God-given freedom to personally direct one's life.

Research has indicated that anxiety correlates positively with the Self-Directing coping style but negatively with the Deferring and the Collaborative styles (Wong-McDonald, 2000). The Deferring and the Collaborative coping styles were associated

with greater involvement in religion than the Self-Directing approach to problem solving. However, Self-Directing and Collaborative styles offer more opportunities for personal initiative and responsibility than the Deferring style. The results of this study emphasized the important, diverse roles of religion in problem solving (Pargament et al., 1988).

Religious Coping, Depression, and Functional Status

Research on using religion as a coping mechanism to adapt to medical illness such as heart disease, renal failure, neurological disease, and several other physical disorders was reviewed by Koenig et al. (2001a). In general, physically ill individuals seeking comfort from their religion were found to experience relief from stress and a sense of hope. They were able to cope better with serious medical illnesses rather than being defeated or overcome by them. Collaboration with God during these difficult times appeared to be related to positive mental health, whereas self-directing coping was associated with "greater risk" of depression and lower quality of life. Koenig et al. (2001b) demonstrated considerable evidence of prevalence of religious coping in medical illness and thus support the suggestion that religion seems to provide a better adaptation to medical illness. According to these authors, health is the strongest predictor of well-being in older people, and religion might assist in promoting certain attitudes that provide well-being and quality of life. Koenig et al. (2001a) support that the relationships between health, religion, and quality of life seem to provide hope and a sense of meaning, purpose, and control in life during times of dealing with disabling medical illness and functional limitations.

An inverse relationship between religious coping, depression, and depressive symptoms was demonstrated in a longitudinal study by Koenig et al. (1992). Religious

coping was examined during a period of approximately two years. Participants included 850 men, aged 65 and over who were suffering from medical diagnoses such as cancer, cardiovascular disease, respiratory disease, renal disease, neurological disease, or gastrointestinal problems. The findings showed that religion was used in managing stress caused by the disease and their impaired functional status. Religious coping was the most important approach in dealing with medical illness for one of every five participants (Koenig et al., 1992).

A study by Idler and Kasl (1992) examined the impact of religion on functional disability and depression in a sample of 2,812 people over the age of 65. The authors hypothesized that religion would have a protective effect against distress, particularly in groups that are more vulnerable. They concluded from the findings that religion, particularly religious involvement, has a powerful effect on the health of the elderly. The results of the effect of private religiousness were less evident. Idler and Kasl (1997) performed a longitudinal analysis of the effect of religion on functional disability. Among the participating patient groups were patients with diabetes and CHF. They found that religious behavior and attitude were strong predictors of improved functioning and well-being.

Other studies have supported the existence of an association between religious coping, medical illness, functional status, and well-being. Koenig (1998) found that 42% of the participants reported religion to be the most important coping strategy. The author concluded that religious coping is prevalent among older medically ill individuals. One limitation of this study might be the geographical location of the study. The author states that North Carolina is in the "Bible Belt south," indicating that religion is "deeply

ingrained into the social fabric of society." However, Koenig argues that, since Gallup Polls suggest similar findings of religiosity among older Americans from various parts of the U.S., the results of his study might represent older medically ill individuals from other regions of the U.S. than North Carolina.

Another study (Koenig, Pargament, & Nielsen, 1998), examined the relationship between health status and religious coping in 577 medically ill hospitalized elderly patients. Findings from this study supported the results from previous studies with an overall utilization of religious coping by the participants. Positive and negative coping strategies utilized by the participants were measured. Among the positive, collaborative coping with God was found to be related to better mental health and less depression. However, a self-directed religious coping approach without God's assistance indicated greater depression. The findings suggested that the correlation between Collaborative religious coping and depressed mood was significantly inversely correlated, while the Self-Directing religious coping was significantly positively correlated with depressed mood (Koenig et al., 1998).

Pargament's three styles of religious coping are frequently used to measure religious coping variations among individuals. Whether the religious strategy remained the same across stressful situations, and whether the religious coping was state- or situation dependent or trait-dependent, has been the focus of research investigation. Schaefer and Gorsuch (1993) conducted a study on situational and personal variation in religious coping, using the measure of Self-Directing, Deferring, and Collaborative religious coping styles. The results from this study indicated that the degree of religious coping changed according to the situation. Furthermore, findings suggested a tendency to

increase as well as decrease of the Collaborative and Deferring coping styles together in relation to the situations, whereas the Self-Directing coping style was inclined to change in the opposite direction. The participants in this study were undergraduate students and adult members from three churches (Schaefer & Gorsuch, 1993).

Another study examined the existence of the three religious coping styles, Self-Directing, Deferring, and Collaborative, on a group of college students with no particular traumatic experience. The participants were compared in terms of trait anxiety, depression, and physical health. The findings did support the existence of the three religious coping styles but no group differences were found for the three outcome measures. According to Kolchakian and Sears (1999), the null findings of this study suggest that it might only be during periods with severe traumatic life events, such as uncontrollable medical conditions, that religious coping benefits are observed. This appears to support the findings of Schaefer & Gorsuch (1993) who stated the degree of religious coping used might change according to one's circumstances.

Further research in this area was performed by Maynard, Gorsuch, and Bjorck (2001), who explored 129 college students' three religious coping strategies of Collaborative, Deferring, and Self-Directing with different stressful scenarios of threat, loss, and challenge. The findings from this study indicated that the individuals might maintain religious coping styles across the three stressful scenarios. Furthermore, these religious coping styles might be stable and trait-specific. Personal variables, such as concept of God, religious participation, and religious importance might have a mediating function in the religious coping process. Negative correlations between these three personal variables and Self-Directing religious coping style were more consistent than the

positive correlations between the three personal variables and Collaborative and Deferring coping styles were (Maynard, Gorsuch, & Bjorck, 2001).

The literature indicates a moderating effect of religious coping on stressful life events (Tix & Frazier, 1998; Fabricatore et al., 2000; Wang & Patten, 2002). Tix and Frazier (1998) indicated that religious coping was related to better psychological adjustment following stressful life events. These relationships were even stronger than non-religious coping strategies, such as problem-solving and cognitive restructuring. In this study, they investigated the effects of religious coping among individuals who were confronted with the common stressful situation of having a renal transplantation. The authors concluded that the result of their study supports the converging body of research that demonstrates religious coping as an effective coping approach to stressful situations and life events. However, further investigating of religious coping and its mediating effect is recommended.

Fabricatore et al. (2000) reported results of personal spirituality as a moderator of the relationship between stressors, subjective well-being, and life satisfaction for undergraduate students at a private, religiously affiliated college. In another study (Wang & Patten, 2002), it was suggested that prayer and seeking comfort and strength through religion might moderate the effect of stress on major depression.

In sum, research suggests that religious coping might be related to better psychological adjustment following a stressful life event such as a medical illness (Koenig et al., 2001b; Tix & Frazier, 1998). Religious behavior and attitude have been found to be strong predictors of improved functioning and well-being (Idler & Kasl, 1997). However, religious coping might vary among individuals. Pargament's three

styles of religious coping indicate variations in religious problem solving style and their outcomes. Collaborative coping style has been found to be inversely correlated with depression whereas the relationship between Self-Directing coping style and depression is positively correlated (Koenig et al., 1998). Furthermore, Collaborative and Deferring coping styles tend to increase and decrease together in relation to a situation or an event and Self-Directing coping style tends to change in the opposite direction (Schafer & Gorsuch, 1993). Recent studies (Schaefer & Gorsuch, 1993; Kolchakian and Sears, 1999; Maynard, Gorsuch, & Bjorck, 2001; Fabricatore et al., 2000) have utilized undergraduate students as participants, which limit the external validity. Generalization from these studies is a challenge and a potential problem when considering the older population who are homebound individuals due to medical illness.

Bruce et al. (2002) emphasize the lack of research on depression among home care patients by stating that their study (2002) was the first to explore this area. According to these authors, previous studies have indicated extensive prevalence of depression in elderly medically ill inpatients and nursing home residents but a lack of research on depression in home health care patients. However, research on the effect of religious coping on depression, caused by medical illness and functional status in home health care patients with medical illness appears to be limited, too.

As previously noted, Koenig et al. (1998) found religious coping to be positive as well as negative, utilizing the RCOPE. The Religious Problem-Solving Scale (RPSS) has shown similar results. The three different coping styles have been found to relate differently to religion. The Deferring and Collaborative styles indicate a higher level of active participation in religion than the Self-Directing style does (Pargament et al., 1988).

The three coping styles have also been found to relate differently to depression (Pargament, 1988). As there are individual differences in maintaining control in stressful situations or life events (Thompson et al., 1993), individuals approach religious problem-solving differently (Pargament, 1997). However, there is not much research on the effect of religious coping among elderly home care patients with medical illness, suffering from depression. The principal area of interest in this study is how Self-Directing, Deferring, and Collaborative coping styles relate to levels of depression.

Elderly patients with a medical illness are prone to depression. Decreased functional status is often a result of the medical illness. Thus, depression and functional limitation, often leading to home-boundness, decrease the quality of life of the medically ill patient. A segment of the elderly ill relies on religion for coping with the disease and its consequences. Religious coping will moderate the depression for the elderly, whose religious problem solving is deferred to God or collaborative between God and the elderly. This study will attempt to provide a greater understanding of the contributions of Religious Coping, Functional Status, and Quality of Life to Depression, and how religious coping might influence the impact of a medical illness. The hypotheses are as follows:

Hypothesis 1

Self-Directing religious coping style, Collaborative religious coping style, Deferring religious coping style, Functional Status, and Quality of Life will predict the level of Depression. Collaborative religious coping, Deferring religious coping style, Functional Status, Physical Health Scale of Quality of Life, and Mental Health Scale of Quality of

Life will have negative standardized beta coefficients. Self-Directing religious coping style will have positive standardized beta coefficient.

Hypothesis 2

2A: Functional Status will predict the level of Physical Health Scale of Quality of Life.

2B: Functional Status will predict the level of Mental Health Scale of Quality of Life.

Hypothesis 3

3A: The relationship between Functional Status and Depression will be moderated by the Collaborative religious coping style.

3B: The relationship between Functional Status and Depression will be moderated by the Deferring religious coping style.

Methods

The variables in the study are: Religious Coping (Self-Directing, Collaborative coping styles, and Deferring), Functional Status, Quality of Life (Physical Health Component and Mental Health Component), and Depression.

