2002

Spirituality and Health: The Mind/Body/Soul Connection

Brooke Anne Elliott

SPIRITUALITY AND HEALTH:
The Mind/Body/Soul Connection

Brooke Anne Elliott

Senior Project
University of Tennessee College Scholars Program
Spring, 2002

Faculty mentor: Dr. Kathleen Lawler
School of Psychology

Committee members:
Dr. Catherine Faver, School of Social Work
Dr. Bonnie Riechert, School of Journalism and Public Relations

ABSTRACT

Health is a broad concept, unique to each individual. Contrary to the traditional focus on the physical component of health, present researchers and professionals in the medical field are taking a more holistic view on health. Health includes physical, mental, psychological, social, and even spiritual well-being. Spirituality through some means, be it one's religion or even a connection to a higher power, self, others, animals, or nature has been positively correlated to health benefits. Both religion, a more societal and institutionalized construct, and spirituality, a more individual and subjective experience, have these links to health enhancement. Studies have demonstrated links between religion/ spirituality and health through means such as church attendance, prayer, the promotion of healthy lifestyles and behaviors, coping strategies, stress, hardiness, behavior patterns such as the Type A behavior, social support, and life satisfaction. In our study on the relationship between spirituality/religion and health, we hope to discover correlations between some of these aspects. Although only in the preliminary stages of research, some correlations have already become evident, but there is more work to be done. While there is opposition and debate in this new field of study, research has demonstrated several strong correlations, which can be incorporated into the medical and psychological fields. Physicians and patients will both benefit from the inclusion of this holistic focus into the field. Further study will only increase the awareness of the importance of this concept in the field of medicine.

Table of Contents

Chapter One:

AN INTRODUCTION TO HEALTH

Health has always been a major focus area in cultures all across the world. But what is health? Is it merely the absence of illness or physical discomfort and ailment? On the contrary, health usually embodies a much more complex and less objective definition. It not only includes this lack of negative physical conditions, but also lack of psychological or mental disorders and, more subjectively, a spiritual well-being and connection with self, others, and even a higher power. Health involves overall well-being in all aspects of life. To most, it is an individual and subjective experience. Physical signs and data can be objectively gathered, such as heart rate, blood pressure, or oxygen in the blood and can be compared to established averages considered *healthy* or *not so healthy*. While these measurable aspects are significant, they do not comprise the entire make-up of health. Many more pieces of the whole individual play a role in health.

The physical aspect of a person is generally considered as the most integral part of health. Physical disease or illness constitutes a lack of health. Even these two entities, however, are different concepts. As Miller and Thoresen (1999) describe, "A large component of health is subjective, which is what differentiates disease (a biomedical concept) from illness (subjective feeling states such as weakness, pain, or nausea)" (p.4). Typically, disease is more objective, with measurable components, which physicians can observe and diagnose as an actual ailment. Illness is more of an individual and subjective determinant of lack of health. A person can describe signs or symptoms. These, though, can only be felt, interpreted, and described by the individual and not actually measured with instruments by the physician. Patients "may experience illness in the absence of a detectable disease (a common problem in medical care) and can experience wellness despite terminal disease" (p.4).

A second aspect of the overall health of a person comes through

psychological and mental well-being. Mental health is a long-established and thoroughly-studied field, in which multitudes of mental illnesses have been diagnosed and treated. Many individuals suffer from mental and psychological disorders, just as people suffer physically from disease. Mental illness may arise from biochemical malfunctions in the brain or body or from other unknown sources. While usually more abstract and difficult to quantify than physical disease, mental and psychological illnesses are widely-accepted as being involved in the overall health picture of the patient.

Aside from these mental and physical elements of health, spirituality plays an integral role. This has only recently emerged as a prevalent theme in health. While spirituality is a broad hypothetical construct and is thus hard to quantify, it is a large part of the individual. Beliefs and faith shape the person and his or her behaviors, and these inevitably affect health outcomes. Each individual has his or her own unique beliefs, making spirituality unique to that person. However, when these factors come into play in the medical field, operational definitions must be determined in order to research specific effects of spirituality on health. "When health problems also have spiritual dimensions, it is often unclear from whom one should seek help" (Miller and Thoresen, p.9). Since spirituality has never been much of a focus area in the Western medical field, physicians have little training and experience in dealing with these problems. Nonetheless, spirituality, religious faith, and other psychological and social constructs have made their presence known as factors in overall health. The change from the former separation of mind and body to a more holistic approach to well-being "has been driven in part by massive evidence that psychological and cultural factors have an important impact on health" [Plante and Sherman (2001), p.2]. Miller and Thoresen (1999) argue, "when spiritual and religious involvement has been measured (even poorly), it has with surprising consistency been found to be

positively related to health and inversely related to disorders" (p.11). With this type of encouraging evidence for the important impact of other factors on the overall well-being of the individual, focus in this area of research will continue to emerge and develop.

Thus, with all of these intertwining aspects, health is "better conceived of as a *latent construct* like personality, character, or happiness, a complex multidimensional construct underlying a broad array of observable phenomena" [Miller and Thoresen (1999), p.4]. There are many different interpretations of the definition of health, usually unique to each individual and culture. According to Lawrence Sullivan (1989), "The sick lie at the intersection of histories that are genetic, social, individual, microbial, and spiritual. . . Around the sickbed swarm conflicting interpretations of disease and competing prescriptions for cure" (pp.2-3). There will continue to be conflicting views on what constitutes disease and how to approach the treatment of patients. Questioning present medical definitions and practices is essential to understand the medical field and expand the field's knowledge. There seems to be a broadening of ideas from the initial views on purely physical well-being to a now more inclusive view of all aspects of the individual. Sullivan (1989) argues, "If sickness provokes innumerable questions, the quest for well-being spawns fantastic schemes for cure. The impulse to experience ultimate well-being looses the imagination, which begets utopian visions, nostalgic longings, physical urges, and political movements. Medicine and religion reveal their kinship here" (p.3). People strive for overall well-being in all aspects of life. Each piece of the individual cannot be separated from all the others in order to be studied or treated. Individuals "experience their own physical, mental, and spiritual well-being as being interrelated. . . . The desire is to be understood and treated not as a liver, or a depression, or an addiction but as a complete and integrated person" [Miller and Thoresen (1999),

p.10]. A holistic approach to medicine and health has emerged as a focal point. Spirituality, along with the more traditional physical, social, and psychological aspects of health, plays an integral role in the overall well-being of the person.

Chapter Two:

A BRIEF HISTORY OF THE MEDICAL FIELD

Although health professionals now understand the different aspects of overall health, this has not always been the case. Throughout the ages, the field of health has evolved from very humble beginnings to elaborate ideas and practices. Before there was ever any science and technology-oriented medical research, diagnosis, and treatment, "people were served by culturally-defined healers. The functions of healing were often blended with those of spiritual leadership within the community" [Miller and Thoresen (1999), p.3]. Healers focused mainly on the forces of the earth and higher beings, such as gods, and used their unique connections to these constructs to be leaders in the community or culture who would be entrusted to heal disease and discomfort. There were signs from the gods and from natural phenomena, such as devastating storms and disasters, in which cultures trusted. Even the most highly-educated in this era assumed that evil or spirits caused illness. If one were sick, others in the community feared he or she was possessed by an *evil spirit* or had done wrong. An illness or death would either be looked at as a punishment for wrongdoing or, on the other hand, the sacrifice of their bodies would be a reward for greatness or a strong spirit. These assumptions have arisen from the findings of "ancient skulls in several areas of the world with coin-size circular holes in them that could not have been battle wounds. These holes were probably made with sharp stone tools in a procedure called *trephination*" [Sarafino (1990), p.7]. Although it is unclear about the exact reasoning behind these procedures, it was "presumably done for superstitious reasons-for instance, to allow illness-causing demons to leave the head" (pp.7-8). This displays the lack of education on the true nature of illness during these times. With no educational basis on the scientific realm of disease, more mystical and abstract ideas about illness stemming from good and evil predominated the culture.

Then, moving into the ancient Greek and Roman empires, there

developed a splitting of the ideas of spirituality and health. No longer did it seem apparent that the two were related in any way. The leading philosophers of the time "produced the earliest ideas about physiology, disease processes, and the mind between 500 and 300 B.C." [Sarafino (1990), p. 8]. Leading thinkers, such as Plato and Hippocrates, focused less on the connection of mind and body and more on the separation. Claims that the "*body* refers to our physical being, including our skin, muscles, bones, heart, and brain. . . [while the] *mind* refers to an abstract process that includes our thoughts, perceptions, and feelings" (Sarafino, p.8) really emphasize this distinct separation. Although these ideas prevailed for many centuries (p.9), they really initiated the focus on this mind/body problem, in which researchers focus on determining if both function independently or if there is a connection of the two within the individual. This questioning still predominates the medical and psychological fields.

As time went on into the Middle Ages, a resurgence of the relationship in the two occurred. The field of science and the advancement of education in this arena had been dramatically delayed, thus the church's influence in health was revived and "people's ideas about the cause of illness took on pronounced religious overtones" [Sarafino (1990), p.9]. The church became the predominant force and authority in medical practice, and research in the scientific arena was abandoned for the time being. Again, "sickness was seen as God's punishment for doing evil things" (p.9), and torturous measures to rid the body of evil were taken by the leaders in the church. During this time, less emphasis was placed on the scientific aspects of the medical field. Instead, traditional and religion-predominated ideas overwhelmed great thinkers of the time.

However, following this time period, the focus on the real and proven healing measures dominated. Less of the abstract and spiritual focuses were prevalent, and more tangible scientific evidence took over the field of medicine.

