WOMEN, SPIRITUALITY, AND CHRONIC ILLNESS

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ABSTRACT

People with chronic health conditions can experience life changing limitations which often require the help of family or other outside resources to manage the condition. Rural dwellers are at increased risk for chronic health conditions. Social support and spirituality have both been shown to be important contributors to adjustment, health, management, and, nursing care of chronically ill people. The purpose of this study was to explore expressions of spirituality in rural women with chronic illness, and investigate the relationship between spirituality and social support.

This study was a secondary data analysis, in which data already collected through a larger research project were examined using qualitative and quantitative techniques. The secondary analysis was conducted with data collected from the Women to Women study at Montana State University-Bozeman, a study which provided computer-based support to women with chronic illness who lived in rural Montana. Asynchronous, computer-based communications of thirteen women were examined. A content analysis of data previously identified as having spiritual content by the research team was undertaken. Analysis of Personal Resource Questionnaire (PRQ) scores, was also performed.

Six categories emerged from the content analysis, which were prayer, faith, verse, finding meaning, transcendence, and family. The women used spirituality to support each other and they shared and relied on their faith to deal with trying times. They prayed for each other, shared bible verses, hymns, and poems all in an effort to deal with illness and daily life. The degree of social support was examined and there was no statistical difference in PRQ scores from the beginning to the end of the computer intervention phase. The communications of the women who had particularly high or low scores were further explored relative to their group interactions.

Results of this study were consistent with findings in previous literature that identified a link between spirituality and social support, yet the relationship between the two remains unclear. Nursing implications include clarifying the role of spirituality in chronic illness and the continued research into the relationship between spirituality and social support.

INTRODUCTION

More than 90 million American people live with a chronic illness. Chronic illness is defined as a disability produced state of unwellness that requires health care intervention over a long period of time and that affects many aspects of life (Curtain & Lubkin, 1990). Chronic health conditions cause a significant amount of activity limitation for about 25 million people. About 70% of the deaths in the United States each year are from a chronic disease (Centers for Disease Control and Prevention, 2002). Chronic health conditions often require assistance from family members and outside resources. Those afflicted with a chronic illness often go through great emotional and social adjustment because of the life changes that are imposed by the illness.

Rural people are at increased risk of chronic health problems due to poverty and limited health services (Davis & Magilvy, 2000; Dorfman, 1998; Krout & Coward, 1998). People diagnosed with chronic illness in rural areas face barriers to care such as long distances, poor road conditions, lack of transportation, lack of health care providers, fewer health resources, and more costly health services (Davis & Magilvy, 2000; Krout & Coward, 1998; Muchow, 1993; Thorson & Powell, 1993). There may be a lack of specialists in rural areas, and costs are often higher to manage chronic illness (McWilliam, Stewart, Belle Brown, Kesai, & Coderre, 1996). Rural dwellers often use informal support systems such as family and friends for health maintenance more than formal support systems such as physicians or hospitals (Bushy 2000; Stoller & Lee, 1994; Weinert & Long, 1987).

Social support has been shown to play a role in the management of chronic illness (Lieno-Kilpi, Luoto, & Katajisto, 1998; Tilden & Weinert, 1987; Uchino, Cacioppo, & Keicolt-Glaser, 1996). Social support networks have a positive effect on well being, and declines in functional and health status have been attributed to poor social support networks (Heidrich, 1996). These networks, though very important to those with chronic health conditions, can be difficult to maintain during an illness state due to stress, distance, and emotional withdrawal from support sources (Michael, 1996; Tilden & Weinert, 1987). Formal social support groups, such as self-help groups, are often lacking in rural areas (Weinert, 2000). The ability to maintain and utilize social support networks can be very important to those with chronic health conditions.

Strategies used by those with chronic health conditions to adjust to limitations include, confronting loss, facing emotional change, redefining health, and finding meaning (Thorne & Paterson, 1998). Confronting loss is facing the losses associated with the diagnosis of a chronic illness. Losses include functional decline, loss of friends, income, home, and quality of life. Depression, anger, sadness, and fear can accompany the diagnosis of a chronic health condition due to uncertainty, apprehension of the unknown, and lifestyle changes (Handron, 1995; McWilliam, et al., 1996; Michael, 1996).

Redefining health is the process of changing the definition of health to fit with each individual's situation and limitations. For example, one might find the things they can and cannot do and make adjustments in their lives. With this redefinition, health takes on different meaning and this contributes to well-being in the life of the person affected

by chronic illness (McWilliam, et al., 1996). Finding meaning is also an important strategy in chronic illness management. It is the process of attributing meaning to certain life events. Increasing meaningfulness in life is addressed by Moch (1998) and her proposed health-within-illness concept. Health-within-illness creates an "opportunity that increases the meaningfulness in life through connectedness or relatedness with the environment and/or awareness of self during a state of compromised well-being" (Moch, 1998, p. 305). The presence of a chronic illness presents an opportunity for the ill person to find meaning in his or her life. One of the strategies that can help an individual find meaning in life is spirituality.

Spirituality has been shown to be an important contributor to health (Flannelly & Inuoye, 2001). The World Health Organization has recognized spirituality as a dimension of quality of life (WHOQOL, 1998). It has been shown to help people with adjustment to illness and is used as a strategy for long term illness management (Daaleman, Kuckelman Cobb, & Frey, 2001; Fryback & Reinert, 1999). Spirituality has also been shown to be important in the nursing care of the chronically ill (Baldacchino & Draper, 2001).

Spirituality, used as an illness management strategy, can include seeking and providing spiritual support. People seek and provide spiritual support in many ways including membership in religious organizations, through prayer, spiritual reading, or meditation. Membership in religious organizations provides structure and a sense of community to many people. Often religious organizations and individuals promote the use of prayer as a means of spiritual support. Prayer can be a way of sharing beliefs or a way to affirm a personal connection to a higher power. Others use the belief in a higher

power and a personal connection to that higher power to support themselves spiritually, independent of membership in any specific religious organization (Beery, Baas, Fowler & Allen, 2002). Spiritual reading is also a way to express or affirm one's own spirituality (Tanyi, 2002). Many people use meditation or going out into nature to support themselves spiritually (Coyle, 2002). Through prayer, meditation, and, in some cases, religious commitments, many people feel a connectedness or a personal relationship with a higher power.

People with high levels of spirituality have been shown to have higher quality of life in the specific domain of chronic illness (Beery, et al., 2002; Flannelly, & Inouye, 2001; Schnoll, Harlow, & Brower, 2000). Using spirituality as an illness management strategy appeared to provide a purpose or sense of meaning in life to those experiencing chronic illness (Davis & Magilvy, 2000). Others have found that those with greater spiritual resources had better adjustment to chronic illness (Landis, 1996; Schnoll, et al., 2000).

Nurses need to be capable and comfortable performing a spiritual assessment of client needs in times of crisis or illness (Baldacchino & Draper, 2001). Nursing has always been interested in promoting quality of life. The nurse is in a unique position to assist the client with the use of spiritual management strategies. Nursing specialties in chronic illness include hospital staff during exacerbations of illness, office nursing staff during scheduled physician or nurse practitioner visits, home health staff, public health nurses, hospice, and the nurse practitioner as a primary care provider in rural areas. Nurses can fill the roles of caregiver, confidante, counselor, and guide through the

sometimes difficult road that accompanies chronic health conditions, and can help to promote illness management by recognizing the importance of spirituality.

In addition to the challenges that living in a rural area already pose to those with chronic illness, social and spiritual support can be lacking as well. Access problems and diminished availability of support groups can contribute to a lack of social and spiritual support, both of which appear to contribute to the well being of people with chronic illness (Flannelly & Inuoye, 2001; Lieno-Kilpi, et al., 1998). There was limited empirical research available regarding spirituality and rural dwellers with chronic illness, more specifically rural women with chronic illness. The purpose of this study was to explore spirituality as an illness management strategy by rural women with chronic illness. This study also explored the relationship between spirituality and social support.

Study Aims

The aims of this study were to: (a) explore ways in which spirituality was expressed, (b) characterize expressions of spirituality, (c) profile participants in terms of level of social support, and (d) explore the relationship of social support and spirituality in rural women with chronic illness. The study was conducted as a secondary analysis of data generated by the Women to Women project. The Women to Women study provided computer-based support to isolated middle aged rural women with chronic illness in Montana. The support intervention was designed to provide a forum for education and sharing with others who had similar challenges and problems.

BACKGROUND

Adjustment to chronic illness is often complex, and spirituality can be part of this ongoing process. This investigation included an assessment of spirituality and the relationship that spirituality has to social support for those with chronic illness in rural areas. A key component of this study was an assessment of literature related to chronic illness, social support, spirituality, and rural people.

Chronic Illness

Chronic illness causes major activity limitations for one out of every ten Americans (Centers for Disease Control and Prevention, 2002). A chronic illness is one that requires ongoing physical, psychological, health care, and social intervention to manage. Consequently, chronic illness affects many aspects of a person's life (Curtain & Lubkin, 1990). For those 10 percent of Americans who suffer from activity limitations due to a chronic health condition, limitations are life changing and often require physical, social, and mental adjustment.