Participants

The participants were identified by the Loma Linda Home Care office supervisor from a computer-generated list with ICD-9-CM codes, indicating a primary diagnosis of cardiovascular disease, cancer, diabetes or chronic obstructive pulmonary disease (COPD). Of a total of 490 patients, who met the inclusion criteria, 36 returned completed questionnaires. In addition, three home health care patients returned the envelopes with notes stating that they did not want to participate. One questionnaire was returned with a note stating that the patient was not able to participate, and six letters with notes that the patient had passed away were received. The sample included twenty-eight male and eight female home health care patients, age 62 to 89 years (M = 76.8, SD = 7.3), from Loma Linda Home Care, associated with Loma Linda University Medical Center. Nineteen patients, discharged within the past year, and seventeen active cases of current patients with a primary diagnosis of cardiovascular disease (16), cancer (7), diabetes (9), or chronic obstructive pulmonary disease (COPD) (2) comprised the sample. The participants reported their religious affiliation as follows: Adventist (4), Baptist (2), Catholic (6), Methodist (3), Non-Denominational (7), and Other (12). See Table 1A for demographics.

Instruments

The Religious Problem-Solving Scale (RPSS). (Pargament, Hathaway, Grevengoed, Newman, & Jones, 1988). (See Appendix A). The scale was developed from interviews of 15 adult interviewees with open-ended questions about their utilization of religion in problem solving and from a literature review (Pargament, Hathaway, Grevengoed, Newman, & Jones, 1988). It comprises 36 items, scored on a five points Likert scale, ranging from "Never" (1) to "Always" (5).

The Religious Problem-Solving Scale consists of three sub-scales, the Collaborative, Self-Directing, and Deferring religious coping styles. The three styles were identified through factor analysis. They differ from each other on two dimensions of the relationship between God and the individual: locus of responsibility for the coping process and the level of activity in this process. (Pargament et al., 1988).

The Collaborative scale includes 12 items. It measures problem solving with participation of God and the individual. An example of a question is "When considering a difficult situation, God and I work together to think of possible solutions." The Cronbach's alpha value is .94 (Pargament et al., 1988).

The Self-Directing scale has 12 items, indicating the individuals' reliance on themselves rather than on God. An example of a question is "I act to solve my problems without God's help. Chronbach's alpha for this scale is .94 (Pargament et al., 1988).

The Deferring religious coping style, which consists of 12 items, measures a passive approach to religious coping with all responsibility deferred to God. An example of a question is "I do not think about different solutions to my problems because God

provides them for me." Chronbach's alpha for the Deferring style was found to be .91 (Pargament et al., 1988).

The SF-12 Health Survey (Ware, Kosinski, & Keller, 1996). (See Appendix A). This scale is a shorter version of the SF-36 Health Survey. It was developed from a subset of 12 items from the SF-36 Health Survey, utilizing data from the National Survey of Functional Health Status (NSFHS) and the Medical Outcomes Study (MOS). The 12 items cover eight domains of health: physical functioning, role limitations due to physical health (role-physical), bodily pain, general health perceptions, vitality, social functioning, role limitations due to emotional problems (role-emotional), and mental health. Six items include physical health, and six items include emotional health. These eight domains are represented in two summary measures: Physical Health (PCS) and Mental Health (MCS) (Ware et al., 1996).

A comparative analysis of the SF-36 Health Survey, a reliable general health measure used in various health studies, and the SF-12 Health Survey was conducted by Dempster and Donnelly (2001). The findings suggested that summary scores of the SF-12 were strongly correlated with the SF-36 summary scores. The MCS scores on the SF-12 were strongly associated to the MCS scores on the SF-36. Likewise, the PCS scores on the SF-12 were strongly associated to the PCS scores on the SF-36. The authors indicated preference of the SF-12 due to its brevity and acceptability of patients.

In 2000, the SF-12 Health Survey was revised and improved in scoring and item construction. However, the items are still representing the eight domains of general health. Alpha coefficients of the 12 items, ranging from .73 to .89, suggest reliability (Ware et al., 2002). Significant correlation between physical health and a chronic

diseases ($r = .33$, $p < .05$) and mental health and chronic diseases ($r = .27$, $p < .05$) suggest construct validity (Resnick & Nahm, 2001). The items are scored on a three points Likert scale, ranging from "No, not limited at all" (3) to "Yes, limited a lot"(1) and on a five points Likert scale, ranging from "Excellent," All of the time," or "Not at all" (1) to "Poor," "None of the time," or ""Extremely" (5) (Ware et al., 2002).

The Duke Activity Status Index (DASI). (Hlatky, Boineau, Higginbotham, Lee, Mark, Cobb, & Pryor, 1989). (See Appendix A). According to Hlatky et al. (1989), the scale was developed from interviews of 50 subjects undergoing graded exercise testing (stationary bicycle) with measurement of peak oxygen uptake. The subjects were asked if he or she was able to perform each activity and whether it was "easy" or "hard." An index of items, representing several major areas of activity such as ambulation, personal grooming, sexual relations, and household tasks were created. Twelve items were identified as representative of activities of personal care, ambulating recreation, household tasks, and sexual relations. The final index of the DASI was tested by completion of the self-administered questionnaire by the same 50 subjects. The Spearman correlation of the DASI with peak oxygen uptake was as follows: $r = .81$, $p < 0.0001$ in the initial developmental phase (interview) and $r = .58$, $p < 0.0001$ in the validation phase (questionnaire). The correlation of alternative measures of activity, Canadian Cardiovascular Society Classification and Specific Activity Scale, and peak oxygen uptake were lower than the correlation of the DASI and peak oxygen uptake of both phases.

The scale includes 12 items. It measures a patient's physical capacity such as ambulation, personal care, household tasks, sexual relations, and recreation on a scale

from 0 (severe functional capacity or limitation) to 58.2 (no limitations). Each of the 12 items is given a weight according to the physiological demand of the activity of the item. The most basic activity, "Walking indoors, such as around the house" is given a score of 1.75. A moderate activity, such as "Climb a flight of stairs or walk up a hill" is scored 5.5, and the most strenuous activities of the questionnaire, " Run a short distance" and "Do heavy work around the house like scrubbing floors, or lifting or moving heavy furniture" are scored 8.0. The participants, who complete the questionnaire, are asked to respond, according to their ability to perform the activity, with a yes (1) or a no (0) to each of the 12 items. The responses are multiplied with their weight value, and a total sum score is calculated for each participant. A total score ranges from 0 to 58.2 (Carter et al., 2002).

The DASI has frequently been utilized to assess the physical capacity of patients with a variety of diseases including the chronic illnesses of this study (Hlatky et al., 1997; Hlatky et al., 1989; Bourassa et al., 2000; Merz et al., 2000; Arena et al., 2002; Rankin, 2002; Carter et al., 2002). Halfman et al. (1997) assessed psychometric properties and issues of practicality of nine questionnaires for physical activity assessment. The validation of the DASI was similar to the validation described by the authors of this questionnaire. Halfman et al. (1997) concluded that the questionnaire appeared to have a particularly helpful function in assessing patient's current level of activity and changes in function in a very brief, cost-effective manner.

Beck Depression Inventory-II. (BDI-II) (Beck, Steer, and Brown, 1996). (See Appendix A). The BDI-II is an updated version of the BDI-I. It consists of 21 items, assessing the intensity of depression in clinical and normal patients, aged 13 and older.

The intensity is rated from 0 to 3 (Indecisiveness: "I make decision about as well as ever" = 0; " I have trouble making any decision" = 3). It differs from the BDI by replacing weight loss, body image, somatic preoccupation, and work difficulty with Agitation, Worthlessness, Concentration Difficulty, and Loss of Energy. The alpha coefficient is .92 (Beck et al., 1996; Steer et al., 1997). In terms of the scale's construct validity, the results of a study by Steer et al. (1997) indicated the following correlations; Derogatis' SCL 90-R Depression with Beck Depressio Inventory-II (r = .89) and Derogatis' SCL 90-Anxiety with Beck Depression Inventory-II (r = .71).

In addition to the modified Religious Problem-Solving Scale (RPSS), the SF-12 Health Survey, the Duke Activity Status Index (DASI), and Beck Depression Inventory-II (BDI-II), the following two questions were added to assist in explaining the results: 1) "Has religion become more important for you after the beginning of your medical illness?" Yes or No. 2) If Yes, how much impact? It was scored on a Likert type scale with an option, ranging from "Less Important" (1) to "More Important" (4) and "Do Not Know" (5).

Demographic data (see Appendix A). Demographic data included self-reported age, gender, diagnosis, religious affiliation, importance of religion and how important, ability to dress and bath dependently or independently and to ambulate with or without assistive device (walker/cane), education, income, number of rooms in the home, if participant sleeps alone, and if not – how many people sleep in the same room.

Procedure

A total of four hundred and ninety participants were identified by the Loma Linda Home Care office supervisor from a computer-generated list with ICD-9-CM codes,

indicating a primary diagnosis of cardiovascular disease, cancer, diabetes or chronic obstructive pulmonary disease (COPD). A questionnaire was sent out to all current male and female patients and male and female patients discharged within the past year. These inclusion criteria include 65 years and older and primary diagnosis of cardiovascular disease, cancer, diabetes or chronic obstructive pulmonary disease (COPD), identified from the computer-generated list. One month after sending out the questionnaires, reminder cards (see Appendix B) were mailed to the participants. Employees from Loma Linda Home Care provided address labels for the envelopes with the questionnaires and for the reminder cards. They addresses and mailed the letters and cards to maintain anonymity.

The questionnaire packet included the Religious Problem-Solving Scale (RPSS), the SF-12 Health Survey, the Duke Activity Status Index (DASI), and Beck Depression Inventory-II (BDI-II), and a section with demographic questions such as data of age, gender, diagnosis, religious affiliation, importance of religion and how important, ability to dress and bath dependently or independently and to ambulate with or without assistive device (walker/cane), education, income, number of rooms in the home, if participant sleeps alone, and if not – how many people sleep in the same room. Enclosed were a letter of support (see Appendix C) from Loma Linda Home Care and a cover letter identifying the key consent items (see Appendix D). These items included: the purpose of the study, why the participants were chosen, the assurance of anonymity, risks, approximate time to complete the questionnaire, and whom to call if distress occurs due to this completion. The assurance that the participation will be on a voluntary basis with the possibility of withdrawing at any time will be included in the letter, too.

A total of thirty-six completed questionnaires were returned to the Department of Psychology, Loma Linda University. Six uncompleted questionnaires were returned with a note that the patient had passed away. In addition, three patients mailed the return envelope with a note, that they did not want to participate, and the wife to one of the patients returned the questionnaire, because her husband was not able to participate.