During the Renaissance of the 14th and 15th centuries and beyond, the medical field witnessed a resurrection of inquiry and innovative thinking. A focus on the individual, humanistic viewpoint replaced the previous God-centered thought. One of the most influential innovators of the time was philosopher, Rene Descartes. His views on the "mind and body as separate entities" (Sarafino, p.9), yet his innovative ideas on the interworkings of mind and body in the perception of pain, caused the Church's role to diminish and science to again prevail. Descartes viewed this mind and body relationship in a mechanistic interpretation: "The key concept for Descartes was the idea of mechanism. The impulse traveling from the site of injury to the brain, he explained, produces pain 'just as pulling on one end of a cord, one simultaneously rings a bell which hangs at the opposite end'" [Morris (1994) p.12]. This reductionist view displayed a basic idea of the human body: "classical science readily fostered the notion of the body as a machine, of disease as the consequence of breakdown of the machine, and of the doctor's task as repair of the machine" [Engel (1977), p.131].

This simplistic way of defining the body and its reaction to pain and disease initiated the view of a more biomedical model of mind and body connection as opposed to previously-accepted religious and spiritual influences. As time went on, the fields of medicine and science continued to flourish. While professionals expanded on Descartes' original ideas, "the basic idea is unchanged. They [doctors and researchers] view pain as strictly the result of an internal mechanism that sends a signal from the site of tissue damage to the brain" (p.12). As the basic understanding of how the body works and the biological causes of disease emerged, "the reputation of physicians and hospitals began to improve, and people's trust in the ability of doctors to heal increased" (Sarafino, p.9). This left little room for the questioning and studying of the relationship between spirituality and health. Much emphasis was placed on the

objective study and understanding of physical health. Inevitably, the more abstract ideas, such as spirituality, were cast aside.

Even today, most focus on the purely physical aspect of medicine. Engel describes that "the dominant model of disease today is biomedical, with molecular biology its basic scientific discipline. It assumes disease to be fully accounted for by deviations from the norm of measurable biological (somatic) variables" [Engel (1977), p.130]. This focus allows medical professionals to look strictly to physical and organic causes for illness and disease and leaves no room for other factors to play a part in the well-being of an individual. Engel concludes, "thus, the biomedical model embraces both reductionism, the philosophic view that complex phenomena are ultimately derived from a single primary principle, and mind-body dualism, the doctrine that separates the mental from the somatic" (p.130). This is a severe oversimplification of the extensive amount of factors that actually do affect health and the interaction of all pieces of the individual. In this view, the biomedical model has been incorporated as the predominant model of disease in the Western world, "its limitations easily overlooked" (p.130); however, there is more to health than the physical component.

Recently, a resurgence back toward the connection of broader factors, including spirituality and health, has arisen. Engel (1977) pleads that "we are now forced with the necessity and the challenge to broaden the approach to disease to include the psychosocial without sacrificing the enormous advantages of the biomedical approach" (p.131). This merely physically-focused model has many contributions in the field, however mind and body cannot be viewed as separate entities; they work together in the overall well-being of the individual. A new model, focusing on all aspects of the individual including spiritual and religious influences, must be devised in order to better grasp the magnitude of all

the pieces of health. Engel states that the "inclusion of somatic and psychosocial factors is indispensable for both" (p.131) *physical* and *mental* diseases. He elaborates that in disease, "the biochemical defect constitutes but one factor among many, the complex interaction of which ultimately may culminate in active disease or manifest illness" (p.131). The physical aspect is only one factor in this complex system of mind and body, which leads to disease. Disease results due to the fact that "psychophysiologic responses to life change may interact with existing somatic factors to alter susceptibility and thereby influence the time of onset, the severity, and the course of a disease" (p.132). Many pieces of the whole individual obviously fall outside the established framework of the biomedical model, thus a broader focus to the whole individual must be taken to improve on the weaknesses in this model. Engel describes the need for more of a "biopsychosocial model," which takes "into account the patient, the social context in which he lives, and the complementary system devised by society to deal with the disruptive effects of illness" (p.132). All factors of the individual as well as all the external factors affecting the individual are important in his or her holistic well-being.

Religion and spirituality are two of the factors that must be considered and included in a new model or focus in the medical field. While previously, "anything with an RS [religion-spirituality] flavor was by definition incompatible with science and its methods" (Larson et al., 1998), a spiritual surge has prompted a stronger emphasis on this relationship in the field. Some might not imagine that this focus dates back as far as it does. As a matter of fact, "scientists have been interested in the influence of religion on mortality and longevity for nearly 130 years. Francis Galton (1822-1911), who was already well-known for his groundbreaking research on scientific genius, reported the results of a study that sought to examine scientifically whether prayer had an objective influence on human

mortality" (McCullough, p.53). Although this initial research demonstrated little if any evidence of a relationship, the thought processes on the matter initiated others to look to this interesting area for further research. During this time, others determined that "empirical studies of possible relationships between RS factors and health started to appear" (Thoresen, Harris, and Oman, p.19). Engel (1977) argues that the previous biomedical model of disease is "no longer adequate for the scientific tasks and social responsibilities of. . . medicine" (p.129); there is more to health than the purely physical. As this aspect of medicine continues to grow in legitimacy, more researchers join in to study and understand this complex combination. Mind and body were previously considered to be completely separate and unique entities. However, "the breadth and intensity of current interest, particularly with respect to health, represents a significant change" (Plante and Sherman, p.1). While some may argue against incorporation of other arenas into the medical field, these other areas are important and well-rooted. "Western physicians, for example, may simply ignore the religious beliefs of their patients, even though religion for centuries has provided complex explanations for pain" [Morris (1994), p.24] and other physical elements. With little focus in abstract concepts, professionals ignore the importance of other factors; Engel again argues that "medicine's crisis stems from the logical inference that since 'disease' is defined in terms of somatic parameters, physicians need not be concerned with psychosocial issues which lie outside medicine's responsibility and authority" [Engel (1977), p.129].

Despite these long-standing ideas on professionals' preconceptions of health being purely physical, the surge of new research and attention to these ideas will spark more acceptance. The previously predominant themes in medicine of purely physical and scientifically-based ideas are now being incorporated into a more complex view of holistic medicine. Research and

concentration in spirituality's emphasis on physical health is not replacing these well-established aspects of medicine; instead, all of these areas should cooperate in order to determine the best approach to determining causes, diagnoses, and treatments of disease in people. People are not made up of separate pieces of a whole. While each aspect of an individual is unique, all pieces of the whole are intertwined in a complex manner and operate together in order to make up the intricate workings of the human body, mind, and soul. Although challenging and intimidating to some, a biopsychosocial model is essential in the medical field. Engel describes this need:

> For despite the enormous gains which have accrued from biomedical research, there is a growing uneasiness among the public as well as among physicians, and especially among the younger generation that health needs are not being met and that biomedical research is not having a sufficient impact on human terms. This is usually ascribed to the all too obvious inadequacies of existing health care delivery systems. . . .Medicine's unrest derives from a growing awareness among many physicians of the contradiction between the excellence of their biomedical background on the one hand and the weakness of their qualifications in certain attributes essential for good patient care on the other. (p.134)

Although this is new and somewhat challenging, patients and physicians alike are ready for a new model which looks to the entire individual and all aspects that contribute to well-being and disease in order to meet the needs of all involved in the diagnosis and treatment of disease and illness.

Chapter Three:

DIFFERENCES IN SPIRITUALITY AND RELIGION

Throughout history, spirituality and religion have been integral in the human psyche. Most people have some aspect of spirituality in which they actively pursue a connection to something beyond this material world for purpose and strength. Miller and Thoresen elaborate:

> For as long as history has been recorded, humankind has assumed that reality is not limited to the material, sensory world. Belief in a spiritual reality continues to characterize a large majority of Americans, be it a belief in a supreme being or order, life after physical death, an ultimate reality, or supernatural beings like angels or demons. Whatever behavioral scientists and health care professionals may themselves believe, the spiritual side of human nature remains important to many or most clients. (pp.5-6)

Both spirituality and religion are substantial, and without much thought, some may define religion and spirituality in the same way. Obviously, "religiousness and spirituality are both complex, multidimensional constructs" [Plante and Sherman (2001), p.5] which are difficult to operationally define in a universal way. Both seem to be unique and acceptable only to each person who experiences them, thus definitions will be drastically varied. Miller and Thoresen (1999) suggest that "some characteristics are shared, such as a search for what is sacred or holy in life, coupled with some kind of transcendent (beyond the self) relationship with God or a higher power or universal energy" (p.6). Regardless, while there may be some overlap in the two constructs for some people, there are significant differences.

Religion seems to be a more societal construct, with prescribed beliefs and practices. Plante and Sherman state that "for most health researchers, 'religion' involves a social or institutional dimension. It includes the theological

beliefs, practices, commitments, and congregational activities of an organized institution" (p.6). This includes the more traditional focus of the church and organized religions, which teaches basic principles to members and worship in a standardized way.