Adaptation to chronic illness is multifaceted because of the complexity of the chronic illness trajectory. Each person is affected differently by chronic illness. Illness trajectories vary based on the symptoms, exacerbations, management resources, and personalities of those affected. Those with severe symptoms, such as fatigue and physical limitations, were more likely to have psychological issues, such as depression, and problems with adjustment (Evans & Wickstrom, 1999; Schafer, 1995). Physical

limitations associated with chronic illness range from mild to severe and can include

fatigue, chronic pain, and loss of body functions (Evans & Wickstrom, 1999; Schaefer,

1995). Generally, physical limitations lead to dependency on others for some functions

which were once were able to be performed independently. This sense of dependence can

lead to feelings of loss, such as loss of self, independence, and support. People with

chronic illness fear the loss of financial independence, and do not want to become a

physical burden on their families (Schafer, 1995). Other things that they sometimes face

are the loss of employment, health insurance, spouse, friends, and home. Those with

chronic health conditions also face great uncertainty. Treatments may not be as effective

as hoped and exacerbations of the illness can occur (Hanna, 1993). All of these factors

contribute to the difficult adjustment required when diagnosed with a chronic illness.

Integration of chronic illness into one's life is a complex process. There are some

steps that have been found to be common across diagnoses. The first phase of integration

is the crisis phase, or the phase where one confronts loss. Loss includes the loss of

capability, loss of function, loss of financial resources, and loss of quality of life

(Handron, 1995; Irvine, Brown, Crooks, Roberts, & Browne, 1991; Michael, 1996). The

second phase of integration is where people become depressed and face emotional

upheaval. They can experience depression, fear, frustration, and anger (Michael, 1996).

Once feelings are worked through, the illness becomes a part of a new self-concept

(Handron, 1995). The next phase is the one of changes. Changes in lifestyle, activity

patterns, diet, medication regimens, and sometimes self-identity occur (Handron, 1995;

Loeb, Penrod, Falkenstern, Gueldner, & Poon, 2003). Changes are the result of

adjustment to the everyday management of the disorder. The final phase is one in which

people seek to gain control of the altered life direction through empowerment.

Empowerment can occur by connection with others through social support, connection

with a higher power through either religious involvement or other spiritual connections,

seeking information through education about the disease and treatments needed,

partnering with a health care provider, being engaged in life and having a sense of

purpose, and by finding meaning in the illness (Handron, 1995; Loeb, et al., 2003;

McWilliam, et al., 1996; Michael, 1996).

 As difficult as it is to imagine having a chronic illness, it is more challenging to

have a chronic illness in a rural area. Not only do rural people have all of the facets of

chronic illness to endure, they also have to deal with limited health care service

availability. An in-depth analysis of rural individuals is helpful to give a picture of how

rural individuals manage when diagnosed with a chronic health condition.

<u>Rural Dwellers</u>

 Rural dwellers are at increased risk for chronic illness due to many factors. When

describing chronic illness in a rural context, it is helpful to have a definition of "rural",

though a consistent definition of rural has been somewhat elusive. According to the 2000

U.S. Census, rural was defined as open country with settlements less than 2,500 people.

However, rural areas are also defined as "non-urban" areas. Urban areas are divided into

two different types, urbanized areas and urban clusters. Urbanized areas are defined as a

nucleus of 50,000 people or more, it must have 1,000 people or more per square mile, and

may have surrounding territory with at least 500 persons per square mile. Urban clusters are defined as a core of population more than 2,500 people but less than 50,000 people with the same population density as an urbanized area. According to this definition, rural areas are defined as all territory located outside urbanized areas and urban clusters (Economic Research Service, 2004).

Krout & Coward (1998) defined a rural place as containing a small number of people and remotely located from a large urban center. This provides an opportunity to view many communities located all over the country as rural in nature. Many people think of farming communities as rural, but only about 6% of people living in rural areas live on farms, so rural areas are not based on occupation (Krout and Coward, 1998; McLaughlin & Jensen, 1998). There is a range in the concept of rurality as well. A rural area can be located just outside of a major metropolitan area, and on the other end of the spectrum, a rural person may live more than 100 miles from the nearest small town (McLaughlin & Jensen, 1998).

Poverty is a prevalent factor in rural communities. Rural people earn about 75% of what their urban counterparts earn yearly (Dorfman, 1998). Poverty is especially present in rural areas with high minority populations such as in the rural South (Williams, Lethbridge, & Chamber, 1997). It leads to problems ranging from lack of basic necessities such as food and running water, to lack of transportation, and lack of health insurance.

Rural residents have greater access problems than those who live in areas of one million people or greater (Auchincloss, Van Nostrand, & Ronsaville, 2001). Distances to health care providers are often further for rural dwellers than urban dwellers and they often have to deal with fluctuating weather conditions. These factors combined with the higher poverty rates in rural areas makes it difficult for many rural dwellers to access care (Cudney & Weinert, 2000; Krout & Coward, 1998; Thorson & Powell, 1993). Rural areas have less population than do urban areas, and small populations cannot support many health care specialists. Which leads to limited health care options in rural areas. Some people deal with the distance and lack of a local specialists by networking with others who have the same problem (Weinert & Long, 1987). Others use their social support networks to help them access care. Rural people use informal networks for health care needs, such as friends and family. They tend not to use formal health care systems, such as physicians and hospitals, until all informal sources of support are exhausted (Long, 1993). This reliance on informal support networks is one of the characteristics of rural people. Other characteristics of rural people are self-reliance and hardiness.

Attributes such as self-reliance, hardiness and self-care have been associated with rural dwellers. Rural persons have long defined their health status based on the ability to work or perform usual daily activities (Bushy, 2000; Long, 1993; Weinert & Long, 1987). When they are not able to work, due to a health problem, is generally when they seek health care. These individuals cannot take a sick day or the work on their ranch or farm will not get done. Therefore, rural individuals are self-reliant with health care activities because they cannot afford to stop working due to economic or functional constraints

(Long, 1993; Weinert & Long, 1987). This kind of self-reliance can be detrimental because it may delay a person from seeking health care until they are gravely ill, which leads to longer hospital stays in some cases (Rabiner, et al., 1997).

Hardiness is defined as surviving despite adverse circumstances (Wirtz, Lee, & Running, 1998). Some characteristics of rural individuals that define hardiness include a positive attitude, adaptability, challenge, spirituality, preserving self, and role models. The rural hardy individual is self reliant, adaptable to new situations, takes care of him/herself, looks forward to the challenges of life, and finds role models in those that came before (Wirtz, et al., 1998). The hardiness characteristic is one which is helpful in health care situations when rural residents encounter access problems.

Self-care in rural health is viewed as the ability to manage an illness at home, not being dependent on the health care system, maintenance of health through proper medication regimens, and use of alternative or home remedies (Davis & Magilvy, 2000). Self-care can be challenging to the rural person because of economics, poverty, and limited access to health information (Muchow, 1993). Lack of education in the maintenance of health is also a factor, although this has been improved with the use of the internet and telemedicine (Muchow, 1993). It is good for those rural people with chronic health conditions to possess the attributes of self-reliance, hardiness, and self-care, because of the access problems, which include distance, poverty, and lack of services. The rural individual generally deals with all of these problems head on and continues to maintain a certain lifestyle with few accommodations.

Despite the problems of limited access to health care services, the rural individual appears to have a better perception and utilization of self-care activities in the management of illness than does the urban person. They were more likely to perform self-care activities and also reported having a higher level of functioning despite disability than their urban counterparts (Rabiner, et al., 1997). Many rural people rely on informal support networks for health advice, management, and care. Social support networks are very important to those with chronic health conditions, and an analysis of the function and purpose of social support networks is essential when discussing chronic conditions.

Social Support

Social support can be defined as the "psychosocial and tangible aid provided by the social network and received by a person" (Tilden & Weinert, 1987, pp. 614). The types of social support received vary, but appeared to have a positive influence on chronic illness management. Beyond providing assistance with daily activities, active social support networks appeared to have a positive effect on well-being. Support of peer groups in cancer has been shown to help with adaptation to cancer diagnosis (Loescher, Clark, Atwood, Leigh, & Lamb, 1990). Jensen (1991) found that people with a shorter breast cancer survival time had been more isolated, had more depressive symptoms and had more difficulty with social contact than those with a longer survival time. There is some evidence that having extensive social support networks helps to reduce stress, and subsequently improves outcomes, because stress has been shown to negatively affect outcomes in those with chronic illness (Tilden & Weinert, 1987; Thomas, 1995).

Heidrich (1996) found that declines in functioning and in health status were attributed to inability to maintain social support networks. Hudson, Lee, Miramontes, and Portillo (2001) reported that there was an inverse relationship between social support and distress in women with HIV. According to Sherman (2003), older adults with osteoarthritis had fewer depressive symptoms when they perceived high levels of social support and low levels of social strain. These data indicated that social support was associated with relieving distress, improving depressive symptoms and preventing declines in health status.

While the importance of maintaining social support networks is clear, the maintenance of these networks in the context of chronic illness can sometimes be difficult. Tilden and Weinert (1987) proposed that social support networks are reciprocal and mutual. Chronic illness is demanding physically, emotionally, and socially, which can impair the support relationship. It can be difficult for the person with chronic illness to reciprocate support received from others. The illness may be stigmatizing, such as AIDS, cancer, or mental illness, and people may withdraw from relationships due to the illness itself.

Families are important sources of strength, but can also be sources of stress, because caring for a family member with a chronic health condition can be taxing physically, emotionally and financially. This can put strain on the support relationship, especially with families that need to distance themselves from the relationship at times (Tilden & Weinert, 1987). Many people with chronic health problems also fear becoming a burden to family members and consequently distance themselves from family support

relationships (Michael, 1996). In order to overcome the stress of maintaining social support networks a few strategies are useful, such as personal counseling, family counseling, formal support groups, and talking to family and friends about the illness (Loescher, et al., 1990). Formal support networks such as health care providers and self-help groups can be helpful in maintaining social support in times of caregiver or family stress.