Analyses Strategies

The data analyses (SPSS) included descriptive statistics of demographic data and data from the following scales: Collaborative, Self-Directing, and Deferring coping styles, Physical Health Scale and Mental Health Scale of Quality of Life, Functional Status, and Depression. Histograms of Collaborative, Self-Directing, Deferring coping styles, Functional Status, Physical Health Scale and Mental Health Scale of Quality of Life, and Depression (see Appendix A) were performed in order to reveal if the distributions are normal. Screening for missing data and outliers 3.5 SD above and below the mean was completed. For evaluation of linearity, scatter-plots of Collaborative, Self-Directing, and Deferring coping styles, Physical Health Scale and Mental Health Scale of Quality of Life, Functional Status, and Depression (see Appendix E) were created.

For Hypothesis 1: (Self-Directing religious coping style, Collaborative religious coping style, Deferring religious coping style, Functional Status, and Quality of Life will predict the level of Depression. Collaborative religious coping, Deferring religious coping style, Functional Status, Physical Health Scale of Quality of Life, and Mental Health Scale of Quality of Life will have negative standardized beta coefficients. Self-Directing religious coping style will have positive standardized beta coefficient)

standard entry multiple regression analysis was computed for determination of relationship between Depression and each of the following: Self-Directing religious coping style, Collaborative religious coping, Deferring religious coping, Functional Status, and Physical Health Scale and Mental Health Scale of Quality of Life.

For Hypothesis 2: (2A: Functional Status will predict the level of Physical Health Scale of Quality of Life. 2B: Functional Status will predict the level of Physical Health Scale of Quality of Life Mental Health Scale of Quality of Life) correlations were computed for determination of the correlation quotient between Functional Status and the Quality of Life.

For Hypothesis 3: (3A: The relationship between Functional Status and Depression will be moderated by the Collaborative religious coping style. 3B: The relationship between Functional Status and Depression will be moderated by the Deferring religious coping style) standard entry multiple regression analysis were computed for determination of the degree, to which the relationship between Depression and Functional Status, is being moderated by Religious Copping.

A moderator effect was calculated as follows: A: Standard entry of Functional Status score on block 1 followed by standard entry of Collaborative coping style score on block 2. The result of standardized score of Functional Status score multiplied by standardized score of Collaborative coping style score was entered last. B: Standard entry of Functional Status score on block 1 followed by standard entry of Deferring coping style score on block 2. The result of standardized score of Functional Status score multiplied by standardized score of Deferring coping style score was entered last.

Explanation of the nature of the moderator effect is as follows: Calculation of simple regression between Functional Status and Depression, saving of the residuals, and construction of a plot with residuals on the y-axis and Collaborative religious coping style on the x-axis.

Results

Screening

Data screening included: screening for missing data, outliers, normality of the variables, and linearity between the criterion and the predictors. Missing data for the demographics by the participants were as follows: Income (6 participants), Number of Rooms (3 participants), Number of People who sleep in the Same Room (2 participants), Diagnosis (2 participants), Religious Affiliation (2 participants), Importance of Religion (3 participants), Able to Dress (3 participants), Able to Bath (3 participants), Able to Walk (3 participants), and How are you able to walk (3 participants).

A total of seven scales were excluded due to missing data of more than 5% of the scale. Missing data for the following variables were as follows: Religious Problem Solving Scale (3), SF-12 Health Survey (2), DASI 1 and BDI-II (1). Additionally, Religious Problem Solving Scale had missing data, 5% or les of the scale, for three individuals. The missing data was calculated, using the mode of the scale.

Two outliers were identified by box plots, one for DASI (Functional Status) and one for BDI-II (Depression). These outliers were not excluded due to minimal effect on the results of the data analysis and the size of the "n."

Additional screening consisted of normality of the variables by histograms and linearity between the criterion and the predictors. Results suggested normality of histograms of PCS (Figure 1) and MCS (Quality of Life) (Figure 2), bimodal distributions of the three religious coping styles (Figures 3, 4, and 5), and skewed distributions of Functional Status (Figure 6) and Depression (Figure 7).

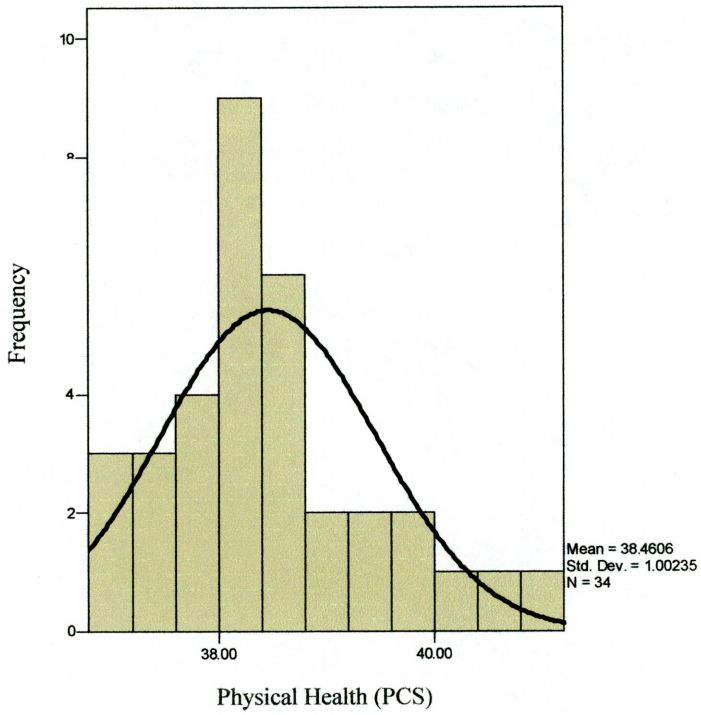

Figure 1. Normal distribution of Physical Health (PCS)

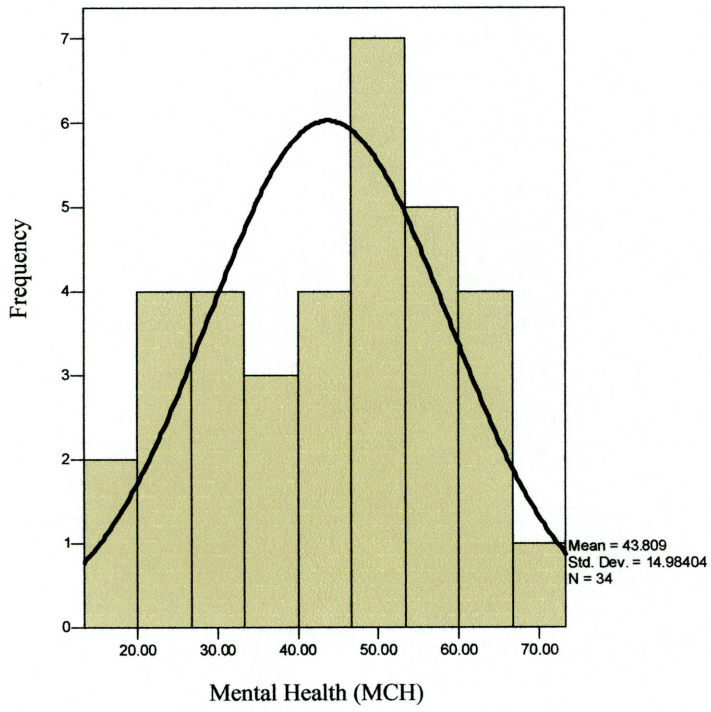

Figure 2. Normal distribution of Mental Health (MCS)