On the other hand, spirituality is unique to each individual. Miller and Thoresen state "spirituality is complex. It is not adequately defined by any single continuum or by dichotomous classifications; rather it has many dimensions" (p.6). It is hard to quantify, in that using scientific or objective terminology could belittle it. Unlike religion's standard practices and social aspects, spirituality is more of a quest for feeling connected to something or a transient experience. Plante and Sherman refer to spirituality as having "increasingly come to mean a more personal experience, a focus on the transcendent that may or may not be rooted in an organized church" (p.6). While most view spirituality as a quest for the sacred or a transcendental approach for a higher being, such as God, it can also be a search for the sacred in the average life or any other aspect in which one may feel closer to a spiritual wholeness. John Hardwig (2000) explains his definition of spirituality:

> The word 'spiritual' is ambiguous. . . *spiritual* refers to concerns about the ultimate meaning and values in life. It has to do with our deepest sense of who we are and what life is all about. *Spiritual* does not imply any belief in a supreme being or in a life after this. Atheists have spiritual concerns just like everyone else. (p.28)

Thus, "each person (regardless of religious involvement) defines his or her own spirituality, which might center on material experiences such as mountain biking at dusk, quiet contemplation of nature, reflection on the direction of one's life, and

a feeling of intimate connection with loved ones" (Miller and Thoresen, p.7).

Miller and Thoresen go on to delineate three broad dimensions of spirituality—"spiritual practices, beliefs, and experiences—[which] are meant to characterize spirituality more generally, whether inside or outside the context of religion" (p.7). Overt practices are fairly easy to quantify, in that "people can be described by the extent to which they engage in spiritual practices such as prayer, fasting, meditation, and contemplation" (p.7) as well as more specific religious practices. Next, beliefs are a very important piece of one's spirituality. Examples of this include transcendental beliefs and ideas about things beyond our understanding of this world and looking past ourselves. In religion, for example, beliefs focusing on the concept of God or a supreme being prevail.

The third and final dimension is much more subjective--spiritual experience, "yet it is fundamental to an understanding of spirituality" (p.8). This aspect can vary once again with the individual; it includes experiences in daily spirituality as well as more elaborate and less common experiences. However, this dimension is more difficult to define; there is a "problem of defining which experiences *are* spiritual" (p.8). What some may describe as being very spiritual to them, others will disagree. This is where spirituality becomes more subjective and less quantifiable.

While emphasis has been placed on differentiating between spirituality and religion, the two are not entirely separate as purely social or purely personal. Some really focus on the sacred and religious approach to spirituality. In the light of this overlap with religion, spirituality "is seen as the major function of religion--the search for the sacred" (p.6). While religion usually includes spirituality, the reverse is not essential. As Miller and Thoresen describe, "spirituality does not necessarily involve religion. Some people experience their spirituality as a highly personal and private matter, focusing on intangible elements that provide vitality

and meaning in their lives" (p.6). God or established religion is not necessarily part of spirituality; a person's spirituality may have nothing to do with any specific religion. It is a much broader construct and applicable to the individual in any way possible. As Plante and Sherman argue, "clearly, spirituality is, at its core, intensely personal and experiential, and cannot be distilled in a test tube or captured on a questionnaire" (p.3). While specific religious views and practices are slightly easier to quantify, spirituality is a much more abstract and inclusive construct. Miller and Thoresen describe the difference: "Religion is characterized in many ways by its boundaries and spirituality by a difficulty in defining its boundaries" (p.6). Spirituality seems to encompass a much broader array of possibilities. Since religion seems to be more of a social construct, it is more of an outwardly-directed practice, while spirituality has more of an inward focus--a more private and personal experience. Wink and Dillon (2001) describe this difference: "religious involvement tends to be a communal activity and. . . we assume that it is more likely to be associated with the more outer-directed" (p.97) and societal aspects of faith. Since religion is not as abstract and inclusive of a concept as spirituality, religion seems to be easier to quantify for research purposes.

Thoresen, Harris, and Oman note that "almost all of the research conducted to date has focused on religion or religiousness, not on spirituality. . . [and that] religious involvement has been limited to a person's reported affiliation with any organized religion. . . or to frequency of attendance at religious services" (p.24). The more objective aspects, like religious affiliation and attendance, may not be extremely representative of the *religiousness* of a person per se, however, they allow researchers a way to quantify it. A basic awareness of the similarities and differences of religion and spirituality allows research to be undertaken to attempt to quantify these subjective constructs in an understandable way.

Chapter Four:

RELIGIOUS FACTORS AND HEALTH

This unique new field of study is expanding quickly. Psychologists and other researchers are looking to determine if and to what extent a relationship exists between religion and health. Wink and Dillon state, "several studies document either a direct or indirect effect of religious participation on various indicators of physical and mental health" (p.75). Many agree that there is a connection between religion and spirituality with health, but what is it about these that leads to these gains in well-being? It is almost essential for medical professionals to understand and accept the innate connection of religion and spirituality with health. Plante and Sherman describe, "religious orientation carries with it a broad array of potential health influences, risk moderators, and coping responses, both positive and negative" (p.5). Health changes are the times in life when religion will be looked to as a source for spiritual guidance and healing.

Religion and spirituality seem to represent the more functional aspects and are not unchanging pieces of a person. Thus, "RS [religion/spirituality] factors are concerned with the changing nature of what the person does, thinks, feels, and subjectively experiences within particular social and cultural contexts. They commonly are not fixed traits or unchanging characteristics" (Thoresen, Harris, and Oman, p.23). Since these are interactive aspects of a person and thus affect decisions and actions, they obviously affect well-being as well. Again, both are multidimensional, with some aspects that are easily defined and measured and some more abstract and unresearchable or unquantifiable pieces. Due to this, "they are much like the concepts of personality, health, and love. Just as personality is more than behavior, health more than blood pressure, and love more than sexual arousal, spirituality is more than feeling connected to life, and religiousness is more than attending church services" (p.23). Since these other concepts affect well-being, religion and spirituality inevitably have similar

effects. All unfixed aspects in people continually change over time and, depending on context, these all vary and have unavoidable effects on health.

What is it about religion that leads to better health? It is very important to understand which types of questions are researchable and if one is looking at a direct or indirect pathway. For example, one might assume a causational relationship between two separate factors, such as religious attendance and the outcome of lower mortality rate just because the increase of one in a sample correlates with the decrease in the other. However, there may be a confounder or third variable related to both that actually leads to the decrease. In this example, religious attendance may be evidence of a stronger commitment to a religion that promotes better health-promoting behaviors, such as not drinking or smoking, which obviously leads to lower death rates. One must acknowledge if there is a direct effect from the event or practice to the physiology or objective health, or if there is a third variable in the mechanism affecting and being affected by both. Thus, some abstract and unknowable questions cannot be researched; they must be posed in researchable ways in order to really determine if connections are present. If direct effects are unknown, researchers must hypothesize a more direct way to test unknown relationships.

That being said, there seem to be relationships between religious and spiritual aspects and health, from personality factors, to social support, to coping mechanisms, and even religious practices. First, on a basic level, mere "participation in religious activities seems to be associated with increased longevity and decreased risk of serious illness" (McCullough, Hoyt, Larson, Koenig, & Thoresen, 2000). Koenig (1997) "found lower rates of stroke in persons who attended religious services at least once per week" (p.85). In another study, McCullough et al. (2000) discovered that highly religious people have 29% higher odds of being alive at a follow-up than less religious people.

So, even superficially, just considering oneself a religious person or attending religious services seems to benefit health.

Another link seems to come through prayer. Although it is difficult to determine specifics or a clear link, prayer has been studied, and some research has reported positive health benefits through prayer. Sloan, Bagiella, and Powell report several correlations in one study by Byrd (1988):

> In this double-blind study, patients in a coronary care unit (CCU) were assigned randomly either to standard care or to receiving daily intercessory prayer by three to seven born-again Christians. Patients and their doctors did not know which patients were receiving prayer. Twenty-nine outcome variables were measured, and on six of them, the prayer group had fewer newly diagnosed problems. . . The prayer group had less newly diagnosed heart failure and fewer newly prescribed diuretics. . . The prayer group also had less newly diagnosed pneumonia and fewer newly prescribed antibiotics. (p.341).

Next, one of the more understandable links of religion and health is through the lifestyles some religious denominations teach and hope the members will follow. For example, "some religions, or subgroups within the religions, are more aimed at promoting conscientiousness than are others" (Worthington, Jr., Berry, and Parrott III, p.123) and are thus more strictly adamant in their promotion of *avoiding* risky behavior and *enhancing* more healthful behaviors. Better health has been linked to frequent church attendance in general and specifically with membership in strict religious sects (e.g., Mormons and Seventh-Day Adventists) and denominations. And since "highly religious individuals

presumably incorporate the main beliefs and values of their religions into their lives" (Worthington, Jr., Berry, and Parrott III, p.123), religion appears to enhance healthful behaviors for its devout followers in beliefs and practices. "Maintaining a low-fat diet, for example, or not smoking or drinking alcohol has a direct impact in protecting people from heart disease and cancer, the two major causes of death in the United States today" (Wink and Dillon, p.82). Nonetheless, it seems it is "not religion or spirituality in the broad sense (i.e. generalized identification) but rather particular experiences of religion and spirituality (e.g. prayer, connectedness), that promote well-being--or, conversely that can cause unhealthy experiences" (Chirban, p.265) which may hinder one's health.

HEALTHY LIFESTYLE AND BEHAVIORS

Without an understanding of the covariate of the healthy lifestyle, one might assume that just attending church leads to lower rates of heart disease and cancer. However, the impact of religion on health in this case seems more related to the healthy lifestyle the religions promote. Nonetheless, the more religiously-devoted people are leading more healthy lifestyles due to their religion, which implies a beneficial impact of religion on physical well-being. Strawbridge, Cohen, Shema, and Kaplan.'s study (1997) found "that people who frequently attended church. . . were less likely to smoke or drink heavily than were people who attended church less frequently." They also found that "frequent church attenders were more likely to change their health behaviors for the better during the 28 years of the study." Specific behaviors frequent attenders were more likely to have were: "1)quit smoking, 2)reduce their drinking, 3)increase the frequency with which they exercised, 4)stay married to the same person, and 5)increase their number of social contacts than were infrequent attenders" (McCullough, p.56).