In previous research, maintenance of social support networks was very important in dealing with a diagnosis of a chronic health condition. There are theories as to how social support helps during illness states. Landis (1996) theorized that social support functions through the transcendent, spiritual dimension because it allows one to find connections with others. This allowed for finding meaning in illness and self-reorganization which then lead to better adjustment in chronic illness (Landis, 1996; Oman & Thoreson, 2002). A sense of faith has been shown to help those with chronic illness adjust to stress (Lin & Bauer-Wu, 2003). In addition to analyzing social support, it is also important to conduct an analysis of spirituality and its role in chronic illness.

<u>Spirituality</u>

The word spirituality is derived from the Latin word spiritus, which means spirit. The definition of spirituality, according to Webster's dictionary, includes: (a) the quality or state of being spiritual, (b) having a spiritual character instead of a worldly or material character, and (c) existence in a spiritual state (Gove. 1986). The word spiritual, according to Webster's Dictionary is defined in part as: (a) consisting of the nature of

spirit rather than material (b) relating to religious or sacred matters, (c) proceeding from or under the influence of the Holy Spirit, (d) concern for religious values, seeking earnestly to live a right relation with God, (e) relating to, or coming from the intellectual or higher endowments of the mind (Gove, 1986). A working definition of spirituality, for the purpose of this study, was determined by refining the standard definitions given for "spirituality" and "spiritual". Spirituality consists of the connection to a higher power, or that which is greater than ourselves, which then enables people to connect with others and find meaning in their lives.

Many people use organized religion and membership in a religious organization to support or express themselves spiritually. Others use the belief in a higher power and a personal connection to that higher power to feel supported spiritually, independent of membership in any specific religious organization. Being a member of a religious organization does not necessarily denote spirituality and many people who think of themselves as spiritual people often deny being religious (Beery, et al., 2002). This presents an ongoing confusion in defining spirituality and religiosity. Some researchers use the term spirituality to reflect religious membership and belief and others use the term to encompass not only religious practices, but also the existential aspect of spirituality.

Coyle (2002) provided a three pronged framework for approaching spirituality from a health perspective. The first aspect is the transcendent, and has to do with a connectedness to God, a higher power, higher consciousness, or to the universe. This aspect encompasses the potentialities of self, faith, meaning and purpose. The second, value/guidance, refers to the activation of the individual. The meaning and purpose that

one finds in a relationship with a higher power can provide motivation to gather information, provide self identity, and promote personal ideals and beliefs. The third, structural behaviorist, refers to the use of religion, church attendance, prayer, and social support in the realm of health. The framework is useful in relating spirituality to the realm of health and illness. As can be seen as a part of the framework, connectedness, transcendence, and finding meaning are important aspects of spirituality. An analysis of these concepts is important in determining their role in chronic illness adjustment.

Self-Transcendence, Connectedness, Finding Meaning

Self-transcendence, connectedness, and finding meaning have all found to be associated with spirituality and chronic illness in recent literature. Self-transcendence is best described as: (a) extension inwardly by activities such as introspection of one's belief systems, (b) extension outwardly by connection and concern with others, and (c) extension temporally by analyzing past perceptions and integrating them into future beliefs (Haase, Britt, Coward, Leidy, & Penn 1992). A critical life event, such as the diagnosis of a chronic illness, can be a catalyst for self-transcendence (Daaleman, et al., 2001). Self-transcendence has the potential to help those with a chronic illness look beyond themselves to a higher power, and to utilize this strength to mobilize their own resources in managing the illness.

The concept of connectedness was frequently found related to spirituality in the literature. Connectedness refers to the connection that one feels with a power greater than oneself and it can help those with illness to gain knowledge of themselves, gain motivation to change, and reflect on meaning and purpose in life (Coyle, 2002). Connecting to a higher power allows people to let go of things which they cannot control as well as control those things which are possible to control (Carson & Green, 1992). Connectedness can be a catalyst for action and can be a source of strength to empower and motivate people with chronic conditions (Coyle, 2002). Feeling a connection with something greater than oneself can lead to wanting to preserve that relationship through meditation and prayer. It can also lead to giving to and taking care of others as a way to show the connection with a higher power (Burkhart, 1994). Feeling a connection to a higher power can be a source of strength and hope to transcend an illness state such as the presence of a chronic illness.

Finding meaning can be defined as finding a sense or purpose in life within the context of illness (Baldacchino & Draper, 2001; Coyle, 2002; Moch, 1998; O'Neill & Kenny, 1998; Tanyi, 2002). Finding meaning in illness has been found to be a useful coping strategy in times of illness or crisis (Baldacchino & Draper, 2001; Carson & Green, 1992; Daaleman, et al., 2001; Fryback & Reinert, 1999; O'Neill & Kenny, 1998; Pace & Stables, 1997). Finding meaning helps those with chronic illness to connect spiritually to themselves, to a higher power, and to those around them. Acknowledging the value of life, which can be a result of finding meaning, allows those with a chronic health condition to assume some control over what is happening, and allows them to let

go of some aspects of the illness and rely on a higher power for support and comfort (Carson & Green, 1992). Finding meaning can be a significant part of integration of the illness because it can help people with a chronic illness find a purpose in life (Daaleman, et al., 2001).

Transcendence, connectedness, and finding meaning are closely related to the theme of spirituality and spiritual coping strategies. Belief in a higher power and connection with powers greater than oneself were found to be critical attributes of spirituality, and transcendence was found to be a subconcept of belief/connectedness by Fryback and Reinert (1999). Spiritual well-being allows people to find connections with others and with a higher power, and through these connections people find meaning in the illness and meaning in life, which helps them transcend their illness (Carson & Green, 1992). All of these concepts are considered to be closely related to spirituality, and the use of spirituality in the integration of a chronic health condition into one's life.

Religiosity

Although linked with spirituality, religiosity is not necessarily a component of spirituality. Many studies have shown that membership in a religious organization does not necessarily make one a spiritual person and vice versa (Carson & Green, 1992; Fryback & Reinert, 1999). The two elements, however, are linked for many people as they rely on their religious faith as a means of support or comfort in times of illness.

Religious faith can be the basis for prayer, meditation, and identifying a higher power in which one believes. Religious belief and participation in worship have been

shown to be associated with quality of life in the context of chronic illness. Murphy, Albert, Weber, Del Bene, and Rowland (2000) found that those with Amytrophic Lateral Sclerosis (ALS) who attended worship services and prayed regularly were more likely to have hope in response to the demands of their illness. Hopelessness was correlated with decreased social support and quality of life. Murphy et al. also found that religious faith influenced decisions regarding the use of technology and offered a source of comfort. Flannelly and Inouye (2001) reported that religious faith and religious affiliation had a positive affect on quality of life in individuals diagnosed with HIV/AIDS, even after other variables were controlled. Strawbridge, Cohen, Shema, and Kaplan (1997) showed that mortality was decreased for those who attended religious services frequently. Beery, et al. (2002) indicated that both spirituality and religiosity contributed to the quality of life of those with heart failure. Pargament, Koenig, Tarakeshwar, and Hahn (2001) found that religious struggle was associated with higher mortality in elderly ill patients and those who were feeling unloved or abandoned by God suffered higher mortality.

Even though religiosity and spirituality can be separated, their impact on quality of life and management of chronic illness is similar. Persons with chronic illness who scored high on religiosity, and those who scored high in existential well-being, did not differ significantly in the level of quality of life. These two groups differed significantly from those identified as non-spiritual. The non-spiritual group had lower quality of life and life satisfaction than those categorized into the previous two groups (Riley, et al., 1998). Strawbridge et al. (1997) analyzed the mortality of those who attended religious services frequently and found that social connection and religious practice were linked.

Those who attended religious services frequently were less likely to have risky behavior such as smoking and heavy drinking. Those who did smoke or drink heavily at baseline were more likely to quit if they attended services (Strawbridge et al., 1997). Oman and Thoreson (2002) theorized that there is some difficulty in distinguishing how religion or spirituality affects health. Factors, such as better health behaviors, or increased social support associated with religious membership can contribute to health. There may also be some mediating psychological factors that contribute to transcendence of illness, such as a sense of well-being, and positive psychological states that religious membership instills. People identified as religious or spiritual may be more likely to have self-efficacy, increased motivation, or willowier. However, independent effects of religion or spirituality on health remained after controlling for all these factors (Oman & Thoreson, 2002).

Religious membership can also be seen as a source of social support. It brings people together that share similar belief systems. Many churches and religious organizations have prayer groups and this may help to bolster the feeling of support that one with chronic illness may feel. Churches also provide a place and people to turn to in times of need or crisis. It appeared religiosity had an effect similar to spirituality on quality of life in those with chronic illness.

Rural dimension of spirituality

Rural people tend to have a strong faith and belief in God, which helps to define their health, health status and who they are (Running, 1998). Rural elderly individuals identify spirituality, religious participation, prayer, and helping others as part of maintaining their present state of health (Koehler, 1998). Rural people's definition of spirituality goes beyond religious participation to describe feeding and maintaining the spirit. Spirituality was identified as a defining theme of hardiness in rural women by Wirtz, et al., (1998). Some of these women identified prayer and attending church as part of adapting to the trying times in their lives, and some identified the connection to a higher power rather than the participation in a specific religion (Wirtz, et al., 1998).

Religious practice in rural communities has a unique place. In many rural communities, churches play an integral part of the community social structure. They are a source of support and resources in small communities. Even though the church can play a large role in the community, it has been reported by rural residents that religion only had a moderate effect on their feelings of social support (Weinert & Long, 1993). In another study by Sullivan, Weinert, and Fulton (1993), rural residents found religious support greatly lacking when returning to their home communities after a cancer diagnosis. More research is needed in these areas to investigate the role of spirituality and religion in rural people with chronic illness.