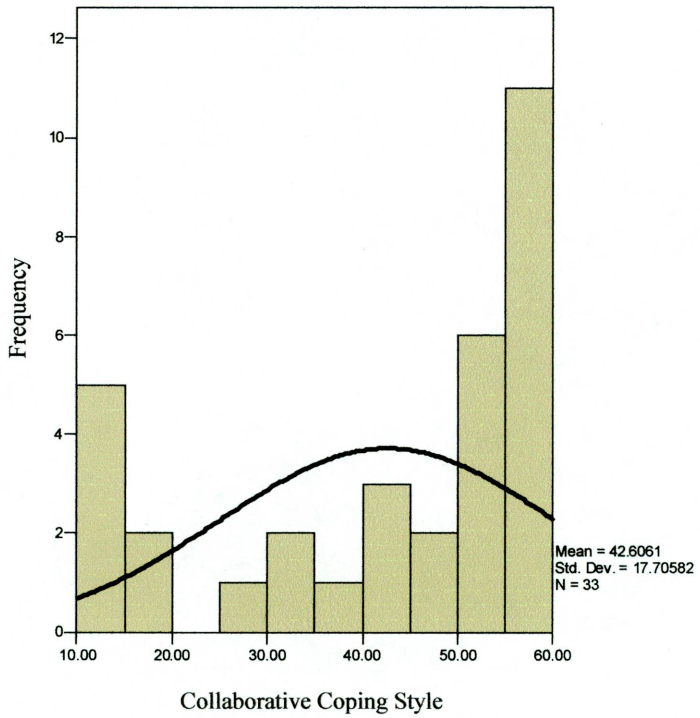

Figure 3. Bimodal distribution of Collaborative Coping Style

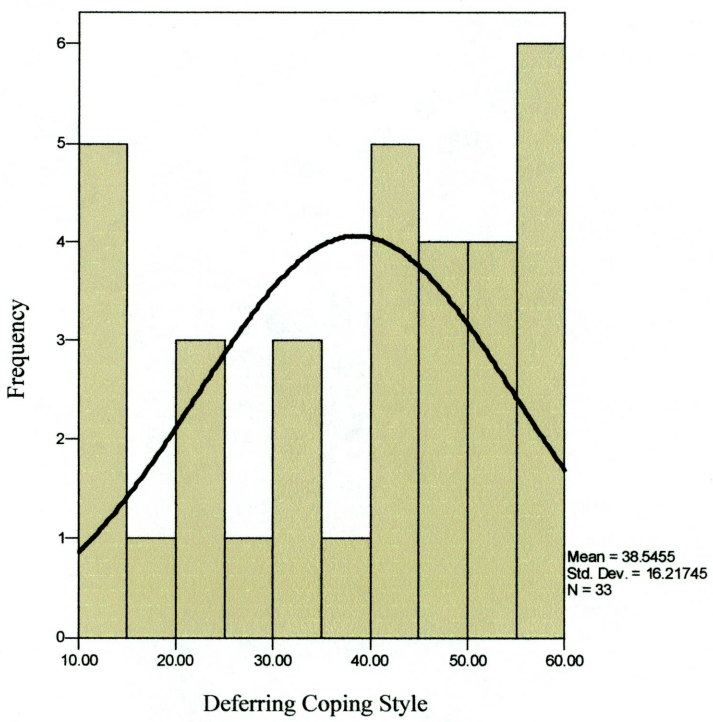

Figure 4. Bimodal distribution of Deferring Coping Style

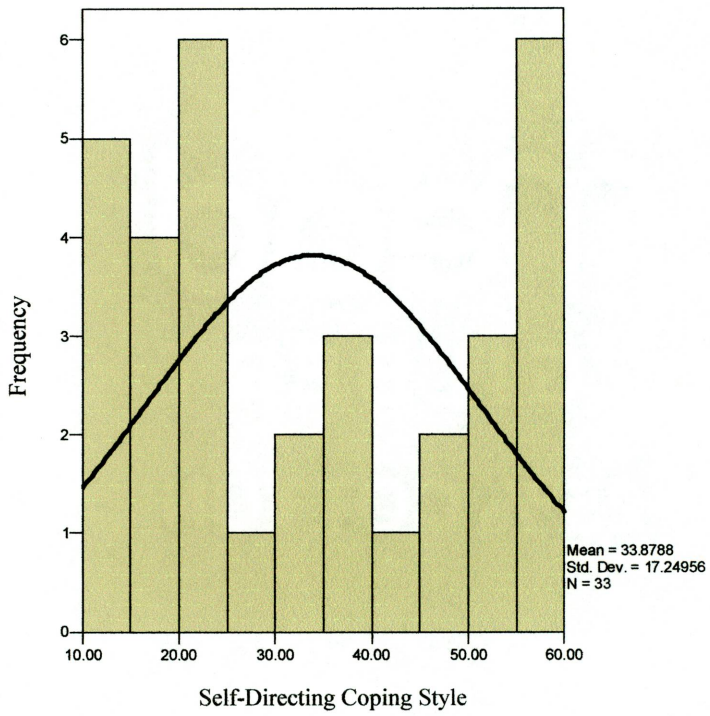

Figure 5. Bimodal distribution of Self-Directing Coping Style

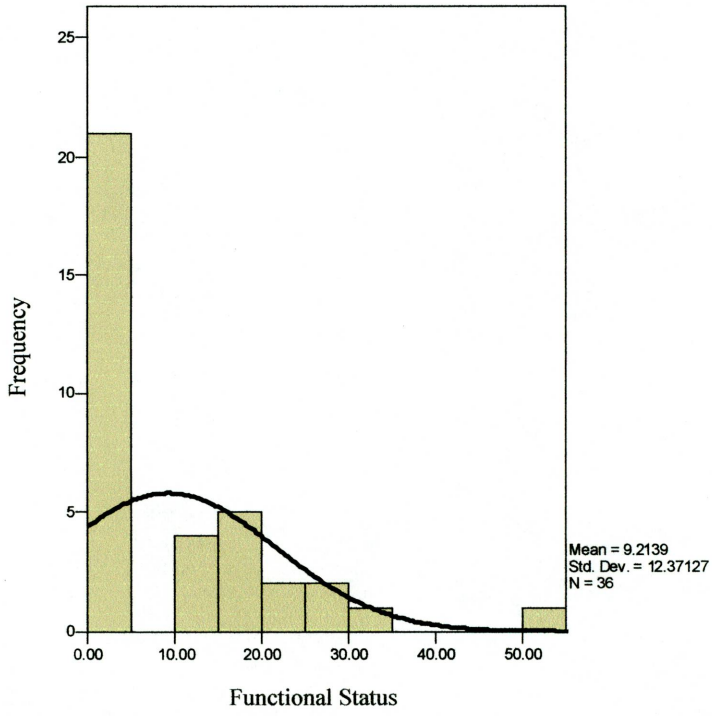

Figure 6. Skewed distribution of Functional Status

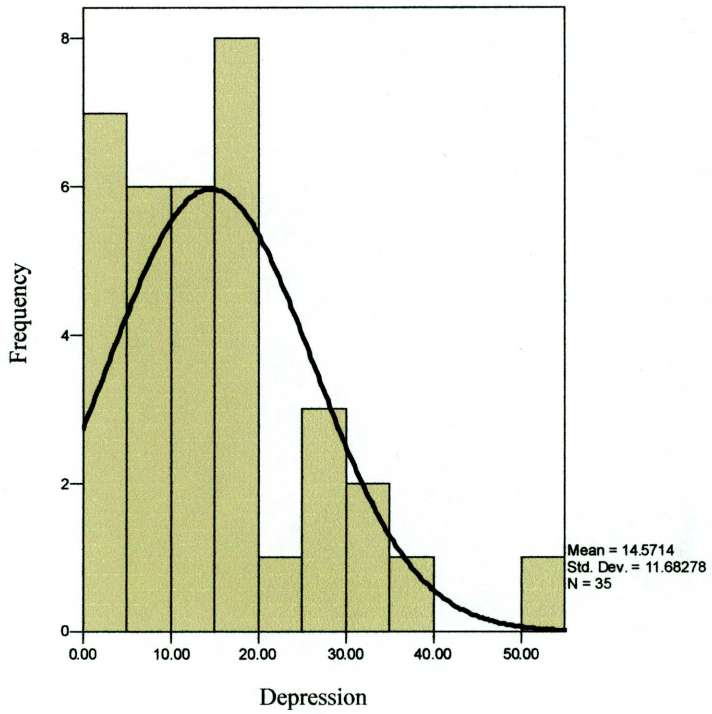

Figure 7. Skewed distribution of Depression

Furthermore, the findings indicated linearity particularly between MCS (Quality of Life) and Depression (Figure 8), Collaborative Religious coping style and Depression (Figure 9), and Functional Status and Depression (Figure 10).

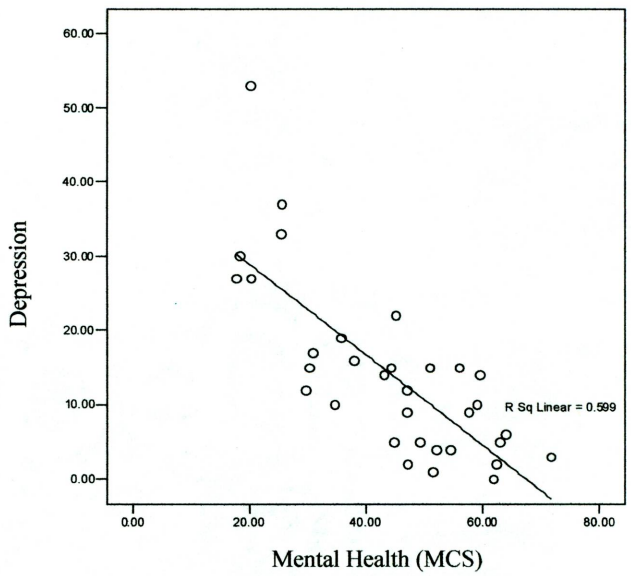

Figure 8. Linearity between MCS (Quality of Life) and Depression

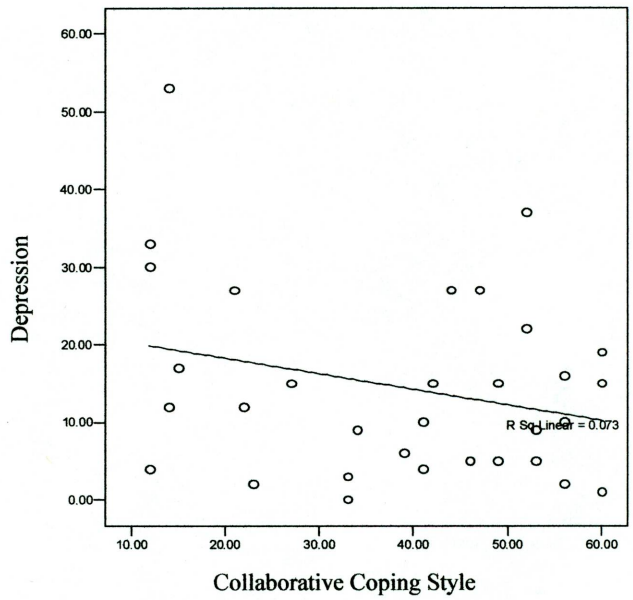

Figure 9. Linearity between Collaborative Coping Style and Depression

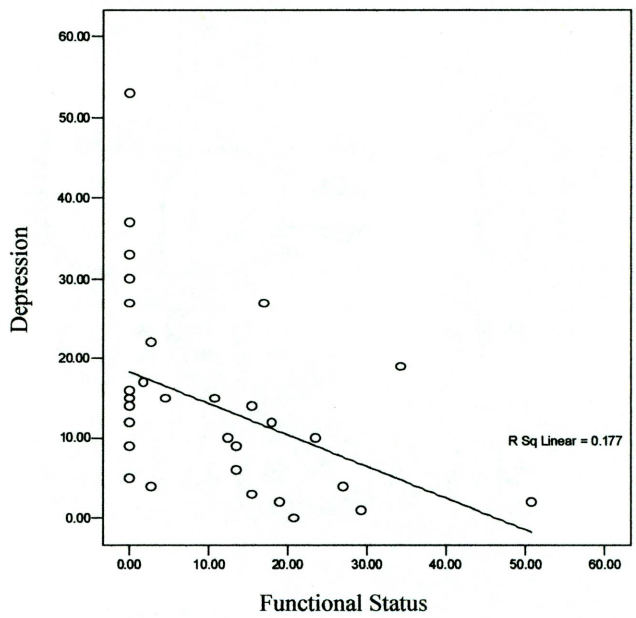

Figure 10. Linearity between Functional Status and Depression

Descriptive Statistics

Demographic information on the participants are presented in Table 1A. The missing data, reported in the screening section, are not included in this table.