Basically, some religions promote better lifestyles; the more seriously one takes religion in his or her life will determine how strictly he or she will follow the principles taught in the church. More devotion to the teachings will lead to a change toward more healthy behaviors and thus the betterment of physical health. So, although one could argue that religiosity leads to better health, it may be "something about the antecedent personalities and habits of individuals who tend to be religiously involved throughout the course of their adult lives" (Wink and Dillon, p.100), which actually leads to the most dramatic effects in health. Furthermore, Smith states, "the impact of religious and spiritual factors may itself vary as a function of the specific religious context or denomination" (p. 360). Different denominations in different situations may have varying effects on the behavioral changes in their members.

INDIVIDUAL FACTORS

Alongside religious affiliation and influence on the person, individual factors also contribute to one's beliefs, practices, and inevitably his or her physical health. People may have different beliefs about who controls their health, for example. Willis, Wallston, and Johnson (2001) report, "individuals' perceived control over their health has been examined extensively to discover the nature and extent of its relationship to health knowledge, health behavior, and health status" (pp.216-217). Where people place their focus on the control of their health and even overall life will affect how they believe and act, which will inevitably affect their overall health.

Another aspect of people, which greatly affects their actions and health, is the degree of forgiveness in their lives. Relative to religion and spirituality, this concept is a central theme in some religions. There are varying degrees of centrality of forgiveness in religions, but for example, forgiveness is the

cornerstone of Christianity (Marty, 1998). According to Worthington, Jr., Berry, and Parrott III, "Forgiveness is one of the warmth-based virtues. It often occurs because love, empathy, humility, and gratitude work together with it" (p.121). And generally, across religions and cultures, there is an intercorrelation of these warmth-based virtues (Templeton, 1997). Thus, with many religions emphasizing forgiveness and other warm virtues, those individuals committed to the beliefs and practices of their religions will be more likely to possess these traits. This is a fairly new focus in the research, and "although no research has explicitly tested the link between forgiveness and health outcomes, studies have identified health benefits with traits associated with forgiveness" (Worthington, Jr., Berry, and Parrott III, p.127).

A. COPING STRATEGIES

One particular individual trait which affects actions and health in the religious aspect is the specific coping strategies people use. During life's unfortunate times, people turn to many sources for aid in coping with adversity. The specific type of coping people seek out depends again on their beliefs and factors such as locus of control. Wink and Dillon describe the two broad categories of coping: "problem-focused, used to alter the source of stress when an individual believes that a constructive solution exists, and emotion-focused, used to reduce distress associated with a problem that an individual believes will be enduring" (p.218). Thus, problem-focused coping is more of a direct approach to alleviate or adapt to the problem as opposed to the emotion-focused coping, which seems to be less constructive in problem-solving and more focused on the feelings side of a problem. More specifically, "problem-focused strategies attempt to remove or reduce the effects of a stressor. These mechanisms include active coping (executing direct action), planning (thinking of

a plan for an active strategy after appraising the stressor), and seeking instrumental support (requesting information or assistance in solving the problem)" (p.218).

This active approach is strikingly different than the more passive emotion-based approach, which includes "seeking emotional support (looking for emotional comfort and understanding), venting (releasing emotions related to the stressor), reframing (appraising the stressor in a more positive light), and humor (making jokes about the stressor)" (p.218). While religion may be considered an aspect of emotion-focused coping (p.218), it more distinctly becomes its own category of coping as "coping through one's personal relationship with God" (p.219). People who use their religion, God or another higher power, or even their unique spirituality as coping processes, may look to their faith for strength, guidance, and comfort during these adverse times.

People all deal with adversity in unique ways. What people believe and how they cope influences decisions on lifestyle and behaviors, thus, these will affect health as well. Again, this relationship between religion or coping and health may not be direct, but there may be some link between them. Thoresen, Harris, and Oman (2001) argue, "one of the functions of religion is to help people cope more effectively with life's inevitable stressors" (p.43). People are better able to manage traumatic experiences through religious coping or openness to spiritual growth (Ellison, 1991). Nonetheless, there is obviously some relationship in religion and health through this third variable of coping, and thus far, most of the RS research on adjustment to illness focuses on the role of religiously oriented coping (Pargament, 1997). For example, Smith reports the study on teenagers done by Willis, Wallston, Johnson, et al. (1999). They found that "among adolescents, religious beliefs and religious coping are indeed associated with a more positive profile on health behaviors" (p.357), such as

reduced instances of smoking and drinking alcohol. It is still not quite definitive which aspects contribute to the benefits of religious-oriented coping, but links are being discovered. For example, Pargament, Smith, Koenig, and Perez discovered that patients' adjustment to their illness was affected by religious coping more than their general religious orientation (1998) Factors such as coping through religion seem to have stronger links to health benefits than just the general attendance or religious affiliation. However, through this prevalence of study in the field, it is evident these religious-based factors, such as religion-focused coping serve some role as buffering or protective factors which lead to healthier lifestyles and better health in general.

These individual factors of beliefs, health locus of control, and coping strategies may play a role in religion's effect on an individual's health. Furthermore, different personality traits are also a major influence on the individual and his or her actions and overall health. Inevitably, "religion promotes a pro-virtue constellation of personality traits, which affects health" (Worthington, Jr., Berry, and Parrott III, p.107), thus one's personality will be affected by spirituality and religious beliefs. Religion may enhance more positive and healthful emotions and personality traits, which will lead to an enhancement of physical health. Some specific traits which some people possess have shown links to physical health.

B. STRESS

Stress in people's lives has been determined to have effects on physical health and well-being. Stress is a major part of most people's lives, and how they allow it to affect them will in turn affect their health. For example, "people's occupations provide sources of stress that can have an impact on blood pressure" (Sarafino, p.126). A study by Sidney Cobb and Robert Rose (1973)

compared the rates of hypertension between air traffic controllers (a very high stress job) and second-class airmen (a seemingly less-stressful job). They found that the "comparisons for each age group revealed prevalence rates of hypertension among the traffic controllers that were several times higher than those among airmen" (Sarafino, p.127). Also, within the group, "prevalence rates of hypertension were higher for traffic controllers working at high-stress locations than for those at low-stress sites" (p.127). Ultimately, it has been found that "*stress* plays an important role in the development of heart disease, particularly through its connection to. . . hypertension" (Sarafino, p.431).

While acute stress has negative effects on health, "chronic stress can also have deleterious physiological effects" (Smith, p.268). Kiecolt-Glaser & Glaser (1995) reported negative effects on immune function due to the chronic stress of caregiving. Being a caregiver for a loved one is a physically- and emotionally-draining responsibility, filled with tremendous stress. Immune function decreases due to this chronic stress. Other studies have revealed the connection between stress and immune activity. Worthington, Jr., Berry, and Parrott III report that "there is research evidence that people high on trait anxiety or social distress have elevated basal cortisol levels (Bell et al., 1993; Sapolsky, 1994) and show signs of decreased immune functioning (Esterling, Antoni, Kumar, & Schneiderman, 1993)" (p.117). Also, in Woods, Antoni, Ironson, and Kling's study of HIV-positive gay men (1999), they found that "religious activities, such as prayer, religious attendance, spiritual discussions, and reading religious/spiritual literature, were associated with significantly higher CD4+ counts and CD4+ percentages (T-helper inducer cells)" (Remle and Koenig, p.204), which shows a positive effect on immune function.

Aside from the effects of stress on blood pressure, hypertension, heart disease, and general immune function, there appears to be a connection

between stress and the development of cancer. Sarafino reports, "a number of studies found that the appearance of several forms of cancer in children and adults was associated with their reports of high levels of prior stress" (p.129); also, some studies indicate that cancer patients receiving stress-reduction therapy live longer than those who do not (Kiecolt-Glaser & Glaser, 1995). Even though the studies are limited in their definitive conclusions, there still seems to be some sort of connection between stress and cancer, which is probably influenced by other factors as well. Stress, nonetheless, is affected by religion and spirituality; in some capacity, religion lowers stress and enhances well-being.

It seems that "personality characteristics (e.g., chronic anger or hostility) and social circumstances (e.g., social support) render some individuals at greater or lesser risk of stress-induced illness by altering the frequency or magnitude of physiological responses" (Smith, p.363). When any sort of stress occurs in one's life, the body will have a response to it. Worthington, Jr., Berry, and Parrott III describe a study by Sapolsky (1994): "Sapolsky has argued that human bodies are intended to respond to acute stressors and that stress-related illnesses occur primarily because we structure our lives so that we experience a multitude of chronic stressors" (p.114). Worthington, Jr., Berry, and Parrott III go on to report two articles which describe the body's reaction to chronic stress:

> The concept that describes the body's adjustment to a stressor is *allostasis* (McEwen & Stellar, 1993). The cumulative effects of allostasis on biological systems is referred to as *allostatic load.* Under conditions of chronic environmental demand, the allostatic load on biological systems can produce a long-term negative impact on physical and mental health (McEwen, 1998). (pp.114-115)

People cope with stress and deal with crises in their lives in different ways, and, for many people, religion and spirituality affect how they adapt to life crises (Feher & Maly, 1999). Stress and adapting to it are inevitably affected by one's beliefs through their religion or spirituality.