Spirituality and Social Support

Research is limited regarding the link between social support and spirituality. Religious involvement and its link to quality of life have been discussed. There is an established link between social support and adjustment to illness states. However, the relationship between spirituality and social support is not well established. Many researchers believe that spirituality and social support are related because of the support one receives with membership in religious organizations (Loeb, et al., 2003; Olphen, et al., 2003; Strawbridge, et al., 1997; Thies, Biordi, Coeling, Nalepka, & Miller, 2003). Some of this support is provided in the form of visits from clergy or members of the congregation, prayers, or communion with others in the form of church attendance. However, as discussed, spirituality can be independent of religious membership for many people. Spirituality is directly correlated with social support as has been demonstrated in recent studies (Craig, C., Weinert, C., Derwinski-Robinson, B., & Walton, J., 2004; Patel, Shah, Peterson, & Kimmel, 2002; Tuck, McCain, & Elswick, 2001). Patel et al. (2002), found that higher spirituality scores correlated with increased perception of social support in clients with end-stage renal disease on hemodialysis. However, Patel et al. also found that higher religious involvement did not correlate with increased perception of social support. Sometimes social support, as described by those who participate in religious activities, is not the fellowship that they experience, but the connectedness that they feel with a higher power (Daaleman, et al., 2001). Thus, high spirituality and high perception of social support may not always be linked to religious membership. More research is

needed to determine if spirituality is linked directly with social support, or if social support is drawn from religious membership.

Spirituality and social support can be employed as strategies in adapting to chronic illness. Rural people have unique challenges in adaptation to chronic illness due in part to access problems and poverty. Even though churches and religious organizations sometimes play a role in the social structure of the community, it has been shown in limited research that reliance on religious support is not always significant to rural people. The sparse literature makes it difficult to draw conclusions about spirituality in rural people with chronic illness. Therefore, it would add to the existing body of nursing knowledge to analyze spirituality and social support in rural people with chronic illness.

Conceptual Framework

Pollock (1990) described a framework of adaptation to chronic illness. This framework was based on the premise that those with chronic illness adapt similarly regardless of specific diagnosis. Factors identified as influencing adaptation included length of illness, physiological functioning, hardiness, stress coping, participation in health promotion, patient education, and demographic characteristics. Spirituality and social support can be identified as part of the stress coping aspect of the framework. Social support has been shown to help people with chronic illness better adapt to the chronic illness through management of stress (Tilden & Weinert, 1987; Thomas, 1995). Spirituality has been shown to improve quality of life and assist with better adaptation to chronic illness by using coping mechanisms such as finding meaning and connectedness

(Coyle, 2002; Flannelly & Inouye, 2001; Landis, 1996). This framework provided a guide for the study reported here because, despite having different illnesses and possibly different illness trajectories, it was theorized that the women would use coping mechanisms such as spirituality and social support in a similar fashion.

METHODS

This study was a secondary analysis of data generated from the Women to Women1 (WTW1) project at Montana State University-Bozeman, College of Nursing. Methodologic triangulation, more specifically between-method triangulation, was used in this investigation (Shih, 1998; Thurmond, 2001). Computer exchanges among women were analyzed for content relating to spirituality. Scores on the Personal Resource Questionnaire (PRQ), a social support instrument, were then analyzed to determine if any relationship existed between spirituality and social support.

<u>Women to Women Project</u>

The WTW 1 project was a project that provided women in rural Montana with a computer-based forum for education and support. The women were recruited through health agencies, media, and word of mouth. A screening interview was conducted to establish eligibility and to collect background information. Written informed consent was obtained after the screening interview was conducted. Women who were eligible and interested in participating were randomized into one of two groups. A non-computer group (n=15) was provided educational materials and were sent a survey to fill out at 2.5 month intervals. The computer group (n=15) received the education materials, surveys, and also access to a computer-based, asynchronous, support and education chat rooms. A total of five cohorts (n=30), each lasting ten months, participated. Inclusion criteria for the Women to Women 1 project were: (a) women ages 35-60 who were diagnosed with

one or more chronic illnesses including cancer, diabetes, rheumatoid diseases, or multiple sclerosis, (b) women who lived at least 25 miles outside of a population center in Montana, which was defined as a town with 12,500 or greater residents (c) able to use telephone, computer, and mail communications, (d) able to utilize computer, telephone and mail communications, and (e) able to read and write English. (Weinert, 2000).

The data were generated through telephone interviews, mail questionnaires, computer-based communications among the women, and end-user statistics. Telephone interviews and mail questionnaires were conducted at baseline, 2.5 months, five months, 7.5 months, and 10 months. The participants in the computer group had access to computer-based communication for the first five months of the study. Computers were provided to those who did not already have them and each computer was installed with the FirstClass software system. A staff member traveled to the home of each woman in the computer group and trained them in the use of the software. Six months into the project the women completed a technology survey which was geared to assessing the intervention portion of the project. The project was completed at 10 months with a final phone interview and mail questionnaire.

The computer program was divided into four components. The first was "Conversation" which was a self-help support group; a forum for the women to converse with each other on any topic. These postings were able to be read and responded to by all participants. This was a free flowing exchange for the women to express opinions, changes in their lives, and express things that may not be directly related to the health topic at hand. Communications were asynchronous in nature and the system was

available 24 hours a day, seven days a week. The researchers did not actively participate in "Conversation" unless invited to do so. The second component was "Healthchat". This was a more structured chat room in which health information was provided by the researchers and discussed by the members of the group. The "Mailbox" area was for private e-mail communication between participants, or between the researchers and participants. The "Resource Rack" was an area that was read-only and was a place for the research team to post announcements or health related information (Weinert, 2000).

The data generated from the two chat rooms ("Conversation" and "Healthchat") were compiled and a content analysis of data was performed. Data were entered into NUDIST, which is a computer program used for the organization and analysis of qualitative data. Data were then organized according to topic in NUDIST for further analysis.

The women completed mail questionnaires at intervals during the project. The concepts measured were social support, quality of life, and psychological adjustment. Instruments included were the PRQ-85 (Weinert, 1987), Quality of Life Index (Ferrans & Farrell, 1990), and Psychosocial Adjustment to Illness Scale (PAIS) (Derogatis, 1986). These data were entered into SPSS, which is a quantitative data software program, for further analysis.

The Women to Women project was given approval by the Institutional Review Board at Montana State University-Bozeman in March 1997. The project has been consistently approved since this time. Additional information about the Women to Women project can be found in recent publications (Cudney, S., Butler, M., Weinert, C., & Sullivan, T., 2002; Cudney, S. & Weinert, C., 2000; Cudney, S., Winters, C., Weinert, C., & Anderson, K., in press; Hill, W., Schillo, L., & Weinert, C., 2004; Hill, W. & Weinert, C., in press; Weinert, C., 2000; Weinert, C., Cudney, S., & Winters, C., 2004; Whitney, A., Weinert, C., & Cudney, S., 2004; Winters, C., Sullivan, T. & Weinert, C., 2004).

Secondary Data Analysis of Women to Women 1

A single cohort, the third to participate, was selected for this study. The data, from "Conversation", were already coded for spirituality by the WTW1 research team. This cohort was selected because of the amount of data identified as containing spiritual content. Other cohorts did not have as much spiritual data, which made the third cohort a better choice than others. The data were then printed out from NUDIST and further analyzed. Content analysis was used to explore spiritual references in the computer communications of the women from "Conversation". Analysis of the PRQ85 scores was used to determine the level of social support.

Between-methods triangulation, which refers to the use of both qualitative and quantitative methods to investigate the same unit, was employed in this study (Shih, 1998). Triangulation helped to provide breadth and depth that was not possible when

using only a single analysis method (Thurmond, 2001). Multi-method design was chosen

as the format for this study because it assisted in exploring the relationship between

spirituality and social support.

Human Subjects Considerations

The data collection for this study was accomplished by meeting with the principal

investigator of the study and receiving permission for access to the necessary data. This

study was determined to be exempt by the Montana State University-Bozeman

Institutional Review Board because it was secondary data analysis. No further data were

obtained from the participants, who were identified by only an identification code. All

identifying information, such as names, addresses, or personal information were removed

from the data by WTW1 staff prior to this secondary data analysis. The participants'

confidentiality and privacy were protected at all times.

<div align="center">Data Analysis</div>

Qualitative data in this study were drawn from the computer-based

communications between the women. For the purposes of this study it was felt that

spontaneous conversations between the women would provide the best source of

information regarding spirituality in chronic illness with minimal intervention on the part

of the researchers. Each communication was in the form of a posting in the

"Conversation" chat room. Postings refer to asynchronous communications between the

women that were placed in an area that could be read by all the participants. Data used for

this secondary analysis were loaded in the NUDIST program and already coded as spiritual by the research team. These data were downloaded and content analysis was conducted to examine spirituality in the lives of the women.

Content Analysis

Content analysis is defined, by Morse & Field (1995), as analysis by identifying topics, which are the basis for categories, which then may be divided into subcategories. The first step was to read the entire data set and identify broad categories. As the data were analyzed, category definition or descriptions emerged, with data fitting into specific categories and not others. After category identification then data were placed into relevant categories and once categories were full then they were further divided into subcategories. When categories and subcategories were defined then descriptive paragraphs were written about each category, and relationships established between categories (Morse & Field, 1995).

Frequency of spiritual communications was noted for each participant. Once each communication was categorized, any patterns that emerged with individual participants was noted and discussed.

Lincoln and Guba (1985) set forth four criteria to establish trustworthiness in qualitative data analysis. The four criteria are credibility, transferability, dependability and confirmability.

Credibility refers to the data accurately reflecting the experience of the research participant (Lincoln & Guba, 1985). Since this is a secondary data analysis, the participants were unavailable for further verification of statements made. Credibility was ensured by verification with other statements made by the participants in the cohort.