Table 1A

Demographics of the Participants

	Frequency	Mean	SD	Percent
Status				
Current patients	17			47.2
Discharged patients	19			52.8
Age	36	76.8	7.3	
Gender				
Female	8			22.2
Male	28			77.8
Education		3.0	1.4	
Elementary	3	College 2 yrs.		8.3
High school	14	(Mean and Median)		38.9
College 2 yrs.	8			22.2
College 4 yrs.	5			13.9
Master's degree	3			8.3
PhD, EdD, MD	3			8.3
Diagnosis				
Heart disease	16			44.4
Cancer	7			19.4
Diabetes	9			25.0
COPD	2			5.6
Religious Affiliation				
Adventist	4			11.1
Baptist	2			5.6
Catholic	6			16.7
Methodist	3			8.3
Non-denominational	7			19.4
Other	12			33.3
Religion important?				
Yes	14			38.9
No	19			52.8
Religion – how important?				
Less important	1			2.8
Somewhat more important	4			11.1
More important	9			25.0
	2			5.6
Able to dress				
Yes	14			38.9
No	19			52.8
Able to bathe				
Yes	16			44.4
No	17			47.2
Able to walk				
Yes	25			69.4
No	8			22.2
Sleep alone				
Yes	27			75.0
No	9			25.0

Table 1A Continued

Demographics of the Participants

	Frequency	Mean	SD	Percent
Number of Rooms		5.0	2.2	
1.00	3			8.3
2.00	2			5.6
3.00	2			5.6
4.00	6			16.7
5.00	8			22.2
6.00	3			8.3
7.00	5			13.9
8.00	2			5.6
9.00	2			5.6

Of the nine participants, who reported that they did not sleep alone, two indicated that two other individuals slept in the room with them, five informed that only one other person slept in the same room, and two participants did not respond to this item.

Descriptive statistics of the variables are presented in Table 1B. These variables are Religious Coping (Self-Directing, Collaborative coping styles, and Deferring), Functional Status, Quality of Life (Physical Health Component and Mental Health Component), and Depression.

Table 1B

Descriptive statistics for Religious Coping, Functional Status, Quality of Life, and Depression

Variable	N	Minimum	Maximum	Mean	SD
Collaborative coping style	33	12.00	60.00	42.6	17.7
Self-Directing coping style	33	12.00	60.00	33.9	17.2
Deferring coping style	33	12.00	60.00	38.5	16.2
Functional Status	36	.00	50.70	9.2	12.4
Physical Health Component (PCS)	34	36.95	41.09	38.5	1.0
Mental Health Component (MCS)	34	17.79	71.76	43.8	15.0
Depression	35	.00	53.00	14.6	11.7

Analysis of Variance of Groups

Table 2 describes the four groups of diagnoses in relation to Depression. Levene's

Test of Equality of Error Variances indicates that the error variance of Depression is approximately equal across groups. Table 2 reveals no statistical main effect for Diagnosis, $\underline{F}$ (3, 29) = .323, $\underline{p}$ > .001, $\underline{\eta^2}$ = .032. This indicates that 3.2% of the variance was accounted for by Diagnosis.

Table 2

Analysis of Variance for Diagnosis

Source	df	F	p	η^2
Diagnosis	3	.323	.809	.032
Error	29			
Corrected Total	32			

R Squared = .032 (Adjusted R Squared = -.068)

Regression Analysis for Hypothesis 1

(Hypothesis 1: Self-Directing religious coping style, Collaborative religious coping style, Deferring religious coping style, Functional Status, and Quality of Life will predict the level of Depression. Collaborative religious coping, Deferring religious coping style, Functional Status, Physical Health Scale of Quality of Life, and Mental Health Scale of Quality of Life will have negative standardized beta coefficients. Self-Directing religious coping style will have positive standardized beta coefficient).

A multiple regression was conducted to determine the degree to which the criterion could be predicted by the predictors. The ratio between the number of predictors and subjects suggested that the number of predictors should be limited. Correlation Matrix with all six predictors indicated Collaborative coping style, Functional Status, and Mental Health Component (MCS) as the strongest predictors of Depression (Table 3). Self-Directing coping style (r = .26, $\underline{p}$ < .001), Deferring coping style (r = -.27, $\underline{p}$ < .001), and Physical Health Component (PCS) (r = -.157, $\underline{p}$ < .001) were not used in the multiple regression because they did not account for a large amount of the Depression variance.

Table 3

Correlation Matrix Table

	1	2	3	4	5	6	7
1. Depression	-						
2. Collaborative	-.41*	-					
3. Self-Directing	.26	-.72**	-				
4. Deferring	-.27	.92**	-.58**	-			
5. Functional Status	-.42*	.08	-.05	-.06	-		
6. PCS	-.16	.08	.16	.10	.49**	-	
7. MCS	-.77**	.28	-.30	.08	.47**	-.06	-

* p <.05 ** p < .01

Standard entry regression analysis with all three predictors entered simultaneously into the analysis was conducted. Table 1B shows means and standard deviations of predictors and criterion. Correlation matrix (Table 4A) reveals the following correlations between the criterion and the three predictors: Collaborative coping style (r = -.41), Functional Status (r = -.42), and Mental Health Component (MCS) (r = -.77). The inter-correlations between the predictors are as follows: Collaborative coping style and Functional Status (r = .08), Collaborative coping style and Mental Health Component (.28), and Functional Status and Mental Health Component (r = .47).

Tabel 4A

Intercorrelations Between Depression, Collaborative Coping Style, Functional Statue, and Mental Health (MCS)

	1	2	3	4
1. Depression	-			
2. Collaborative	-.41*	-		
3. Functional Status	-.42*	.08	-	
4. MCS	-.77**	.28	.47**	-

* p < .05 ** p < .0

Table 4B displays the regression results for the model, which indicates significant prediction of Depression by the three predictors. The model accounts for 66.4% of the variance. MCS is the best predictor with the biggest standardized Beta coefficient,

whereas Collaborative coping style and Functional Status are less predictive with smaller standardized Beta coefficients.

Table 4B

Regression Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.815[a]	.664	.626	7.60563

Change Statistics

Model	R Square Change	F Change	df1	df2	Sig. F Change
1	.664	17.150	3	26	.000

Coefficients

Model	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1 (Constant)	44.621	4.947		9.019	.000
Collaborative	-.111	.083	-.160	-1.347	.190
Functional Status	-.078	.125	-.089	-.629	.535
MCS	-.574	.111	-.709	-5.185	.000

The ANOVA Summary suggests statistical significance for model 1: $\underline{F}$ (3, 26) = 17.15, $\underline{p} < .001$.

In summing up the results for the overall model with three predictors (Collaborative coping style, Functional Status, and Mental Health Component (MCS): $\underline{R} = .815$, $\underline{R}^2 = .664$, $\underline{R}^2_{adj} = .626$, $\underline{F}$ (3, 29) = 17.15, $\underline{p} < .001$. This model accounts for 66.4% of variance explained in Depression.

Pearson Correlation Coefficients for Hypothesis 2

(Hypothesis 2A: Functional Status will predict the level of Physical Health Scale of Quality of Life.

Hypothesis 2B: Functional Status will predict the level of Mental Health Scale of Quality of Life).

Pearson correlation coefficients were conducted in order to determine the associations between Functional Status and PCS and Functional Status and MCS. Table 5 provides the correlations between Functional Status, Physical Health Component (PCS), and Mental Health Component (MCS).

Table 5

Intercorrelations Between Functional Status, Physical health (PCS), and Mental Health (MCS)

	1	2	3
1. Functional Status	-		
2. PCS	.49**	-	
3. MCS	.47**	.06	-

** $p < .01$

Functional Status was significantly correlated with PCS ($r = .49$) as well as with MCS ($r = .47$), indicating a positive relationship between Functional Status with both Physical Health Component and with Mental Health Component of Quality of Life.

Regression Analysis for Hypothesis 3A

(Hypothesis 3A: The relationship between Functional Status and Depression will be moderated by the Collaborative religious coping style).

In order to evaluate the moderating effect of Collaborative coping style on the association between Functional Status and Depression, standard entry regression analysis was conducted. Table 6A displays the model summary, which indicates the variance, accounted for by Functional Status, Collaborative coping style, and their interaction (28,8%) and the variance accounted for by Collaborative coping style (13.8%). The effect size of Collaborative coping style is medium-large (3.7). However, after removal of the

variance explained by Functional Status and Collaborative coping style, the interaction accounts for 3.7%.

Table 6A

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.427[a]	.182	.155	11.24703
2	.566[b]	.320	.273	10.42867
3	.597[c]	.357	.288	10.32320

a. Predictors: (Constant), Functional Status
b. Predictors: (Constant), Functional Status, Collaborative coping style
c. Predictors: (Constant), Functional Status, Collaborative coping style, std. FTx std. Coll.cop.

Change Statistics

Model	R Square Change	F Change	df1	df2	Sig. F Change
1	.182	6.679	1	30	.015
2	.138	5.893	1	29	.022
3	.037	1.596	1	28	.217

Table 6B presents the ANOVA table, which suggests statistical significance for the regression: $\underline{F}\ (3, 28) = 5.18$, $\underline{p} < .001$.

Table 6B

ANOVA Summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	844.847	1	844.847	6.679	.015
	Residual	3794.872	30	126.496		
	Total	4639.719	31			
2	Regression	1485.764	2	742.882	6.831	.004
	Residual	3153.955	29	108.757		
	Total	4639.719	31			
3	Regression	1655.800	3	551.933	5.179	.006
	Residual	2983.919	28	106.569		
	Total	4639.719	31			

Table 6C displays the coefficient summary, which explains the nature of the interaction effect. The interaction between Functional Status and Collaborative coping

style is non-significant, and the moderating effect of Collaborative coping style is minimal.

Table 6C

Coefficient Summary

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	18.464	2.489		7.418	.000
	Functional Status	-.405	.157	-.427	-2.584	.015
2	(Constant)	28.957	4.900		5.910	.000
	Functional Status	-.375	.146	-.395	-2.571	.016
	Collaborative	-.254	.105	-.373	-2.428	.022
3	(Constant)	28.081	4.900		5.731	.000
	Functional Status (FS)	-.379	.145	-.399	-2.624	.014
	Collaborative (Coll.)	-.238	.104	-.349	-2.278	.031
	Std. FS x std. (Coll.)	2.582	2.044	.193	1.263	.217

Figure 11 illustrates the nature of the moderator effect of Collaborative coping style, based on the change from model 2 to model 3.