C. HARDINESS

Another aspect of individual characteristics affecting health is through hardiness. Some people are better-suited to resist illness and disease than others. Remle and Koenig define hardiness as "a psychological construct composed of the personality dimensions of commitment, challenge, and control [and report that these] may be correlated with better health over time" (p.200). In fact, hardiness "differentiates people who do and do not get sick under stress" (Sarafino, p.111). Sarafino describes the three characteristics included in hardiness:

> (1) *Control* refers to people's belief that they can influence events in their lives—that is, a sense of personal control. (2) *Commitment* is people's sense of purpose or involvement in the events, activities, and people in their lives. For instance, people with a strong sense of commitment tend to look forward to starting each day's projects and enjoy getting close to people. (3) *Challenge* refers to the tendency to view changes as incentives or opportunities for growth rather than threats to security. (p.111).

Thus, those individuals who possess more control, commitment, and challenge in their lives seem to be more resistant to disease.

Several studies have looked at the connection between hardiness and

health. In Carson's 1993 study of HIV-positive participants, "hardiness was significantly correlated with a composite measure of all spiritual activities [prayer, meditation, visualization or imagery, reading religious literature, or attendance at congregational services or spiritual retreats] combined; greater hardiness was tied to more spiritual involvement" (Remle and Koenig, p.201). In another study, the researchers discovered that "high hardiness was significantly related to lower psychological distress levels, higher perceived quality of life, and more positive personal beliefs regarding the benevolence of the world and randomness of life events" (Farber and colleagues, 2000). Remle and Koenig conclude that "one would expect that they [spirituality and religion] might play an important role in promoting a sense of meaning and a positive, optimistic world view" (p.201).

Along the same lines of hardiness, "other researchers have described similar personality traits that, like hardiness, might protect people from the effects of stress" (Sarafino, p.111). One trait, for example, is a "*sense of coherence*, which involves the tendency of people to see their worlds as comprehensible, manageable, and meaningful" (Antonovsky, 1979 and 1987). This is similar to the control factor in hardiness, and thus will also affect people's perceptions of the importance and manageability of their lives. Another trait—"resilience—seems to include high levels of three components: self-esteem, personal control, and optimism" (Major et al., 1998). Resilient people are more likely to recover from adverse experiences quicker and to evaluate negative life events with less distress. These people, despite less than optimal life conditions, recover from and thrive after adverse situations more so than their less resilient counterparts.

Hardiness, coherence, and resilience are all related to an individual's ability to view life as meaningful, manageable, and not as stressful as others. These all contribute to one's ability to resist illness more than other people. There are differing views on what may be the cause for this innate resistance to

illness. For example, it may be that "hardy people will remain healthier when under stress than those whose personalities are less hardy because they are better able to deal with stressors and are less likely to become anxious and aroused by these events" (Kobasa, 1979). Kobasa also reports the development of fewer illnesses during highly-stressful times among hardy individuals. Also, "hardy people show less physiological strain when under stress than less hardy individuals" (Contrada, 1989). Although the research is still in progress and not definitive at the time, "related aspects of personality are clearly involved in maintaining health" (Sarafino, p.112). Sarafino summarizes, "people with a high degree of hardiness, coherence, or resilience—or some related personality traits—may have some protection against the harmful effects of stress on health" (p.112). These internal characteristics may be somewhat innate, but they are also shaped by the person's upbringing and exposure. Religion will thus play a role in the development of the person's individual traits, and will in turn affect health through these as well.

D. TYPE A BEHAVIOR

Some integral aspects of an individual trait affecting health come through the Type A behavior pattern. This behavior is characterized by three components: *competitive achievement orientation, time urgency,* and *anger/hostility* (Sarafino, p.113). People that demonstrate this behavior pattern seem to have tendencies of always being on and sticking to a schedule and will only accept perfection and success from themselves. For example, a typical type A behavior is "interrupting and talking fast and loudly" (p.113). Social connections and activities may not be a priority to them, in that work-oriented and other result-gaining activities are their focus. They will inevitably take failures in life with great difficulty and will feel more personal responsibility for them.

Due to this extreme goal-oriented and driven lifestyle, several health effects will occur. First, stressors play a major role in the lives of Type A individuals, and this may lead to illness. For example, Type A classification "has been associated fairly consistently with health outcomes, particularly heart disease" (p.114). Another health risk comes through the hurried and impatient lifestyle. Type A individuals tend to be involved in more accidents than more easy-going people (Suls & Sanders, 1988). In another study, Type A people reported more respiratory symptoms (i.e. asthma attacks and coughing spells) and more gastrointestinal symptoms (i.e. ulcers, indigestion, and nausea) (Woods and Burns, 1984).

One of the most significant links between Type A and health comes through the development of coronary heart disease. Sarafino reports, "dozens of studies have been done to assess the link between Type A behavior and CHD [coronary heart disease], and most studies have confirmed the link" (p.115). For example, one study found that even after an eight and a half year follow-up, "the Type A subjects were twice as likely as Type Bs [the opposite behavior pattern, characterized more in a passive nature] to have developed CHD and to have died of CHD" (Rosenman et al., 1975). The link between Type A and CHD seems to come through the higher physiological reactivity during stressful tasks in Type As when compared with Type Bs (Glass et al., 1980). Type As seem to have a more intense physiological reaction, and "frequent episodes of high arousal produce a lot of wear and tear on the cardiovascular system. One way this may occur is through the hormones that are released during arousal [i.e. epinephrine]" (Sarafino, p.116), which can damage the system. Another way is through increased blood pressure. During stressful times, Type A individuals report higher blood pressure reactivity than Type Bs (Diamond et al., 1984).

Type As face the most health risks through the anger/hostility component.

For instance, "hostility seems to be a deadly emotion that may be especially damaging to cardiovascular health when it is expressed outwardly and when it involves a cynical or suspicious mistrust of others" (Everson et al., 1999). On a physiological level, "hostile individuals have higher resting blood pressure and serum cholesterol levels; and when harassed or stressed, they show poorer heart pumping efficiency and higher heart rate, blood pressure, and blood platelet activity" (Sarafino, p.116). Furthermore, "because chronic hostility is part of an unforgiving disposition, the implication is that chronic unforgiveness might be related to poor cardiovascular health" (Worthington, Jr., Berry, and Parrott III, p.114). This leads to the connection of religion and spirituality to one's outlook on life, since forgiveness is such an integral part of religion. Inevitably, RS factors affect one's personality and behaviors, such as the Type A behavior or forgiveness. Hostility seems to be the main connection to the effects of Type A behaviors on health, and thus, competitive achievement and time urgency components seem to carry less health risks. This extreme negative emotion leads to negative effects on the physiological processes in the body. Although some links seem to be apparent, "researchers have had difficulty differentiating negative and high-arousal emotions (such as anger and fear) physiologically using EMG, startle reflexes, and sympathetic indicators (such as skin conductance)" (Worthington, Jr., Berry, and Parrott III, p.111). Nonetheless, negative emotions affect health in a negative way, enhancing physical disorders and decreasing immune function. No matter what the links are, though, one's religion or spirituality will innately affect their behaviors, including Type A behaviors, which will then affect their health.

E. SOCIAL SUPPORT

A major trend in the connections between RS factors and health appears

to come through one's social support. Contact with others, especially those with similar beliefs or medical conditions, adds to the overall well-being of people. This may come in the form of just attending public religious services with others, through different types of support groups, or even in just having other people who care about one's well-being. It helps to feel important to someone else, and with the support of others, people will thrive. Worthington, Jr., Berry, and Parrott III claim, "the social support that comes about through organized religion affects health" (p.107). This social support of others who share these same beliefs and practices benefits the person. Smith describes, "individually oriented constructs (e.g., religious practices or spiritual values) are likely to be related to the patient's social context (e.g., availability of care and support)" (p.371).

While it may superficially seem that religion itself is the link to better health, "it is possible that persons who report high levels of strength and comfort from their religion are people who also experience comfort from multiple sources, such as friendships, community, and marriage" (Thoresen, Harris, and Oman, p.42). It is more than just mere attendance at church, which provides this comfort and support. For example, Strawbridge's study showed that frequent church attenders were less likely to smoke and drink. However, Strawbridge reports that another main factor in these behaviors was "they also had more social connections than did infrequent church attenders" (1997). This social connection through religion has much to offer people. Plante and Sharma cite Blaine and Croker's 1995 findings: "religious institutions also provide emotional social support by creating a feeling of connectedness for individuals in the congregational community" (p.242). The support of others is very soothing for people, especially those facing trying times, such as illness.

Not only does it help to feel supported and have someone to lean on, but social support also helps in coping with these adverse situations in life. In a

breakthrough study, David Spiegel et al. (1989) designed a therapeutic support group for women facing metastatic breast cancer. Both of their groups received the normal cancer therapy, but the treatment group attended weekly support group sessions, while the control group did not. The impressive results of the research demonstrated that the women in the treatment group lived an average of 37.6 months, while the control group only lived an average of 18.9 months after the study was complete. Although the exact reasons for this dramatic increase are unknown, there is a definite link between this social network and an increase in lifespan. These women in the group were able to talk openly with the other women about their thoughts, desires, and fears, and it helped them to have others in the same situation to lean on. Social support has credence in the positive benefits of health, and it is greatly enhanced by religion or spirituality.

On another note, it is difficult to differentiate which factor *causes* the other—religion or social support. For instance, "attendance at religious services and social support are significantly correlated. However, we cannot be certain about the causal direction of this relationship. Church attendance may lead to increased social support, but it is equally plausible that it may result from social support" (Sloan, Bagiella, and Powell, p.344). Nonetheless, the two are linked, and thus religious people seem to have more social support, which aids in health and well-being.