Transferability refers to the applicability of the results to another study (Lincoln & Guba, 1985). Transferability was ensured by the sufficient description of analysis and results to ensure the reader will be able to make judgements about the applicability of results to other contexts.

Dependability is concerned with stability and repeatability of the study (Lincoln & Guba, 1985). Dependability was ensured by consultation with the original research team and thesis chair to ensure accurate interpretation of data.

Confirmability addresses researcher bias (Lincoln & Guba, 1985). Freedom from bias was ensured with consultation with the research team and thesis chair. It was also ensured by the investigator's efforts to set aside any preexisting assumptions regarding chronic illness, spirituality and social support.

Quantitative Analysis

The PRQ (Personal Resource Questionnaire) was a social support measure developed by Brandt and Weinert (1981). The PRQ is based on the Weiss (1969) model which is made up of five concepts: (a) intimacy, (b) social integration, (c) nurturance, (d) reassurance of worth, and (e) assistance (Weinert, 1987). Originally developed in 1981, the instrument was refined and called the PRQ85. The tool is a 25-item

questionnaire with a seven-point Likert scale that measures a person's perceived social support. Scores can range from 25 to 175. Higher scores indicate higher levels of perceived social support (Weinert, 1987).

The PRQ85 was part of the repeated measures mail questionnaire that was administered at intervals during the project. The scores used for this study were obtained at baseline, 2.5, and five months. These time points were the beginning, midpoint, and end of the computer intervention phase. Analysis of the PRQ85 scores included determining perceived support based on the total score for each participant at each interval and then by examining mean scores for each participant. Higher scores indicated higher perceived social support.

The PRQ85 has been shown in multiple studies to be a valid and reliable tool for the measurement of social support. Chronbach's alpha for the PRQ85 in other studies ranged from .79 to .93 (Weinert, 2004). Chronbach's alpha for the PRQ85 in this study was reported to be .85, which is consistent with other studies.

<u>Multi-Method Analysis.</u>

To better show the link between social support and spirituality, triangulation of the qualitative and quantitative findings occurred. Spiritual content was demonstrated to be present in the spontaneous conversations of women with chronic illness. Categories and subcategories emerged when the data were coded that showed the character of the spiritual communications of women with chronic illness. The PRQ85 scores were then analyzed to determine perception of social support. Social support and spirituality were

found to be linked in the context of chronic illness in the literature. Therefore, in addition to the separate analysis of spirituality and social support, both concepts were analyzed together to show a relationship between the two concepts.

Summary

The purposes of this study were to examine spiritual communication in chronic illness and explore the relationship between spirituality and social support. Womens' messages were examined for spiritual content and categorized based on commonalities. Once categories were established, subcategories emerged and were defined. In addition, social support scores for participants were examined in relation to spirituality.

FINDINGS

The Women to Women Study was divided into five cohorts, each lasting ten months. Five of those months were dedicated to the computer intervention portion of the study. Cohort three, which was selected for this study, had thirteen women that participated in and completed the computer intervention portion of the study. This portion lasted 22 weeks and started on November 23, 1998 and finished on April 25, 1999.

Demographics

The thirteen participants were women who ranged in age from 38 to 61 years old, with a mean age of 48.4 years. The range of income was less than $15,000 per year to $65,000-$69,000 per year. Median income was $30,000-$35,000 per year. Five of the women were not employed at the time of the study. One was in food service, two were in health care, two were in education, one in sales, one in government, and one in other services. Mean years of education were 14.4 years, with a range of 10 to 20 years. Time since diagnosis ranged from one year to 27 years, with a mean of 15 years. Mean distance from emergency care was 12.7 miles and ranged from 0.2 miles to 44 miles. Distance to routine care ranged from one mile to 400 miles, with a mean of 66.7 miles. Average length of residence in Montana was 21.5 years, with a median of 14 years, and a range of one year to 50 years. Seven of the participants had children under the age of 18 living at home. One participant was never married, nine were married, two were divorced, and one was separated. Diagnoses were as follows: multiple sclerosis (n=3), diabetes (n=3),

arthritis (n=1), lupus (n=1), fibromyalgia (n=1), and cancer (n=3), both arthritis and fibromyalgia (n=1). The computer intervention group started with 15 participants and two did not complete the full 22 weeks. Twelve of the thirteen who completed the computer intervention went on to complete the entire 10 months of the study.

Messages

There were a total of 673 messages created and posted ("Conversation" & "Healthchat") by this cohort. Of these, 280 messages were posted in the "Conversation" portion. The mean number of messages created in "Conversation" per person was 21.5.

Messages were analyzed for content. There were 258 communications with social support content in "Conversation", which was 92.1% of total messages in "Conversation". Ninety messages (32.1%) contained spiritual content in "Conversation", with an average of 7.5 spiritual messages per woman. All 90 posts identified as having spiritual content were also identified as having social support content, resulting in about 35% of the social support exchanges containing spiritual content.

The amount of activity in the computer-based support group ("Conversation") varied. It was helpful when looking at the exchanges as a whole to have a breakdown of messages by content. This gave a clearer picture of the women and their number of messages that contained spiritual and social support content. On Table 1 is a breakdown of messages posted by each woman according to social support and spiritual content and total messages. There were some inconsistences in the numbers because of the overlap between spiritual and social support messages.

Table 1. Spiritual and Social Support Content and Total Messages

Participant	Spiritual messages created	Social Support messages created	Total Messages created
1	0	1	3
2	1	8	16
3	7	18	24
4	2	11	12
5	5	12	14
6	4	29	32
7	34	67	75
8	4	15	15
9	5	7	7
10	8	26	26
11	2	4	5
12	2	8	17
13	16	33	34

The messages as a whole were very rich. There were many lively discussions regarding health concerns, humor, scripture, and life. An analysis of content in the spiritual messages is required to show the great depth these women reached in their spontaneous conversations.

Analysis of spiritual postings

The women shared spirituality with one another in their computer communications. The predominant categories identified were prayer, faith, verse, transcendence, finding meaning, and family. The category of prayer included prayers for health and prayers for family. Sharing faith and reliance on faith were subcategories of the category, faith. Verse refers to the use of hymns, poems, bible verses, humor, and songs. The use of spirituality to deal with family issues had a high frequency of mention in the spiritual communications. The number of communications identified by category is shown on Table 2. The category and subcategory totals do not equal the total messages, because within one message there was often more than one category identified.

Table 2 Frequency table for categories and subcategories

Themes Subcategories	Number of References in Postings
Prayer	46
Prayer for Family	27
Prayer for Health	13
Faith	42
Sharing Faith	16
Reliance on Faith	30
Verse	19
Transcendence	12
Finding Meaning	10
Family	39

Prayer

Prayer was one of the predominant categories found in the computer exchanges, and was used to both ask for and provide support. Prayer asking for support was generally about illness or family concerns. Prayers offering support were often in response to these requests. Occasionally there were offers of prayers when none were requested and often those offers were in response to an illness struggle someone was having or a family tragedy or incident.

Prayer for Health. Struggles with health and illness were a source of prayer. One woman offered prayer in response to another women starting a new medication. She stated "hope this new medicine works .... I'll say a prayer for you." Another example is

"maybe the new meds will do something for your peace of mind .... I will pray that things work out well." Another participant stated that "Lately I can't sleep supine. My husband sleeps in another room due to my coughing and snoring. So I would apprishate (sic.) a prayer about this." Another is "I will pray that your back pain becomes mannageable (sic.)." These were examples of using prayer as a means of offering and asking for support for health and illness concerns.

Prayer for family. Offering prayer was also associated with participants stating family concerns. Things such as deaths in the family, family illness, children leaving home, children getting into trouble, and everyday family stressors were all topics covered. One woman stated "Sorry to hear about your family problems. It sounds very stressful. I will remember you in my prayers." Another wrote, "I am so glad to hear how much better your mother is doing. I'm a great believer in prayer myself. I would be lost without it." Later in the same message the woman asked for prayer in response to her son being released from prison; "We did a lot of praying when he was in. And now that he's out we'll be doing a lot more praying for him." Family crises can be a source of stress, and prayer appeared to be a form of sharing and connecting with the other members of the group in response to the stress. In addition to offering personal prayers, some of the women also took prayer requests to their bible study or prayer groups in their respective churches. For example, "I will be praying for your son and so will our womens prayer and bible study group." Prayer, in these instances, appeared to be a way of providing support for family issues.

Faith

Faith in God, or a higher power, appeared to play a significant role in many of the participants lives. These women showed a willingness to rely on faith and share their faith in times of crisis or illness.

Sharing faith. The computer communications also were a way for the women to provide support for one another, in addition to prayer, by sharing faith. A statement made by one woman who was dealing with an exacerbation of her fibromyalgia syndrome (FMS) was "God has been holding me up .... I remind myself again that God only alows (sic.) us as many troubles as each of us can bear." A response to her post read "Glad to hear you are managing-with God's help. Regarding God's support-reminds me of a quote of Mother Teresa–'I know God won't give me anything I can't handle. I just wish he didn't trust me so much'." Another statement made was "I am always suprised (sic.) at being able to continue with getting what has to be done done (by God's good grace and my families support)." This shows a willingness to turn to God in times of stress and need for support. Pulling from spiritual resources appeared to be one of the ways these women coped with chronic illness.

Reliance on faith. These women often turned to their faith to get through trying times. They showed this in the way they spoke about God and their religion. One participant that was having family troubles posted "... there appears to be an open door for my brother and I to mend our relationship. I know God had a hand in all this and

I have faith that He knows what he's doing!". Another post read "Trust in God as He is the one that holds us in the palm of his hands." Others were "keep the faith", or "I've decided to not worry over it as things will happen the way that God sees fit.". Another woman stated "Perhaps I need to meditate on the fact that God will keep me in his care no matter what. It is not undersanding (sic.) that is more important (though it feels like it is), but enjoying life regardless of knowing what is going on." One more example regarding one participant quitting smoking was "... but I also knew that with God's help I could do it."