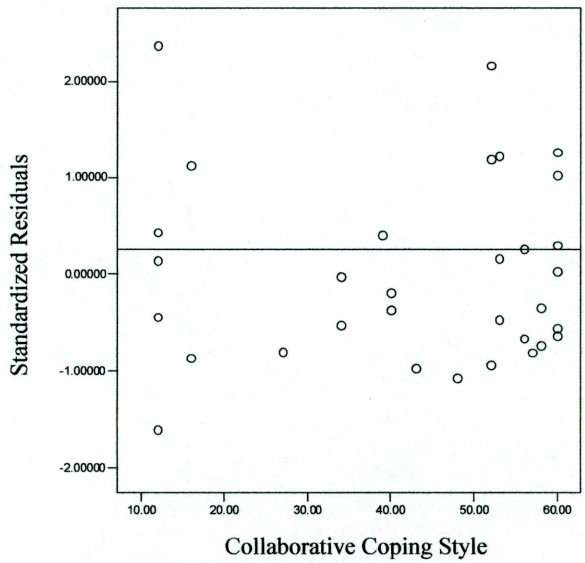

Figure 11. Moderator effect of Collaborative Coping Style

In summing up the results for the moderating effect of Collaborative coping style on the association between Functional Status and Depression: $\underline{R} = .597$, $\underline{R}^2 = .357$,

R^2_{adj} = .288, $R^2\Delta$ = .037, F (3, 28) = 5.18, p <.001, FΔ (1,28) = 1.60, p > .001. Functional Status, Collaborative coping style, and their interaction accounts for 28.8% of variance explained. The variance accounted for by Collaborative coping style (13.8%) suggests a medium-large (3.7) effect size of Collaborative coping style. After removal of the variance by Functional Status and Collaborative coping style, the variance of the interaction accounts for 3.7%.

Regression Analysis for Hypothesis 3B

(Hypothesis 3B: The relationship between Functional Status and Depression will be moderated by the Deferring religious coping style).

In order to evaluate the moderating effect of Deferring style on the association between Functional Status and Depression, standard entry regression analysis was conducted. Table 7A displays the model summary, which indicates the variance, accounted for by Functional Status, Deferring coping style, and their interaction (23.7%) and the variance accounted for by Deferring coping style (8.4%). The effect size of Deferring coping style is medium (2.9). However, after removal of the variance explained by Functional Status and Deferring coping style, the interaction accounts for 4.4%.

Table 7A

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.427[a]	.182	.155	11.24703
2	.516[b]	.267	.216	10.83244
3	.558[c]	.311	.237	10.68533

a. Predictors: (Constant), Functional Status (FS)
b. Predictors: (Constant), Functional Status, Deferring coping style (Def.)
c. Predictors: (Constant), Functional Status, Deferring coping style, std. FS x std. Def.

Change Statistics

Model	R Square Change	F Change	df1	df2	Sig. F Change
1	.182	6.679	1	30	.015
2	.084	3.340	1	29	.078
3	.044	1.804	1	28	.190

Table 7B presents the ANOVA table, which suggests statistical significance for the regression: $\underline{F}\ (3, 28) = 4.21$, $\underline{p} < .001$.

Table 7B

ANOVA Summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	844.847	1	844.847	6.679	.015[a]
	Residual	3794.872	30	126.496		
	Total	4639.719	31			
2	Regression	1236.809	2	618.404	5.270	.011[b]
	Residual	3402.910	29	117.342		
	Total	4639.719	31			
3	Regression	1442.781	3	480.927	4.212	.014[c]
	Residual	3196.937	28	114.176		
	Total	4639.719	31			

Table 7C displays the coefficient summary, which explains the nature of the interaction effect. The interaction between Functional Status and Deferring coping style is non-significant. The moderating effect of Deferring coping style is minimal.

Table 7C

Coefficients Summary

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.465	2.489		7.418	.000
	Functional Status	-.405	.157	-.427	-2.584	.015
2	(Constant)	26.898	5.200		5.172	.000
	Functional Status	-.419	.151	-.441	-2.768	.010
	Deferring	-.216	.118	-.291	-1.828	.078
3	(Constant)	26.988	5.130		5.261	.000
	Functional Status (FS)	-.388	.151	-.409	-2.574	.016
	Deferring (Def.)	-.233	.117	-.300	-1.910	.066
	Std. FS x std Def.	2.303	1.714	.213	1.343	.190

Figure 12 illustrates the nature of the moderator effect of Deferring coping style, based on the change from model 2 to model 3.

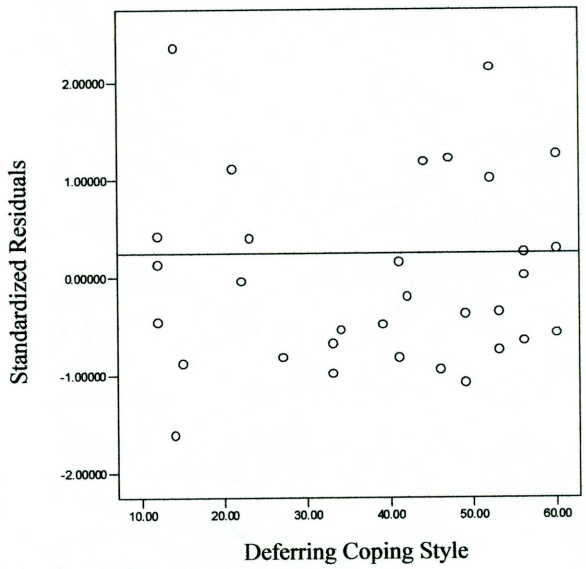

Figure 12. Moderator effect of Deferring Coping Style

In summing up the results for the moderating effect of Deferring coping style on the association between Functional Status and Depression: $R = .558$, $R^2 = .311$, $R^2_{adj} = .237$, $R^2\Delta = .044$, $F (3, 28) = 4.21$, $p < .001$, $F\Delta (1,28) = 1.80$, $p > .001$. Functional Status, Deferring coping style, and their interaction accounts for 23.7% of variance explained. The variance accounted for by Deferring coping style (8.4%) suggests a medium (2.9) effect size of Deferring coping style After removal of the variance explained by Functional Status and Deferring coping style, the variance of the interaction accounts for 4.4%.

Discussion

The best predictors of Depression were retained for the multiple regression analysis for Hypothesis 1. Among the six predictors, Collaborative coping style, Functional Status, and Mental Health Component (MCS) were found to have the strongest correlation between Depression and each predictor. The predictors not included in the multiple regression analysis were Self-Directing coping style, Deferring coping style, and Physical Health Component (PCS) of Quality of Life. However, the correlations of these predictors were large enough to be meaningful. Even if they were not statistically significant, they were moderate in size. They were suggesting a possibility for decreased depression for individuals endorsing Deferring coping style and PCS and increased depression for individuals endorsing Self-Directing coping style. Furthermore, the test results indicated that MCS, Collaborative coping style, and Functional Status had negative standardized beta coefficients and thus predicted the level of Depression. However, MCS was the only variable that significantly predicted Depression in the multiple regression analysis but Collaborative coping style, and Functional Status are still important predictors because they assist in detecting the level of depression. Thus, the test results only partly supported Hypothesis 1. MCS is comprised by the scales of Vitality, Social Functioning, Role-Emotional, and Mental Health which were found to be the best indicators of depression in the elderly home health care patients with a medical disease in this study.

The participants reported moderate to low quality of life in relation to depression, primarily in the realm of emotional well being. Overall, depression was rated as mild. A careful consideration of the scoring of depression reveals a tendency to dissimilar scoring

by the two genders. Some participants, in particular males, scored in a wider range than females. No female participant reported severe depression (scores 29-63) whereas four males (14.8%) scored in this range. On the average, female participants reported less depression than the male participants. Nevertheless, female and male participants reported similar low to moderate levels of emotional quality of life (MCS). However, the uneven distribution of participants between the two genders makes comparison difficult and should only be approached with caution.

The results of the present study converge with many previous studies, investigating quality of life, depression, and medical illness (Gilbar et al., 2001; Grassi et al., 1996; Clark et al., 1997; Blake- Mortimer et al., 1999; Lacasse et al., 2001; Peruzza et al., 2003). Despite extensive research is creating an increasing awareness that quality of life is important, further studies, examining the quality of life of home health care patients with medical illness and depression are recommended. A focus on this particular population would generate greater awareness of this population's needs for improvement of quality of life.

The test results indicated significant correlations between Functional Status and PCS and Functional Status and MCS (Hypothesis 2). The strong relationship between Functional Status and the two components of Quality of life proposes that, as the elderly home health care patients experienced decreased physical functioning due to their medical illness, their quality of life, physical as well as mental, diminished. It would be anticipated that physical functioning and physical health would be related. However, the findings suggested that mental health was almost equally associated with physical functioning. The participants reported that the more limited they experienced their

physical functioning the greater the negative impact was felt on their physical and emotional quality of life. Furthermore, male and female participants reported similar decrease in physical and emotional quality of life at similar decreased levels of functioning. The results of this study support previous studies (Boult et al., 1994; Hobbs et al., 2002). However, since home health care patients are homebound due to functional limitations, further studies on the impact on physical as well as mental health quality of life due to decreased physical functioning is recommended.

Collaborative and Deferring coping styles did not significantly moderate the relationship between Functional Status and Depression (Hypothesis 3). However, the main effects of the two coping styles were significant with medium-large (Collaborative) and medium (Deferring) effect sizes. Furthermore, despite the small moderating effect of the two coping styles, these findings are still important and useful. They draw attention to clinical importance. Evaluation of patients' religious problem solving or coping style appears to be helpful in detecting depression, and identification of depression in home care patients makes determination of treatment needs possible and provides opportunities for improved quality of life for this population. Current literature has indicated that depression often goes un-or under-diagnosed and consequently untreated.

Power analysis indicated that 165 participants would be required in order to obtain statistical significance with a magnitude of 3.7% (Functional Status-Collaborative coping style interaction) and a magnitude of 4.4% (Functional Status- Deferring coping style interaction). Despite lack of statistical significance, the test results might suggest a tendency to demonstrate a moderating effect by Collaborative and Deferring coping styles on the relationship between physical functioning and depression among the elderly

home care patients. Another reason for the limited support of Hypothesis 3 by the results might be due to the composition of the sample with predominantly males (males: 28, females: 8). A careful consideration of the scoring of the three religious coping styles by the two genders reveals that the females of this sample had a tendency to report Collaborative and Deferring coping styles (62.55%) as their preferred religious coping style, whereas the males of the sample reported less use of Collaborative and Deferring coping styles (52%). In addition, three male participants did not complete the Religious Problem-Solving questionnaire.

Comments in the questionnaires by the females were only positive toward religion. For instance, participant #12 wrote that religion has "always" been important to her, and participant #21 wrote a letter, praising God for His healing power. Participant #22 stated that "God has always been important to me all of my life." Among the 28 male participants, only one offered positive comments about religion. Participant # 32 reported in the questionnaire "Without personal relation with Jesus Christ it is very difficult to cope with life." Male participant #1, who described himself as a "Free Walker" added a note to the questionnaire stating "That Big Book has caused more wars and death and suffering than any book printed." One male participant described himself as an atheist.