On the opposite end of the spectrum, the lack of social support may have adverse effects. For instance, among patients who elected to undergo heart surgery, mortality was predicted by both the absence of comfort and strength from religion as well as the lack of participation in social groups (Oxman, Freeman, and Manheimer, 1995). Not only does it help to have social support, but it may actually harm a person to be without it. It may lead to earlier death if a person is isolated from the love and support of others.

F. LIFE SATISFACTION

One more aspect of well-being comes through happiness and life satisfaction. Links of religion with these have also been discovered. Wink and Dillon summarize studies by Ellison (1991) and Koenig (1997): "Overall, there is strong and compelling evidence that people who have higher levels of religiosity have higher levels of well-being and life satisfaction" (p.88). Some sort of religious involvement appears to promote a happier and more gratifying life experience. In fact, merely having religiosity early in life has been shown to predict future life satisfaction. Wink and Dillon (2001) report, "the buffering effect of religiosity of life satisfaction in late adulthood could be predicted from a time interval of close to 30 years even after controlling for the initial ratings of subjective health" (p.96). By determining religiosity at a younger age and then comparing it to the life satisfaction results of a follow-up study thirty years later, the two corresponded. Along this more long-term outlook, "individuals with greater spiritual well-being were more likely to report continued enjoyment of life, despite their ailments, relative to those who scored low on spiritual well-being" (Brady et al., 1999).

Even more intriguing, Blazer and Palmore emphasize, "Positive religious feelings, despite a decline in religious activities, have also been shown to have a strong impact on happiness and adjustment, especially for older people" (1976). Even without direct participation in these religious practices, an optimistic religious outlook seems to benefit well-being. The focus on optimism, not only in spirituality and religion, but also in life in general, accentuates one's happiness and life satisfaction, which leads to health benefits. Taking a different approach than the purely physical health focus, an interest has been sparked in the ways that attitudes, such as optimism, happiness, and other aspects of more

psychological health affect the well-being of people. Being optimistic involves viewing negative events as only temporary, not one's own fault, and restricted to only the present context. This opposes viewing the event as permanent and blaming oneself or allowing it to carry over into other aspects of life as pessimistic people tend to do. Pessimism can lead to a helpless and hopeless state, always blaming oneself and seeing no hope for anything better. Ultimately, this view can result in the epitome of helplessness, depression. This is a severe health risk. Optimism, thus, can alleviate this risk of depression and can help a person overcome failures and struggles in life and focus on his or her successes (Seligman, 1991).

There may even be times in life when an optimistic outlook is more beneficial to a person. Wink and Dillon hypothesize "that religiosity may have a buffering effect on life satisfaction during times of personal adversity" (p.92). During the most difficult trials in life, optimism may benefit the person even more, providing a more hopeful outlook for better things to come and a better overall adjustment to adversity. There are already "preliminary indications that optimism mediates the relationship between general religious orientation and psychological adjustment" (Sherman, Simonton, et al., 2000). Religion enhances an optimistic outlook. Generally speaking, Wink and Dillon summarize, "those who were religious tended to be happier" (p.92). It appears that just being religious increases one's happiness, which will positively affect health as well.

These individual factors as well as other RS factors play a significant role in the influence of spirituality on health. People have different beliefs, practices, behaviors, and even coping strategies, which determine their lifestyle and affect overall health as well. Researchers are still not sure about the specific factors that affect health; however, some theories have arisen about these effects. "Which specific aspects of religiousness or spirituality are tied to which

specific types of health outcomes are not yet clear. Some studies point to enhanced well-being and life satisfaction, while others highlight reduced emotional distress or functional impairment" (Sherman and Simonton, p.172). There is no definitive link yet, and it may be some time before answers are discovered. Nonetheless, these links do have relevance in the medical field, and further research will only broaden its understanding and influence.

Chapter Five:

THE OTHER POINT OF VIEW

While most researchers who look for a positive link in spirituality or religion and health may be swayed to only report the supportive evidence of their theories, there is still opposition to these ideas, which cannot be overlooked. For example, some give little credence to a relationship, claiming that "health impairments hinder church participation, especially that of the elderly, thus accentuating the positive association that may be found between religious involvement and good health" (Wink and Dillon, p.82). Obviously, if one is too ill or physically incapable to attend religious services, more of the healthy church attenders will be counted, thus swaying the data.

On the other hand, some may find a relationship between religious involvement and poor physical health. For instance, Courtenay et al. (1992) "found a significant relationship between religiosity and some physical health problems in their study of 165 older Americans (aged 60 to over 100 years of age)" (Wink and Dillon, p.82). Although seemingly contradictory to the view that religion enhances health, there may be an understandable explanation for this discrepancy. Physical ailment or health problems may cause people to turn to religion or a higher power for strength and coping. This would display a positive correlation of negative health with religious involvement.

Another disagreement comes through the discussion of whether religion affects those in poor health as well as those in good health. Researchers will inevitably be more interested in the sick and how they turn to religion for strength and comfort during times of adversity; thus without much focus on those in a positive health state, "we are uncertain whether religion buffers life satisfaction both when things go well and when things go poorly in life or whether it is only in the latter eventuality" (Wink and Dillon, p.88). For instance, in Idler's study, patients in rehabilitation clinics who have a physical disability may be more likely to find hope in religious involvement than their healthier counterparts (1995).

This provides evidence of a stronger correlation between religious practices and health for those facing adversity than for those who have no afflictions. A strong example of this concept comes in Wink and Dillon's study on life satisfaction and religiosity. The two report:

> nonreligious individuals who were in poor health show[ed] the lowest levels of overall life satisfaction. Individuals high in religion and in poor health showed the highest levels of satisfaction. A follow-up *t*-test analysis revealed that there was a statistically significant difference, $t(39) = 2.31$; $t < .05$, in levels of life satisfaction among the two groups of individuals in poor physical health (but who differed in religion). Among individuals in good health, the difference in the life satisfaction between the religious and nonreligious participants was not significant; $t(75) = .47$; n.s. (p.90)

Thus, among those in poor health, nonreligious people are the least satisfied, while highly-religious people are the most satisfied with life. Religion appears to most affect the life satisfaction of those in poor health more so than it affects healthy individuals. Wink and Dillon summarize that their findings "support the hypothesis that religiosity may have a buffering effect on life satisfaction during times of personal adversity" (p.92).

Without cause and effect evidence of an absolute relationship, there will continue to be opposition and questioning of the effects of religion on health and vice versa. It may not be strictly religious participation, but also the behaviors this activity in a religion promotes for the believer. Since some religions promote more healthy lifestyles and prohibit risky health behaviors, such as smoking and

drinking alcohol, it may be more of a secondary link for religion and health, not a direct relationship. As Wink and Dillon sum up, "Overall, therefore, it may not be religiousness per se but the lifestyle practices and social consequences that stem from participation in a particular religion that. . . provide sociocultural buffers against early mortality and the negative consequences of illness in general" (p.83). Some will believe what they want to believe, and even if definitive evidence is discovered, opponents may still continue to argue. However, the research to date seems to point in the direction of a connection between spirituality/religion and health.

Chapter Six:

OUR STUDY ON SPIRITUALITY AND HEALTH

Dr. Warren Jones and Dr. Kathleen Lawler

In research, the most valid and reliable results come through standard experimentation, with random sampling and controlled study, looking for a direct cause and effect relationship. With this in mind, "in a well-designed experiment . . . all other variables are controlled or held constant" (Sarafino, p.25). Participants are assigned to either the experimental group, which "receives the treatment" (p.26) or has the variable being measured implemented, or to the control group, which "receives their care without the drug" (p.26) or does *not* have this variable present. This type of research is obviously the most reliable, due to the random sampling and controlled experimentation, and if a connection is discovered between the variable being measured and an outcome, it may be likely for a cause-effect conclusion to be made. This can only be concluded if "three criteria have been met: (1) the levels of the independent and dependent variables corresponded or varied together, (2) the cause preceded the effect, and (3) all other plausible causes have been ruled out" (p.27).

Experimentation, although the most valid and reliable research method, is not always an option. There are other forms of study; "research always involves the study of variables, but in *nonexperimental methods*, the researchers *do not manipulate an independent variable*" (p.27). Even though nonexperimental methods may seem less dependable in providing direct relationships in a cause-effect manner, these are still valuable in research. Usually, "the aim of a research project requires only that an association between variables be demonstrated" (p.27). When direct experimentation is unethical or unfeasible due to limitations, these are beneficial. One type of nonexperimental method, a common type especially in psychology and this complex and ambiguous arena of spirituality, is a correlational study. The "term *correlation* refers to the *co* or joint relation that exists between variables—changes in one variable correspond with changes in another variable" (p.27). Correlational studies have been the

predominant type in the area of spirituality and health. It is nearly impossible to study a direct relationship between a religion, spiritual belief or practice, or behavior and the outcome of physical health. Thus, mere associations and correlations between one variable and the other can only be discovered as the results of this type of test. These studies do not prove a direct cause-effect relationship; instead, they are merely "nonexperimental investigations of the degree and direction of statistical association between two variables" (p.28).

Using a correlational setup for research, I have worked alongside Dr. Kathleen Lawler and Dr. Warren Jones on their study of spirituality and health. They hope to gain an understanding of some of these specific factors of spirituality and religion which affect health. Using a self-report setup in the form of a questionnaire, we sampled sixty-three University of Tennessee students (nineteen men and forty-four women). To gain a broad understanding of spirituality and religiosity, a 173-item questionnaire was initially given in order to maintain more reliable answers to similar questions. Following the survey, the scale was revised to a twenty-one items, which seem to most reflect these aspects of spirituality and religiosity. Items were chosen which apply to specific belief areas, such as related spiritual realm, higher power, connection, nature, meaning, and other spirituality. The specific questions hopefully reflect these common themes and will help gain a basic understanding of the spirituality of the subjects in the sample. Then, along with the SR survey, a basic health survey (the CHIPS survey) was given. [4] The two scales were compared in order to compare correlations among the aspects of spirituality and health.