Verse

There were many references made to scripture in the content of messages posted. These references were in the form of bible verses, hymns, and poems. The postings that involved scripture were full of references regarding transcendence and finding meaning in the face of illness.

Bible verses, hymns, poems, songs and humor were a way for the women to share faith and provide support for one another. For example, one hymn stated "Day by day and with each passing moment, strength I find to meet my trials here .... Ev'ry day the Lord himself is near me with secial (sic.) mercy for each hour....". Another was a bible verse that read in part "I cry out to the Lord. I pray to the Lord for mercy. I pour out my problems to him. I tell him my troubles. When I am afraid, you, Lord, know the way out....". A quote posted read, "I am only one, but I am one. I can't do everything, but I can do something. And what I can do, with the help of God, I will do..." A poem read, "O

thou who canst not slumber, and whose light grows never pale, teach us aright to number

our years before they fail! On us thy mercy lighten, on us thy goodness rest, and let thy

spirit brighten the hearts thyself has blessed!". An example of humor that was posted was

"When God passed out brains, I thought he said trains. And I missed mine. When God

passed out looks, I thought he said books. And didn't want any. When God passed out

ears, I thought he said beers. And asked for two long ones....". These examples show

sharing and reliance on faith by the use of scripture, hymns, poetry and humor.

Transcendence of illness

Transcendence in illness was a theme found in the communications among the

women. They found ways to transcend their illness state through faith and spirituality.

There were many references to transcendence in the many quotations of hymns, poems,

songs, and humor. Posting these things appeared to be a way for the women to express

themselves and give words to what they were feeling about their illness. One woman

expressed her feelings in a poem.

> I have come up from the depths, the sea is below and the mountains above, in a
> vallly (sic.) I stand. How long a journy (sic.) to reach this plain from death toward
> life. But now I see- the way is long before me, the wind calls awakend (sic.), I
> breath. My foot moves- I must alow (sic.) myself to feel pain and hurt, anothers
> touch and word. Becuse (sic.) God keeps the inner person- safe. Built upon the
> secure foundation of Christ we may allow others through our walls.

This was one example of how poetry was used to express transcendence of illness.

Another verse read "I say 'you are my protection you are all I want in this life.' Listen to

my cry because I am helpless .... Free me from my prison. Then I will praise your name.

Then the good people will surround me because you have taken care of me. Lord, hear my

prayer." This is a Psalm written by David. In this passage the participant talks about transcending her illness by being released from her "prison" through God.

Finding meaning in illness

Bible verses were also used to convey a sense of finding meaning in the presence of illness. One person wrote,

> God has been holding me up and though it is difficult so far I am managing to do what (absolutly) (sic.) needs to be done .... I remind myself though, God only alows (sic.) us as many troubles as each of us can bear. He gives rest in the storm. In Hebrews Chapter 4, God talks about intering (sic.) into his rest. I think his is talking about salvation here. About being secure as his child. When life is put in that perspective my troubles do not seem burdonsom (sic.).

This quote exemplified her finding meaning in her illness. Despite the fact she had an illness, she felt that it was all part of God's plan for her, and it could have been much worse than her situation was already, in her eyes. She went on to quote bible verses that exemplified her previous discussion, she stated, "Romans chapter 8, verses 14 through 39 are even clearer .... If so be that we suffer with him, that we may be also glorifies (sic.) together. For I reckon that the sufferings of the present time are not worthy to be compared with the glory which shall be revealed in us". This participant related her present suffering from chronic illness to this bible verse. She seemed to speak of finding enough meaning in the illness to not concentrate on the ailments she has now but concentrate on the glory that will be hers with God someday. She posted another bible verse that also illustrated meaning. It stated "...I can do all things through Christ who strengtheneth me. Not withstanding, ye have well done, that ye did share with my affliction.".

Another example of finding meaning was a prayer quoted,

> Let me do my work each day; and if the darkened hours of despair overcome me, may I not forget the strength that comforted me in the desolation of other times...Let me not follow the clamor of the world, but walk calmly in my path. Give me a few friends who will love me for what I am; and keep ever burning before my vagrant steps the kindly light of hope.

This verse was full of finding meaning in illness for this participant. She talked about despairing at times, but being able to overcome the despair through her faith in God. Through God she continued to have hope of a better life someday. The illness changed her life by providing a greater reliance on her faith to find her way. This was her way of finding meaning in the illness.

Faith, finding meaning, and transcendence were all-important parts of integration of chronic illness into daily life. Chronic illness is characterized by waxing and waning of symptoms in most cases, leading to exacerbations and remissions, good days and bad days. Most of these women had support systems which were very important in their daily lives. The role of family was very prominent in many of the postings with spiritual content. Thus, this research would not be complete without a discussion of family and the use of spirituality to deal with family issues.

<u>Family</u>

The role of spirituality in managing everyday family concerns was evident in many of the exchanges. These were not only women with chronic illness, they were mothers, grandmothers, daughters, wives and employees. These women had an incredible connection and interaction with their families. Just because they were diagnosed with a

chronic illness did not mean that they stopped existing in these other roles. It seems that

they often put their families before themselves and used spirituality frequently to manage

family concerns. There was also evidence of spiritual management of everyday stressors

such as employment.

One woman spoke about managing the demands of a job,

> ...I've worked 12-14 hour shifts this last 3 days .... Hopefully life will slow down soon and I'll be back on the computer more. I am always suprised (sic.) at being able to continue with getting done what has to be done done (by God's good grace and my families support). I tell myself "I'll colapse tomarrow (sic.)" just when I think can't go on things improve.

This showed a reliance on self and family to get through daily life. It also showed how

stress at work can contribute to a chronic illness situation. Family problems can be

stressful, especially when dealing with special circumstances and prayer was used as one

way to help in managing family issues. A participant stated

> I'm a great believer in prayer myself. I would be lost without it. My husband and I have been really busey (sic.) running around with our youngest son trying to get him settled in and he's trying to find work and it's really hard for him because he just got released from prison. It just about killed me when he was sent there... But we did alot of praying when her was in. And now that he's out WE'LL BE DOING alot more praying for him.

There were also issues of family death and dying that one woman faced. She talked about

her mother,

> I was relieved to know how much hospice will be doing. The nursing home came highly recommended by the hospice. I am also very glad that God saw fit for me to find a way to see her and say good-bye .... I know God has a hand in all this and I have faith that He knows what he is doing.

Family tragedy or fear also was mentioned. One participant talked about her son and his family stuck in a volatile situation overseas "To say that we have added more gray hair and wrinkles since the bombing started is an understatement–. Anyway– please include them in your thoughts and prayers." This request garnered many responses to the effect of praying for her family. Not only did this person rely on her faith to deal with family issues she also had the benefit of spiritual support from others in the group. It was evident from the communications that spirituality was used to deal with the stressors of everyday life.

<u>Social Support</u>

Along with discussion of family concerns comes a discussion of the role of social support in the management of chronic illness. The family provided some measure of social support for many of these women. A discussion of the link between social support and spirituality is necessary in gaining a more complete picture of how these women managed their chronic illness.

All of the messages identified as having spiritual content were also identified as having social support content. The women used spiritual references and discussion to provide social support to one another. The following are some examples of the use of spirituality to provide social support.

Prayer, scripture, poetry, hymns, and humor were all used by these women to provide support to one another. There were many references such as "I'll say a prayer for you" and "thanks for your thoughts and prayers", which were used to let certain

participants know that they were being supported by the others in the group. There were comments such as "just knowing others are out there makes a difference" that embody the commonality of spirituality and social support. Even the posting of bible verses and hymns indicated the willingness of the participants to support one another. Hymns, poetry, and verses often showed transcendence, and willingness to share with other group members so that they were not alone in their personal and spiritual struggles. Comments such as "thank you for sharing your feelings and problems with us" and "sharring (sic.) our struggles lightens the load and brightens the way" showed the support that they felt from communicating with one another and how sharing similarities with illnesses and families made it easier to manage each day.

These women demonstrated the support that their faith provided them. Some of these women belonged to faith-based organizations, from which they drew support, such as bible groups, churches, and prayer groups. One participant wrote "I will be praying for your son and so will our womens prayer and bible study group. Please keep us informed if you hear anything. The ladies will want to know they keep track of answered prayers". Another said about her daughter "I am so thankful for answered prayer, she is home safe, but still not getting along well with her roommate-Sunday mornings sermon was 'blessed are the peacemakers-for they shall be called the children of God ... I told her this sermon was for her." And one woman wrote "Am keeping your Dad in our prayers and so is the ladies Bible Study and Prayer group at church." These are just a few of many mentions of faith-based groups in the postings. This shows a willingness to take the requests and needs of group members to their faith based organization for prayer and support. It also

shows that these ladies were reasonably active in their churches, bible study groups, and prayer groups. Their reliance on religious organizations for support is clear by their postings.

Social support is an important factor in chronic illness. The women in this group were active in providing social support, especially in a spiritual way. It appears that social support and spirituality are related as demonstrated in the complete readings of this group of women. This is gleaned from the fact that all of the spiritual posts were also identified as having social support content. These women provided each other with support in a spiritual way 35% of the time and this is evidence of a relationship between social support and spirituality. In order to further explore the role of social support and spirituality analysis of social support scores on the PRQ was undertaken.