The males of this sample might not favor Collaborative and Deferring coping styles as a coping approach. In the male-female comparison, the female participants had a greater tendency to score Collaborative and Deferring coping style than the male participants. Interestingly, as indicated previously, female participants reported on average less depression than male participants. However, comparison needs to be cautious due to the small sample size and the uneven distribution of the two genders. In

attempting to explain that 77.8% of the participants were males, the demographic data were closely examined but no clear pattern emerged other than they had a greater inclination to participate than the prospective female participants.

The results of the present study do not fully support the literature. A moderating effect of religious coping on stressful life events has been reported in the literature (Tix & Frazier, 1998; Fabricatore et al., 2000; Wang & Patten, 2002). This study indicates that a tendency to moderation of the relationship between depression and physical functioning by religious coping might exist. The small sample size is a limitation of this study. A larger sample size of this study might have resulted in convergence with the findings of the past literature. Further study of religious coping styles as moderators of the relationship between depression and physical functioning in a large study with a more representative sample is recommended. Another limitation of this study might have been the dependence on self-reported information. The participants might have either over-reported or particularly underreported on their religious coping approach to the medical illness.

Of 490 questionnaires mailed to participants, only 36 completed questionnaires and 10 notes from patients or their families that the patient either was not able to or declined to participate. There might be several reasons for this low return rate. In addition to the six deceased patients, others might have passed away as well. The population, targeted for this study, was elderly, frail, and in poor health due to a medical condition of heart disease, cancer, diabetes, or COPD. Furthermore, patients might have relocated to e.g., assisted living, nursing home, or homes of family members. Of course, a major group of patients might not have wanted to participate in this study for several reasons. One of

them might have been the topic of this study. The focus on religion seemed to have created a need for indicating opposition to religion by some of the participants of this study. Prospective participants might have been displeased as well and not responded to the questionnaire which began with the Religious Problem-Solving Scale. Future studies may want to consider to placing a more emotionally neutral scale, e.g., the DASI, measuring physical functioning or the SF-12 Health Survey, measuring quality of life, in the beginning of the questionnaire.

In summary, decreased physical functioning had a negative impact on the quality of life, physical as well as mental, of the participants of this study. However, only the mental health aspect of quality of life significantly predicted depression among the participants. Nonetheless, the main effects of Collaborative and Deferring coping styles were large enough to counterbalance depression. In assessment of depression among elderly home health care patients with a medical disease, evaluation of the patients' quality of life and religious problem solving or coping style appears to be helpful in detecting depression. Due to the small sample size, three of the predictors, PCS, Self-Directing coping style, and Deferring coping style, were excluded from the regression analysis. Significant correlations between Functional Status and PCS and Functional Status and MCS suggested strong relationships between these variables. Even though this study did not fully support previous studies that have suggested significant moderator effect by religious coping of an association between depression and a major stress or life event, the main effects obtained in the study are important. However, future studies with larger sample sizes are recommended for clarification of the impact religious coping may have on depression and major health related stressors in home health care patients.

Application

Screening and management of depression in the elderly home care patient with medical illnesses is essential for possible improvement of the quality of life of the patient. Referral for psychological service by the general practitioners has shown to vary according to the knowledge of available psychological treatments (Collins et al., 1997). Psychological therapy of patients with depression might include individual psychotherapy or family therapy. Collins et al. (1997) found that counseling was the most often selected type of psychological therapy by the practitioner, whereas family therapy was the least referred form of therapy.

However, choice of psychological treatment of depression should not depend on familiarity with psychological therapies or lack thereof by the general practitioner but on the best therapeutic approach for the individual patient. A particular treatment approach is cognitive behavioral therapy (CBT). This technique has been found successful in the elderly with depression (Thompson, 1996). It is a structured, short-term, present-oriented psychotherapy, particularly suitable for individuals with depression. Its purpose is aimed at modification of dysfunctional thinking and behavior. CBT is goal oriented and problem focused, and it emphasizes the present. General CBT goals are identification, evaluation, and modification of dysfunctional automatic thoughts (situation specific words and images passing through one's mind), intermediate beliefs (rules, attitudes, assumptions), and core beliefs (the most fundamental level of belief about oneself). After the dysfunctional automatic thoughts, intermediate beliefs, and core beliefs have been identified and evaluated, the client is taught how to respond to dysfunctional thinking, using Dysfunctional Thought Records (DTR), Cognitive Conceptualization Diagram, and

the Core Belief Worksheet. In addition therapy sessions with focus on these techniques, CBT aims at teaching the client to become his or her own therapist. Thus, homework assignment is an important component of CBT (Beck, 1995). CBT has three phases. In the initial phase (approximately sessions 1 through 3), a therapist/client working relationship is established. The client is being socialized into therapy, and a good client/therapist relationship is necessary for obtaining an optimal outcome. In the middle phase (approximately session 4 through 12-16), specific goals are addressed and the client is taught a variety of cognitive and behavioral techniques for achieving these goals. The final phase (three to four sessions) is the preparation for application of skills, learned in therapy, so that the client can manage stressful situations independently (Thompson, 1996). CBT is an excellent choice of therapy for some clients with depression. However, the choice of treatment approach should depend on the individual patient.

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APPENDIX A: SURVEY

Please answer all questions Thank you for your participation!

Please circle the number that most closely resembles how you solve problems.

1. When I have a problem, I talk to God about it and together we decide what it means.

1	2	3	4	5
Never				Always

2. Rather than trying to come up with the right solution to a problem myself, I let God decide how to deal with it.

1	2	3	4	5
Never				Always

3. When faced with trouble, I deal with my feelings without God's help.

1	2	3	4	5
Never				Always

4. When a situation makes me anxious, I wait for God to take those feelings away.

1	2	3	4	5
Never				Always

5. Together God and I put my plans into action.

1	2	3	4	5
Never				Always

6. When it comes to deciding how to solve a problem, God and I work together as partners.

1	2	3	4	5
Never				Always

7. I act to solve my problems without God's help.

1	2	3	4	5
Never				Always

8. When I have difficulty, I decide what it means by myself without help from God.

1	2	3	4	5
Never				Always

9. I don't spend much time thinking about troubles I've had; God makes sense of them for me.

1	2	3	4	5
Never				Always

10. When considering a difficult situation, God and I work together to think of possible solutions.

1	2	3	4	5
Never				Always

11. When a troublesome issue arises, I leave it up to God to decide what it means for me.

1	2	3	4	5
Never				Always

12. When thinking about a difficulty, I try to come up with possible solutions without God's help.

1	2	3	4	5
Never				Always

13. After solving a problem, I work with God to make sense of it.

1	2	3	4	5
Never				Always

14. When deciding on a solution, I make a choice independent of God's input.

1	2	3	4	5
Never				Always

15. In carrying out the solution to my problems, I wait for God to take control and know somehow He'll work it out.

1	2	3	4	5
Never				Always

16. I do not think about different solutions to my problems because God provides them for me.

1	2	3	4	5
Never				Always

17. After I've gone through a rough time, I try to make sense of it without relying on God.

1	2	3	4	5
Never				Always

18. When I feel nervous or anxious about a problem, I work together with God to find a way to relieve my worries.

1	2	3	4	5
Never				Always

19. When I'm upset, I try to soothe myself, and also share the unpleasantness with God so He can comfort me.

1 2 3 4 5
Never Always

20. When faced with a decision, I make the best choice I can without God's involvement.

1 2 3 4 5
Never Always

21. God solves problems for me without my doing anything.

1 2 3 4 5
Never Always

22. When I have a problem, I try not to think about it and wait for God to tell me what to tell me what it means.

1 2 3 4 5
Never Always

23. In carrying out solutions, I work hard at them knowing God is working right along with me.

1 2 3 4 5
Never Always

24. When a difficult period is over, I make sense of what happened on my own without involvement from God.

1 2 3 4 5
Never Always

25. When faced with a question, I work together with God to figure it out.

1 2 3 4 5
Never Always

26. When I feel nervous and anxious, I calm myself without relying on God.

1 2 3 4 5
Never Always

27. God doesn't put solutions to my problems into action; I carry them out myself.

1 2 3 4 5
Never Always

28. I don't worry too much about learning from difficult situations, since God will make me grow in the right direction.

1 2 3 4 5
Never Always

29. When I am trying to come up with different solutions to troubles I am facing, I do not get them from God but think of them myself.

1	2	3	4	5
Never				Always

30. When a hard time has passed, God works with me to help me learn from it.

1	2	3	4	5
Never				Always

31. God and I talk together and decide upon the best answer to my question.

1	2	3	4	5
Never				Always

32. When faced with a decision, I wait for God to make the best choice.

1	2	3	4	5
Never				Always

33. I do not become upset or nervous because God solves my problems for me.

1	2	3	4	5
Never				Always

34. When I run into trouble, I simply trust in God knowing that He will show me the possible solutions.

1	2	3	4	5
Never				Always

35. When I run into a difficult situation, I make sense out of it on my own without divine assistance.

1	2	3	4	5
Never				Always

36. The Lord works with me to help me see a number of different ways that a problem can be solved.

1	2	3	4	5
Never				Always

This survey asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities.

For each of the following questions, please mark an [X] in the one box that best describes you.

1. In general, would you say your health is:

Excellent	Very good	Good	Fair	Poor
▼	▼	▼	▼	▼
[ ]	[ ]	[ ]	[ ]	[ ]

2. The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

	Yes limited a lot ▼	Yes, limited a little ▼	No, not limited at all ▼
Moderate activities, such as moving a table,pushing a vacuum cleaner, bowling, or playing golf.....	[ ]	[ ]	[ ]
Climbing several flights of stairs.....	[ ]	[ ]	[ ]

3. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	All of the time ▼	Most of the time ▼	Some of the time ▼	A little of the time ▼	None of the time ▼
Accomplished less than you would like.....	[ ]	[ ]	[ ]	[ ]	[ ]
Were limited in the kind Of work or activities.....	[ ]	[ ]	[ ]	[ ]	[ ]

4. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	All of the time ▼	Most of the time ▼	Some of the time ▼	A little of the time ▼	None of the time ▼
Accomplished less than you would like.....	[ ]	[ ]	[ ]	[ ]	[ ]
Did work or other activities less carefully than usual...	[ ]	[ ]	[ ]	[ ]	[ ]

5. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all	A little bit	Moderately	Quite a bit	Extremely
▼	▼	▼	▼	▼
[ ]	[ ]	[ ]	[ ]	[ ]

6. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks …

	All of the time ▼	Most of the time ▼	Some of the time ▼	A little of the time ▼	None of the time ▼
Have you felt calm and peaceful?.....	[ ].....	[ ].....	[ ].....	[ ].....	[ ]
Did you have a lot of energy?.....	[ ].....	[ ].....	[ ].....	[ ].....	[ ]
Have you felt downhearted and depressed ?.....	[ ].....	[ ].....	[ ].....	[ ].....	[ ]

7. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
▼	▼	▼	▼	▼
[ ]	[ ]	[ ]	[ ]	[ ]

These questions are about any physical limitations you might have. For each question, please rate whether, at the present time, you can do one or more of the activities. Some questions mention more than one activity. Answer according to the one activity you can

do best. Please choose the one answer that best describes you. If you have never done an activity, or don't usually do it, answer "Don't do this for other reasons."