Since this is only the initial attempt at this study, with such a limited sample size, the results are far from complete or thorough. However, even with

[4] The original 173-item spirituality survey, the twenty-one item revised scale, the CHIPS health survey, and the correlation matrices are all included following this paper for further review.

these limitations, some correlations became evident. First, using the revised spirituality questionnaire with all the subjects, the only aspect spirituality corresponded to was the religiousness subscale according to Ellison and Smith's Spiritual Well-Being Scale (1991). The two had a correlation of $r = .440$, significant at the 0.01 level. Since our focus was to determine the difference in spirituality and religion, this is not what we were initially anticipating. It is discouraging that the two were so correlated, indicating the sample's general spirituality overlapping through a religious focus. However, there may be some initial reasons for this. This could be due to the limited number of participants as well as the small focus-area in East Tennessee, part of the so-called "Bible belt." Many around this area are very religious, so this may explain the correlation between spirituality and religiosity among this small sample. Moreover, by dividing the subjects by gender (males: n=19 and females: n=44), this relationship between spirituality and religiousness was no longer valid for the males, but actually increased in the females. The correlation among the females only was $r = .56$, $p<.0001$. Thus, it appears that among this sample, the women's spirituality comes mostly through their religion.

Next, the biggest correlation comes through Stress and Health (CHIPS). These were correlated at $r = .58$, $p<.0001$ for all of the subjects, and $r = .649$ and $r = .616$, $p<.0001$ for the men and women, respectively. Thus, stress and health are strongly correlated among all of the subjects in the sample. In our analysis, this is the strongest relationship to date. Although it is not the overall spirituality link we were hoping for, this does account for one of the dominant individual factors affected by one's spirituality and beliefs and affecting one's health. Stress plays a major role in an individual's overall health.

While these were the only significant correlations in the initial study, there were some marginal relationships. For example, religiousness was also

marginally related to stress, with $r = -.22$, $p<.09$ among the entire sample. This negative correlation implies that with lower religious participation, one would expect higher levels of illness or negative health symptoms. Again, according to the present literature on the subject, public religious behavior has stronger effects on health, due to the aspects of social support and the encouragement of positive health behaviors when compared to private worship practices. Thus, this result fits with the consensus thus far, that public religious practice has a positive effect on health.

It is difficult to differentiate which specific aspects of spirituality and religiosity directly or indirectly affect health. A self-report method may not be the most accurate approach to study, but this may be the only possible way to ethically gauge these measures. Self-bias may come into play, as the subjects rate themselves on their beliefs, behaviors, and health. Also, depending on the day, each subject will be in a different mood, with different stressors, concerns, and illnesses in life, so the accuracy may not be precise. Again, this sample size of merely sixty-three subjects is small, so with a larger sample, stronger relationships may become evident. With more participants in the sample and follow-up surveys, the study and its results will be more random and accurate.

This being just the initial study, there is much work to do on the scale development and the gathering more data. Different items may relate better to other factors of spirituality and health, but it will just take time and different approaches to best determine if relationships do in fact exist. This first attempt at the study is just the beginning of Dr. Lawler and Dr. Jones' research in the area. According to the overwhelming research in the area, there are apparently some links between spirituality/religiosity and well-being. Many researchers are jumping on the bandwagon, hoping to discover these links to benefit health professionals and all people, as well.

Chapter Seven:

WHERE DO WE GO FROM HERE? THE FUTURE OF R/S RESEARCH

Many experiments and studies searching for a link in spirituality/religion and health have been completed and continue to be devised. This field is continuing to grow in interest and acceptance. However, "only 7% [of studies] involved experimental (as opposed to correlational or descriptive) designs" (Thoresen, Harris, and Oman, p.31). Also, most of the research has been limited as cross-sectional, short-term studies and has "examined only very narrow aspects of religion and spirituality, such as church attendance" (Plante and Sherman, p.5). Most people have lifelong beliefs, practices, and health histories; thus, in studying a connection between these abstract practices and health, it is impossible to ethically and randomly-assign participants to a specific religion or to a group with a specific disease. Correlational data have been the major focus of most researchers and has provided a glimpse into the links in these areas. However, it is also understood that "health status and religious involvement, moreover, are not stable over the life course" (Wink and Dillon, p.76). Obviously, people's beliefs and ways of living change as they age and mature. People are not the same in any aspect throughout their entire lives; inevitably, religious involvement and well-being will change throughout life as well. Thus, the previously-discussed cross-sectional and/or strictly correlational studies will not provide a thorough picture of the individual and the lifetime effects of religious factors on health. Again, there is a desire for experimental data in order to show more of a cause and effect relationship between religious factors and physical well-being, but this type of research is many times unfeasible in this area.

Nonetheless, some progress has been made in showing links between spirituality/religion and health. There seem to be good reasons for the increasing awareness in this area. Many people have some sort of religious or spiritual beliefs, which are important to them, and "some segments of the population are eager for health behavior change approaches that are based on or are at least

consistent with their religious and spiritual beliefs" (Miller, 1999). Not only is there a need to recognize a connection between spirituality/religion and health, but there is also debate over the incorporation of spirituality and religion into the health field. Chirban reports Vande Kemp's 1996 conclusion that "while most prominent psychologists have examined religion, it has not been integrated into the mainstream of psychotherapy" (p.265). However, if patients want this recognition, respect, and incorporation of their personal beliefs into their treatments, healthcare professionals need to become aware of these connections. Chirban argues that "quite often, the patient's most intense positive and negative feelings are connected to his or her religious and spiritual experiences" (p.267); thus, they will want their medical needs to surround these experiences and emotions. In this day and age, physicians are so concerned with diagnosing and treating the physical source of the problem, that they lack having the focus on the whole individual and all aspects of health. Morris (1994) argues, "doctors who average seven minutes per patient may simply lack the tools and time to hear what patients themselves could tell them" (p.25). Cassell (1991) adamantly states, "persons cannot be reduced to their parts so that they can be better understood. Reductionist scientific methods, so successful in other areas of human biology, are not as useful for the comprehension of whole persons" (p.12). Thus, with a holistic focus on the patient, including beliefs and concerns, physicians would be better equipped in understanding the overall health of the patient. So, even though there are doubts and concerns about the inclusion of spirituality and religion into the medical and psychological fields, "this does not mean that such issues should be actively avoided in clinical care. Rather, it means that tentativeness, caution, and sensitivity are required" (Smith, p.374).

In order to incorporate spirituality and religion into the healthcare field,

health professionals must be properly trained in understanding and respecting patient's beliefs and working with them to develop treatment strategies compatible with them. Miller and Thoresen (1997) claim there is a need "to provide health professionals with the knowledge, understanding, and skills to competently handle counseling at the border [between physical healthcare and religious/spiritual issues]" (p.9). They go on to describe five qualities that clinicians must have during this approach:

- A nonjudgmental, accepting, and empathic relationship with the client
- An openness and willingness to take time to understand the client's spirituality as it may relate to health-related issues
- Some familiarity with culturally related values, beliefs, and practices that are common among the client populations likely to be served
- Comfort in asking and talking about spiritual issues with clients
- A willingness to seek information from appropriate professionals and coordinate care concerning clients' spiritual traditions (p.10)

With these in mind, there is a significant desire to include these important areas in healthcare. However, while the proponents for the incorporation of spirituality and religion into the medical field are adamant about the importance of it, most agree that it is not the *only* treatment approach that should be used. In fact, "the evidence to date does not suggest that current scientifically based health care methods should be replaced by spiritual approaches" [Miller and Thoresen (1997), p.12], but instead should coincide with traditional methods.

Some clinicians are "uncertain about how to approach these issues" (Chirban, p.266), but "psychology is now addressing religious issues with fervor" (p.266). While many links have been found between RS factors and health, what is "needed at this point is replication of such effects by other researchers using very similar procedures" (Thoresen, Harris, and Oman, p.35). There are obvious links, which provide hope for future study and incorporation into the medical field; nonetheless, more research must be undertaken in order to increase the understanding of the links of spirituality and religion to holistic well-being and overall health.

REFERENCES

Antonovsky, A. (1979). *Health, stress, and coping.* San Francisco: Jossey-Bass.

Antonovsky, A. (1987). *Unraveling the mystery of health: How people manage stress and stay well.* San Francisco: Jossey-Bass.

Bell, I.R., Martino, G.M., Meredith, K.E., Schwartz, G.E., Siani, M.M., & Morrow, F.D. (1993). Vascular disease factors, urinary free cortisol, and health histories in older adults: Shyness and gender interactions. *Biological Psychology, 35*, 37-49.

Blaine, B., & Croker, J. (1995). Religiousness, race, and psychological well-being: Exploring social psychological mediators. *Personality and Social Psychology Bulletin,* 21, 1031-1041.

Blazer, D., and Palmore, E. (1976). Religion and aging in a longitudinal panel. *Gerontologist,* 16, 82-85.

Brady, M.J., Peterman, A.H., Fitchett, G., Mo, M., & Cella, D. (1999). A case for including spirituality in quality of life measurement in oncology. *Psycho-Oncology, 8*, 417-428.

Byrd, R.C. (1988). Positive therapeutic effects of intercessory prayer in a coronary care unit population. *Southern Medical Journal,* 81, 826-829.