Personal Resource Questionnaire (PRQ) Score Analysis

The PRQ (Personal Resource Questionnaire) is a social support measure that has been used extensively in nursing and health related research. In this study the PRQ was used to evaluate the perceived social support of the participants. High PRQ scores correspond with high levels of perceived social support. The PRQ was administered at baseline, the halfway point, and the end of the computer intervention. It was helpful to evaluate the PRQ scores because it gave a picture of how these women perceived their own social support. The PRQ scores were examined over time for difference in the level of social support before, during, and at the end of the computer intervention.

For this study, PRQ scores were used in two different ways. One was to examine

the level of social support, perform statistical analyses, and determine change over the period of the computer intervention. The second was to consider the participants who were outliers and examine how they conversed with others in the group. This helped determine if the participants with low scores interacted differently than those with high scores.

The mean PRQ scores from Time 1, Time 2, and Time 3 were analyzed, and while there was a small increase in the group mean score, a t-test for significance showed that there was no significant difference between scores at T1 and T3, indicating no significant change in the level of perceived social support. As can be seen on Table 3, there were participants who had a higher perception of social support than others. PRQ results for each participant at T1, T2, and T3 are displayed on Table 3:

Table 3. PRQ Scores

Participant	PRQ Score Time 1	PRQ Score Time 2	PRQ Score Time 3	Mean
1	138	148	142	142.6
2	120	126	98	114.6
3	145	146	152	147.6
4	139	135	146	140.0
5	157	153	152	154.0
6	89	114	111	104.6
7	113	117	115	115.0
8	147	139	134	140.0
9	151	154	154	153.0
10	141	150	158	149.6
11	130	115	114	119.6
12	143	147	138	142.6
13	139	154	148	147.0
Mean	134.7	138.3	135.5	136.1

There were four PRQ scores that could be considered low outliers. They were the scores for participants two, six, seven, and eleven. The overall group mean PRQ score was 136.1, and when calculated without the four outliers it was 146.2. The mean score, with outliers included, is comparable to other scores in the WTW1 project. Both scores, with and without outliers, are also similar to PRQ scores obtained in other studies that have used the PRQ as a study tool. Mean PRQ scores obtained by other studies using the PRQ85 as a tool ranged from 112.3 to 149.2, with an average of 135.8 (Weinert, 2004). Mean scores from other cohorts in the WTW1 study are displayed on Table 4.

Table 4 Group Mean PRQ scores for other cohorts in WTW 1

	Time 1	Time 2	Time 3
Cohort 1	128.8	128.8	136.3
	(sd 26.3)	(sd 26.3)	(sd 20.8)
Cohort 2	138.2	136.7	137.4
	(sd 13.9)	(sd 18.1)	(sd 14.0)
Cohort 4	126.3	128.0	126.9
	(sd 20.1)	(sd 23.1)	(sd 18.9)

There were women in the group who had much lower average social support scores than others in the group. It was helpful to explore these womens' communications individually to gain a more broad view in this research setting.

<u>Exploration of Individual Results</u>

Four participants, numbers two, six, seven, and eleven, had lower average PRQ scores than the remainder of the group. Participant five had the highest average PRQ score. To fully appreciate the value of the social support measure, an in-depth analysis of the contributions made by these group members was examined.

While participant seven had a low social support score, she was the most active group member in "Conversation". She communicated almost daily, and her messages had a great deal of content. She posted jokes, humor, scripture, and medical information. She

used poems, verse, and scripture to share how she was feeling on a certain day or at a certain time and many of her messages with scripture had content identifying transcendence and finding meaning in illness. She was very illness focused and mentioned her illness frequently in her communications, although she did talk some about her job and home life. She provided some support for other group members, but not as much support as some of the other participants provided. It appeared she was mostly reaching out to the other group members for support in her difficult situation. The response of other group members to her requests for support and her postings of verse and humor was generally good. There were a few comments thanking her for her contributions of humor, scripture, and verse to the group. She also received a few prayer postings for her illness situations. Even though she appeared to be very active socially in "Conversation", this woman appeared to be reaching out for support more than providing support in this group. It seemed that she was trying to make connections with other group members to feel more supported in her current life situation.

Participant eleven also had a low social support score. She was slightly above average in number of messages with spiritual content, and was above average in her communications with social support content. Like participant seven, participant eleven talked extensively about her illness issues, and often asked for support. She wrote long messages detailing her illness concerns. She did offer some supportive messages, but like participant seven she appeared to be needing support and she was reaching out for this support in a spiritual way.

Participant six had a low social support score. Her participation level was average in messages identified as spiritual and was above average in her exchanges containing social support content. In her messages she conversed well with others in the group. She not only sought support, but offered it as well, in contrast to participant seven who overwhelmingly sought support rather than provided support. However, she mentioned she was in the process of leaving her husband and seeking a divorce due to his alcohol abuse, and this may have contributed to her low perception of social support. Judging from her messages, she did have family support. Her daughter was living with her and her grandchildren helped her out. Although she had social support at home, her social support score appeared to reflect her turmoil at home.

Participant two also had a low social support score and was fairly inactive in her posting of messages. She only had one message identified as spiritual. The only mention of faith, God, or otherwise was a "God Bless" at the end of the message. This person wasn't the least active member in the group, but was one of the least active members. She shared very little about her illness and slightly more about her family and daily life. One of her comments was "I am especially glad to be writting (sic.) to you as I only have one friend here and she does not know all my ailments. I really do not want my students to know or even other people." She did not appear to reach out to others in the group and was reserved in her communication. This woman may have been low on her social support scores because she experienced fear of people finding out she had a chronic health condition. She was minimally participatory in the group and did not appear to use spirituality at all in her communications.

In contrast to the low scoring participants, number five had the highest PRQ score in the group. There was a marked difference in her overall communications and spiritual communications in the group. She was positive and supportive. She would go out of her way to mention other participants by name and state that she would pray for them and their requests. While she did ask for support for certain family concerns, she left the impression that she was always seeing the positive rather than the negative in her illness, family, and daily life. She posted uplifting quotes, prayers, and verses both in her spiritual communications and her social support communications. She mentioned her family frequently and how much she enjoyed spending time with them. Her high social support scores reflect that she was positive, spiritual, and willing to provide support to other group members.

Although generalities cannot be made regarding this analysis of individual cases, these women all used spirituality in some way to either provide or elicit social support from others in the group. Through their connection with each other they shared their faith in a higher power and this gave them common ground to share their fears and concerns, and feel that they were being supported not only socially, but spiritually as well. Most of the women with low social support scores appeared to use the forum to reach out to other group members. The participant with a high social support score appeared to be very comfortable providing support in a spiritual way and this was reflected in her positive attitude, her frequent mention of spirituality, and her concern with others.

The relationship between spirituality and social support was evident but yet confounded because there was no clear delineation between the two. These women

appeared to feel supported by their respective religious organizations, by their feelings of connection to a higher power, and by connecting with each other in a spiritual way. There was no way to separate the two concepts of spirituality and social support in this data set, which provides an area for further inquiry regarding levels of social support, and overall spiritual and social support activity in an online setting.

Summary

Analysis of spiritual and social support posts in this forum was helpful in establishing that these women relied on spirituality to deal with their chronic health conditions. They did this through use of prayer, scripture, reliance on family, and by finding meaning in their illness. The mean PRQ scores were similar to other cohorts in the Women to Women study, and yet individual scores within the group varied widely. Women with lower and higher social support scores were further analyzed with respect to how they relied on spirituality and how they interacted with other group members. While they relied on spirituality, they also drew from each other and their support systems to help alleviate some of the stress due to illness concerns and the everyday stressors of life.

SUMMARY AND CONCLUSIONS

This study was conducted as a secondary analysis of data gathered in the Women to Women project at Montana State University-Bozeman. The computer-based communications of thirteen women who participated in one cohort of this project were analyzed for spiritual content, and social support content. PRQ (Personal Resource Questionnaire), a social support measure, scores were then analyzed to explore a relationship between spirituality and social support. Triangulation, which is defined as the use of both qualitative and quantitative methods to investigate the same unit, was used in this study (Shih, 1998). Advantages of using triangulation included increasing the credibility and trustworthiness of the data, and it also provided opportunities for different interpretations of the data. (Brietmayer, Ayres, & Knafl, 1993).

The findings of this research provide important insight in how women with chronic health conditions express spirituality and how spirituality plays a role in illness management. These results also show that spirituality and social support are factors in managing day to day life. The women demonstrated a reliance on social support, spirituality, and family to manage their illness. There was no significant difference in overall social support scores from the beginning to the end of the computer intervention phase of the study. However, there were differences in social support scores among the participants, which was explored.

In the qualitative portion of the study a content analysis was performed on the data to determine spiritual content. There were six major categories defined based on the content analysis of the data. These were prayer, faith, verse, transcendence, finding meaning, and family. Subcategories of prayer were prayer for health, and prayer for family. There were two subcategories for the category faith, which were reliance on faith, and sharing faith.

The women mentioned prayer frequently in their communications. Prayer was used as a means to ask for and offer support to others in a spiritual way. It was something that the women in the group appeared to share besides a chronic health condition. The women were also seen to use prayer to connect with a higher power, especially when they needed help coping with the demands of illness or life. Prayer was identified in the literature as a way of connecting spiritually to a higher power (Burkhardt, 1994; Mendelson, 2002; Narayanasamy, 2002). It has also been shown that reliance on social support networks is important in chronic illness, and sharing prayer with others is a form of social support (Narayanasamy, 2002). The use of prayer, as a means of connecting and as a support tool, was consistent with findings in previous literature.