Can you.....	Yes, with no difficulty	Yes, with some difficulty	No, I can't do this	Don't do this for other reasons
1. Take care of yourself, that is, eating, dressing, bathing, and using the toilet?	1	2	3	4
2. Walk indoors, such as around your house?	1	2	3	4
3. Walk a block or two on level ground?	1	2	3	4
4. Climb a flight of stairs or walk up a hill?	1	2	3	4
5. Run a short distance?	1	2	3	4
6. Do light work around the house like dusting or washing dishes?	1	2	3	4
7. Do moderate work around the house like vacuuming, sweeping sweeping floors, carrying in groceries?	1	2	3	4
8. Do heavy work around the house like scrubbing floors, or lifting or moving heavy furniture?	1	2	3	4
9. Do yard work like raking leaves, weeding or pushing a power mower?	1	2	3	4
10. Have sexual relations?	1	2	3	4
11. Participate in moderate recreational activities, like golf, bowling, dancing, double tennis, or throwing baseball or football?	1	2	3	4
12. Participate in strenuous sports like swimming, singles tennis, football, and basketball or skiing?	1	2	3	4

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statement carefully, and then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness
 0 I do not feel sad.
 1 I feel sad much of the time.
 2 I am sad all the time.
 3 I am so sad or unhappy that I can't stand it.

2. Pessimism
 0 I am not discouraged about my future.
 1 I feel more discouraged about my future than I used to be.
 2 I do not expect things to work out for me.
 3 I feel my future is hopeless and will only get worse.

3. Past Failure
 0 I do not feel like a failure.
 1 I have failed more than I should have.
 2 As I look back, I see a lot of failures.
 3 I feel I am a total failure as a person.

4. Loss of Pleasure
 0 I get as much pleasure as I ever did from the things I enjoy.
 1 I don't enjoy things as much as I used to.
 2 I get very little pleasure from the things I used to enjoy.
 3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings
 0 I don't feel particularly guilty.
 1 I feel guilty over many things I have done or should have done.
 2 I feel guilty most of the time.
 3 I feel guilty all of the time.

6. Punishment Feelings
 0 I don't feel I am being punished.
 1 I feel I may be punished.
 2 I expect to be punished.
 3 I feel I am being punished.

7. Self-Dislike
0 I feel the same about myself as ever.
1 I have lost confidence in myself.
2 I am disappointed in myself.
3 I dislike myself.

8. Self-Criticalness
0 I don't criticize or blame myself more than usual.
1 I am more critical of myself than I used to be.
2 I criticize myself for all of my faults.
3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes
0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.

10. Crying
0 I don't cry anymore than I used to.
1 I cry more than I used to.
2 I cry over every little thing.
3 I feel like crying, but I can't.

11. Agitation
0 I am no more restless or wound up than usual.
1 I feel more restless or wound up than usual.
2 I am so restless or agitated that it's hard to stay still.
3 I am so restless or agitated that I have to keep moving or doing something

12. Loss of Interest
0 I have not lost interest in other people or activities.
1 I am less interested in other people or things than before.
2 I have lost most of my interest in other people or things.
3 It's hard to get interested in anything.

13. Indecisiveness
0 I make decisions about as well as ever.
1 I find it more difficult to make decisions than usual.
2 I have much greater difficulty in making decisions than I used to.
3 I have trouble making any decision.

14. Worthlessness
 0 I do not feel I am worthless.
 1 I don't consider myself as worthwhile and useful as I used to.
 2 I feel more worthless as compared to other people.
 3 I feel utterly worthless.

15. Loss of Energy
 0 I have as much energy as ever.
 1 I have less energy than I used to have.
 2 I don't have enough energy to do very much.
 3 I don't have enough energy to do anything.

16. Changes in Sleeping Pattern Choose only ONE statement:
 0 I have not experienced any change in my sleeping pattern.
 1a I sleep somewhat more than usual.
 1b I sleep somewhat less than usual.
 2a I sleep a lot more than usual.
 2b I sleep a lot less than usual.
 3a I sleep most of the day.
 3b I wake up 1-2 hours early and can't get back to sleep.

17. Irritability
 0 I am no more irritable than usual.
 1 I am more irritable than usual.
 2 I am much more irritable than usual.
 3 I am irritable all the time.

18. Changes in Appetite Choose only ONE statement:
 0 I have not experienced any change in my appetite.
 1a My appetite is somewhat less than usual.
 1b My appetite is somewhat greater than usual
 2a My appetite is much less before.
 2b My appetite is much greater than usual.
 3a I have no appetite at all.
 3b I crave food all the time.

19. Concentration Difficulty
 0 I can concentrate as well as ever.
 1 I can't concentrate as well as usual
 2 It's hard to keep my mind on anything for very long.
 3 I find I can't concentrate on anything.

20. Tiredness or Fatigue
 0 I am no more tired or fatigued than usual.
 1 I get more tired or fatigued more easily than usual.
 2 I am too tired or fatigued to do a lot of the things I used to do.
 3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex
 0 I have not noticed any recent change in my interest in sex.
 1 I am less interested in sex than I used to be.
 2 I am much less interested in sex now.
 3 I have lost interest in sex completely.

Please indicate your age, number of rooms in your home and check for the following information about you.

A. Age: ___

B. Gender: ___M ___F

C. Education: ___Elementary ___High School

___College (2 years)

___College (4 years) ___Masters (beyond 4 years)

___Ph.D., EdD, MD

D. Income: ___$0 - 20,ooo ___$20,001 – 40,000 ___$40,001 - 60,000

___$60,001 ___80,000 ___80,001 and above

E. Number of rooms in your home: ___

F. Do you sleep alone: ___Yes ___ No

If No-please indicate how many people sleep in the same room as you do:__

G. Please-what is your primary diagnosis:

___Heart Disease ___Cancer

___Diabetes ___Chronic Obstructive Pulmonary Disease

H. Religious Affiliation: ___Adventist ___Methodist

___Baptist ___Non-denominational

___Catholic _____Other

I. Importance of Religion: Has religion become more important for you after the beginning of your medical illness?

___Yes ___No

If Yes – how important:

___Less ___Somewhat less important ___Somewhat more important

___More important ___Do not know

J. How are you able to dress: ___Need help ___Do not need help

K. How are you able to bath: ___Need help ___Do not need help

L. Are you able to walk: ___Yes ___No

M. How are you able to walk: ___With cane/walker

___Without cane/walker

Thank you for completing these questions!

If you have any additional comments:

Thank you for your participation!

APPENDIX B: REMINDER CARD

April 23, 2004

Dear Participant,

You recently received a survey from Loma Linda University regarding a study titled: "Religious Coping, Quality of Life, and Depression." Thank you very much if you have completed and returned this survey to us. If you have not, it would be greatly appreciated, if you would do so.

Thank you.
Sincerely,

Kirsten Ingheim, MPT
Doctoral Student
Clinical Psychology

M. Galbraith, RN, Ph.D.
Professor, Department of Psychology
and School of Nursing

APPENDIX C: LETTER OF SUPPORT

January 28, 2004

Dear Patient,

A Doctoral student at Loma Linda University, Department of Psychology, Kirsten Ingheim, is conducting a study, titled "Religious Coping, Quality of Life, and Depression in Home Care Patients."

Since you are a patient of Loma Linda University Medical Center Home Care, you are invited to participate. Participation is completely voluntary. Your care at Loma Linda Medical Center Home Care will not be influenced in any way, whether or not you decide to participate in the study. In addition, no one at Home Care will know, whether or not you participated in the study.

For further details about this study, please see the enclosed Information Letter from the student, Kirsten Ingheim, who is conducting the study. If you have any additional questions or concerns related to this study that I, can answer, please contact me.

Sincerely,

Michelle Oliver, RN
Nurse Manager of LLUMC Home Care

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APPENDIX D: COVER LETTER

February 17, 2004

Dear Participant,

You are selected to participate in a study titled: "Religious Coping, Quality of Life, and Depression in Home Care Patients" because you are currently a patient of Loma Linda Home Care. This survey is part of a supervised doctoral project, conducted by Kirsten Ingheim at Loma Linda University. The questions of this survey pertain to the way you feel your illness might have influenced your life, and the way you spiritually may cope with your illness. The purpose of this study is to gain a better understanding of how an illness may impact the life of an individual, and how religion may or may not help this individual cope with the illness.

Your participation is entirely on a voluntary basis. If you at any point, while filling out the questionnaire, decide you are no longer willing to participate, you may stop. If there are particular questions you want to skip, you may do so. Completion of this survey will expose you to no greater risk of stress or breach of confidentiality than every day life or being a patient of Home Care. Participation in the study will take about 30 minutes. If you choose to participate, please fill out the survey, insert it in the self-addressed, stamped envelope that we have provided for you, and mail it back to us. By returning the survey to us, you will be consenting to have your responses included in the project. You will remain anonymous. Only the researchers will have access to the information you provide for the study but they will not be able to connect your name with your responses.

If you have any questions about this project, please do not hesitate to contact me or my research supervisor, K. I., and Dr. Galbraith at (909) 558-8577. If you wish to speak to an impartial third party not associated with this project regarding a complaint or concern, you may call any Patient Representative at Loma Linda University Medical Center (909) 558-4647.

Your participation is greatly appreciated. Thank you for your time and cooperation.

Sincerely,

Kirsten Ingheim, MPT
Doctoral Student
Clinical Psychology

M. Galbraith, RN, Ph.D.
Professor, Department of Psychology
and School of Nursing