Faith was found to be a constant presence in the lives of these participants. They showed their faith not only by their participation in religious activities, but by their willingness to utilize spiritual resources to manage problems. The women talked about turning to God in times of need. Sharing faith with one another in a supportive way was found to be present in the communications. There was mention of membership in religious organizations by some of the women. Religious membership has been shown to

be an important factor in managing chronic illness (Flannelly & Inouye, 2001). Sharing faith and relying on faith are both important factors in chronic illness management (Mendelson, 2002; Narayanasamy, 2002; O'Neill & Kenny, 1998).

Sharing support and faith through the use of humor, bible verses, poems, songs, and hymns was a common occurrence in the communications between these women. Verse appeared to provide a way for the women to either deal with or escape briefly from their illness states and was found to be a way of providing support and inspiration to the other group members. These messages relate back to providing support in a spiritual way by relying on faith, and by relying on each other to assist them through their health concerns or with the rigors of everyday life.

Many of the verses had messages of transcendence and finding meaning in them. Transcendence of illness states and finding meaning in illness are two themes found frequently in previous literature (Fryback & Reinert, 1999; Haase, et al., 1992; Narayanasamy, 2002). Transcendence of illness is important because transcending an illness can require looking beyond oneself to a higher power and utilizing the strength from that connection to manage the illness. Finding meaning in illness is important because it can help the person with an illness find a purpose in life. There were a few participants who described how their faith helped them transcend their illness states and find meaning in their lives. Faith helped them to overcome their physical or mental limitations and grow beyond what they thought they were capable and become a stronger person. Faith also helped the women to transcend their illness states. They acknowledged that the illness is a part of their life and that they must look beyond and rely on faith to get

them through the difficult times. The women stated that though they were burdened in this life with an illness that they would have a better life someday if they continued to trust in God and keep faithful to him.

Family was a big part of these participants' lives. The women mentioned family frequently in their communications that contained spiritual content. Although not directly related to spiritual management of illness, an exploration was undertaken regarding using spirituality to manage family concerns. These were not just women dealing with chronic illness, they filled a number of other roles in their daily lives, and so it was important to acknowledge that the management of a chronic health condition goes beyond concerns directly related to the illness. What was found in these data was that the women were not only using spirituality to manage illness concerns, they used spiritual coping strategies to manage their daily lives. For example, they spoke of family tragedies, children leaving home, worries about work, and concerns about grandchildren. Family issues were frequently mentioned in prayer requests. The finding that family is important in chronic illness management has been mentioned in previous literature. Mendelson (2002) discussed the fact that the participants in her study, who were also women, were primarily family focused. Further inquiry into the importance of family to women with chronic illness, and if the importance of family holds true across gender lines and other illness states, may add to the existing body of chronic illness literature.

The level of social support did not change significantly from the beginning to the end of the computer intervention portion of the Women to Women study. Most likely this was due to the small sample size. This lack of significant changes in social support scores

was not as important as the distinction among participants. There were women with a much higher perception of social support than others. It appeared that one participant with a lower level of measured social support compensated for her lack of feeling support at home by seeking a great deal of support from others in the group. In contrast the person with the highest social support score projected a positive and supportive attitude in all of her communications with other group members. Even though the measured social support scores did not provide any significant statistical information, they did provide depth to the analysis of individual spiritual communications of group members.

Social support has a long history of being important in the management of chronic illness (Lieno-Kilpi, et al., 1998; Heidrich, 1996; Tilden & Weinert, 1987; Uchino, et al., 1996). The computer-based postings of these women reflected that they were providing social support to one another in an online forum. All of the spiritual postings were identified as having social support content and this demonstrated that these participants were providing support to one another in a spiritual way. This leads back to one of the most commonly mentioned concepts related to spirituality in the literature, connectedness (Burkhardt, 1994; Narayanasamy, 2002; O'Neill & Kenny, 1998; Tanyi, 2002). Connectedness refers to not only the connection that one feels to a higher power, but the connection that those with similar belief systems feel for each other (Burkhardt, 1994). Connectedness can provide a sense of empowerment, which leads to transcendence of illness states (Carson & Green, 1992; Landis, 1996). These women relied on their spirituality and each other to share life experiences, illness concerns, and family issues. They shared their spirituality in ways that supported and comforted other group members.

Some group members shared the fact that they were members of religious organizations, others did not mention this, and others did not participate much in spiritual discussions. Overall this was a rich data set from which could be demonstrated that these women with chronic illness were spiritually supportive of one another, they participated in spiritual activities in their daily lives, and they relied on their spirituality to manage their chronic illness as well as other daily concerns.

Since these were rural women with chronic illness, it was important to address the rural dimension and impact of this study. However, it was difficult because there was no urban comparison group. To determine if rural computer-based support groups are different from urban support groups one would need to study a comparable urban group to determine if their use of spirituality as a factor in chronic illness management differed. The women did reflect some of the values of rural people in their communications. They were reasonable spiritually active, and some identified membership in religious organizations, and reliance on faith to get them through rough times in their lives. This is consistent with previous findings in the literature (Wirtz, et al., 1998).

Difficulty was encountered separating spirituality and social support. Spirituality and social support appeared to be intertwined in their use by the women. These women used spirituality to provide support to other group members frequently as evidenced by their communications. All of the postings identified as having spiritual content, were also identified as having social support content, which made it difficult to separate the two concepts. This was consistent with previous literature that states social support and spirituality are related, but the link is unclear. There is some speculation that the link is

religious membership, but others have refuted this finding (Daaleman, et al., 2001; Patel, et al., 2002). More research is needed to clarify the relationship between spirituality and social support.

Limitations of this study included the small number of participants, a limited time frame, and there was no direct measure of spirituality. This was a secondary data analysis and no further information was obtained from participants, so there was no opportunity to clarify ambiguous information, or explore spirituality and social support in more depth with the women. There may also be more information gleaned from studying further groups and cohorts. The combined social support scores from a larger sample may provide more information about whether the participation in the computer intervention portion of the study made any significant difference in the level of social support over time.

This study will be helpful to nursing because it clarifies the role that spirituality plays in the day to day life of those with chronic illness. Spirituality was found to be important to those with chronic health conditions and it is imperative for the nurse to facilitate the spiritual management of chronic illness through contacting clergy, or through providing access or information about support groups, or just being there to listen, among many potential interventions. Implications for nursing education include making the spiritual dimension of holistic care a key part of the education of new nurses, and acknowledging that spirituality plays a role in the adjustment to chronic illness and also a part in the daily lives of those with chronic health conditions. Implications for nursing research include the continued investigation of the role that spirituality plays in

adjustment to chronic illness. The primary impact on nursing is to emphasize as long as communication is open, honest, nonjudgmental, and nonthreatening, nurses can play a key role in discussion of spiritual concerns in chronic illness.

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APPENDICES

APPENDIX A

PERSONAL RESOURCE QUESTIONNAIRE

PERSONAL RESOURCE QUESTIONNAIRE
Brandt and Weinert

Below are some statements with which some people agree and others disagree. Please read each statement and **CIRCLE** the response most appropriate for you. There is no <u>right</u> or <u>wrong</u> answer.

1	**STRONGLY DISAGREE**
2	**DISAGREE**
3	**SOMEWHAT DISAGREE**
4	**NEUTRAL**
5	**SOMEWHAT AGREE**
6	**AGREE**
7	**STRONGLY AGREE**

Q-1. There is someone I feel close to who makes me feel secure 1   2   3   4   5   6   7

Q-2. I belong to a group in which I feel important 1   2   3   4   5   6   7

Q-3. People let me know that I do well at my work (job, homemaking) 1   2   3   4   5   6   7

Q-4. I can't count on my relatives and friends to help me with problems 1   2   3   4   5   6   7

Q-5. I have enough contact with the person who makes me feel special 1   2   3   4   5   6   7

Q-6. I spend time with others who have the same interests that I do 1   2   3   4   5   6   7

Q-7. There is little opportunity in my life to be giving and caring to another person 1   2   3   4   5   6   7

Q-8. Others let me know that they enjoy working with me (job, committees, projects) 1   2   3   4   5   6   7

Q-9. There are people who are available if I need help over an extended period of time 1   2   3   4   5   6   7

Q-10. There is no one to talk to about how I am feeling 1   2   3   4   5   6   7

Q-11. Among my group of friends we do favors for each other 1   2   3   4   5   6   7

	1	STRONGLY DISAGREE
	2	DISAGREE
	3	SOMEWHAT DISAGREE
	4	NEUTRAL
	5	SOMEWHAT AGREE
	6	AGREE
	7	STRONGLY AGREE

Q-12. I have the opportunity to encourage others to develop their interests and skills 1 2 3 4 5 6 7

Q-13. My family lets me know that I am important for keeping the family running 1 2 3 4 5 6 7

Q-14. I have relatives or friends that will help me out even if I can't pay them back 1 2 3 4 5 6 7

Q-15. When I am upset, there is someone I can be with who lets me be myself 1 2 3 4 5 6 7

Q-16. I feel no one has the same problems as I do 1 2 3 4 5 6 7

Q-17. I enjoy doing little "extra" things that make another person's life more pleasant 1 2 3 4 5 6 7

Q-18. I know that others appreciate me as a person 1 2 3 4 5 6 7

Q-19. There is someone who loves and cares about me 1 2 3 4 5 6 7

Q-20. I have people to share social events and fun activities with 1 2 3 4 5 6 7

Q-21. I am responsible for helping provide for another person's needs 1 2 3 4 5 6 7

Q-22. If I need advice, there is someone who would assist me to work out a plan for dealing with the situation 1 2 3 4 5 6 7

Q-23. I have a sense of being needed by another person 1 2 3 4 5 6 7

Q-24. People think that I'm not as good a friend as I should be 1 2 3 4 5 6 7

Q-25. If I got sick, there is someone to give me advice about caring for myself 1 2 3 4 5 6 7