Carson, V.B. (1993). Prayer, meditation, exercise, and special diets: Behaviors of the hardy person with HIV/AIDS. *Journal of the Association of Nurses in AIDS care, 4,* 18-28.

Cassell, Eric J. *The Nature of Suffering and the Goals of Medicine.* Oxford, 1991: Chapter 3, 1-15.

Chirban, John T. "Assessing Religious And Spiritual Concerns in Psychotherapy." Chapter 11, *Faith and Health: Psychological Perspectives*. New York: The Guilford Press, 2001.

Cobb, Sidney and Rose, Robert M. (1973). Hypertension, peptic ulcers, and diabetes in air traffic controllers. *Journal of the American Medical Association,* 224, 489-492.

Contrada, R.J. (1989). Type A behavior, personality hardiness, and cardiovascular responses to stress. *Journal of Personality and Social Psychology,* 57, 895-903.

Courtenay, B., Poon, L., Martin, P., Clayton, G., & Johnson, M. (1992). Religiosity and adaptation in the oldest-old. *International Journal of Aging and Human Development,* 34, 47-56.

Diamond, E.L., Schneiderman, N., Schwartz, D., Smith, J.C., Vorp, R., & Pasin, R.D. (1984). Harassment, hostility, and Type A as determinants of cardiovascular reactivity during competition. *Journal of Behavioral Medicine,* 7, 171-189.

Ellison, C.G. (1991). Religious involvement and subjective well-being. *Journal of Health and Social Behavior,* 32, 80-99.

Ellison, C., and Smith, J. (1991). Toward an integrative measure of health and well-being. *Journal of Psychology and Theology*, 19, 35-48.

Engel, George L. "The Need for a New Medical Model." *Science*, New Series, Vol. 196, No. 4286. (Apr. 8, 1977), pp. 129-136.

Esterling, B.A, Antoni, M.H., Kumar, M., & Schneiderman, N. (1993). Defensiveness, trait anxiety, and Epstein-Barr viral capsid antigen antibody titers in healthy college students. *Health Psychology,* 12, 132-139.

Everson, S.A., Kaplan, G.A., Goldberg, D.E., Lakka, T.A., Sivenius, J., & Salonen, J.T. (1999). Anger expression and incident stroke: Prospective evidence from the Kuopio Ischemic Heart Disease Study. *Stroke*, 30, 523-528.

Farber, E.W., Schwartz, J.A.J., Schaper, P.E., Moonen, D.J., & McDaniel, J.S. (2000). Resilience factors associated with adaptation to HIV disease. *Psychosomatics, 41,* 140-146.

Feher, S., & Maly, R.C. (1999). Coping with breast cancer in later life: The role of religious faith. *Psycho-Oncology,* 8, 408-416.

Glass, D.C., Drakoff, L.R., Contrada, R. Hilton, W.F., Kehoe, K., Mannucci, E.G., Collins, C., Snow, B., & Elting, E. (1980). Effect of harassment and competition upon cardiovascular and plasma catecholamine responses in Type A and Type B individuals. *Psychophysiology,* 17, 453-463.

Hardwig, John. "Spiritual Issues at the End of Life: A Call for Discussion." *Hastings Center Report* 30, no.2 (2000): 28-30.

Idler, E. (1995). Religion, health, and non-physical senses of self. *Social Forces,* 74, 683-704.

Kiecolt-Glaser, J.K., & Glaser, R. (1995). Psychoneuroimmunology and health consequences: Data and shared mechanisms. *Psychosomatic Medicine,* 57, 269-274.

Kobasa, S.C. (1979). Stressful life events, personality, and health: An inquiry into hardiness. *Journal of Personality and Social Psychology,* 37, 1-11.

Koenig, H.G. (1997). *Is religion good for your health? Binghamton,* NY: Haworth Pastoral Press.

Larson, D.B., Swyers, J.P., & McCullough, M.E. (Eds.). (1998). *Scientific research on spirituality and health: A consensus report.* Rockville, MD: National Institute for Healthcare Research.

Major, B., Richards, C., Cooper, M.L., Cozzarelli, C., & Zubek, J. (1998). Personal resilience, cognitive appraisals, and coping: An integrative model of adjustment to abortion. *Journal of Personality and Social Psychology,* 74, 735-752.

Marty, M.E. (1998). The ethos of Christian forgiveness. In E.L. Worthington, Jr. (Ed.), *Dimensions of forgiveness: Psychological research and theological perspectives* (pp.9-28). Philadelphia: Templeton Foundation Press.

McCullough, Michael. "Religious Involvement and Mortality: Answers and More Questions." Chapter 3, *Faith and Health: Psychological Perspectives.* New York: The Guilford Press, 2001.

McCullough, M.E., Hoyt, W.T., Larson, D.B., Koenig, H.G., & Thoresen, C. (2000). Religious involvement and mortality: A meta-analytic review. *Health Psychology,* 19(3), 211-222.

McEwen, B.S. (1998). Protective and damaging effects of stress mediators. *New England Journal of Medicine,* 338, 171-179.

McEwen, B.S., & Stellar, E. (1993). Stress and the individual: Mechanisms leading to disease. *Archives of Internal Medicine,* 153, 2093-2101.

Miller, W.R. (Ed.). (1999). *Integrating spirituality into treatment: Resources for practitioners.* Washington, DC: American Psychological Association.

Miller, W.R., and Thoresen, C.E. (1999). Spirituality and health. in W.R. Miller (Ed.), *Integrating spirituality into treatment.* Washington, DC: American Psychological Association, pp. 3-18.

Morris, David B. (1994). "Pain's Dominion: What We Make of Pain." *Wilson Quarterly,* pp. 8-26.

Oxman, T.E., Freeman, D.H., & Manheimer, E.D. (1995). Lack of social participation or religious strength and comfort as risk factors for death after cardiac surgery in the elderly. *Psychosomatic Medicine,* 57, 5-15.

Pargament, K.I. (1997). *The psychology of religion and coping: Theory, research, practice*. New York: Guilford Press.

Pargament, K.I., Smith, B.W., Koenig, H.G., & Perez, L. (1998). Patterns of positive and negative religious coping with major life stressors. *Journal of Scientific Study of Religion*, 37, 711-725.

Plante, Thomas G., and Sharma, Naveen K. "Religious Faith and Mental Health Outcomes." Chapter 10, *Faith and Health: Psychological Perspectives*. New York: The Guilford Press, 2001.

Plante and Sherman. *Faith and Health: Psychological Perspectives*. New York: The Guilford Press, 2001.

Remle, R. Corey and Koenig, Harold G. "Religion and Health in HIV/AIDS Communities." Chapter 8, *Faith and Health: Psychological Perspectives*. New York: The Guilford Press, 2001.

Rosenman, R.H., Brand, R.J., Jenkins, C.D., Friedman, M., Straus, R., & Wurm, M. (1975). Coronary heart disease in the Western Collaborative Group Study: Final follow-up experience of 8 ½ years. *Journal of the American Medical Association,* 233, 872-877.

Sapolsky, R.M. (1994). *Why zebras don't get ulcers: A guide to stress, stress-related diseases, and coping.* New York: Freeman.

Sapolsky, R.M. (1999). Hormonal correlates of personality and social contexts: From non-human to human primates. In C. Panter-Brick & C.M. Worthman (Eds.), *Hormones, health, and behavior: A socio-ecological and lifespan perspective* (pp.18-46). Cambridge, England: Cambridge University Press.

Sarafino, Edward P. *Health Psychology: Biopsychosocial Interactions,* Fourth Edition. New York: John Wiley & Sons, Inc., 1990.

Seligman, Martin E.P. *Learned Optimism.* New York: A.A. Knopf, 1991.

Sherman, Allen C. and Simonton, Stephanie. "Religious Involvement among Cancer Patients: Associations with Adjustment and Quality of Life." Chapter 7, *Faith and Health: Psychological Perspectives*. New York: The Guilford Press, 2001.

Sherman, A.C., & Simonton, S. (2001). Coping with cancer in the family. *Family Journal,* 9, 193-200.

Sherman, A.C., Plante, T.G., Simonton, S., Adams, D.C., Harbison, C., & Burris, S.K. (2000). A multidimensional measure of religious involvement for cancer patients: The Duke Religious Index. *Journal of Supportive Care in Cancer,* 8, 102-109.

Sloan, Richard P., Bagiella, Emilia, and Powell, Tia. "Without a Prayer: Methodological Problems, Ethical Challenges, and Misrepresentations in the Study of Religion, Spirituality, and Medicine." Chapter 3, *Faith and Health: Psychological Perspectives.* New York: The Guilford Press, 2001.

Smith, Timothy W. "Religion and Spirituality in the Science and Practice of Health Psychology: Openness, Skepticism, and the Agnosticism of Methodology." Chapter 15, *Faith and Health: Psychological Perspectives.* New York: The Guilford Press, 2001.

Spiegel, D., Bloom, J.R., Kraemer, H.C., & Gottheil, E. (1989). Effect of psychosocial treatment on survival of patients with metastatic breast cancer. *The Lancet,* 2, 888-891.

Strawbridge, W.J., Cohen, R.D., Shema, S.J., & Kaplan, G.A. (1997). Frequent attendance at religious services and mortality over 28 years. *American Journal of Public Health,* 87, 957-961.

Sullivan, Lawrence E. "Introduction: The Quest for Well-Being and the Questioning of Medicine." *Healing and restoring : health and medicine in the world's religious traditions.* New York: Macmillan, 1989.

Suls, J., & Sanders, G.S. (1988). Type A behavior as a general risk factor for physical disorder. *Journal of Behavioral Medicine*, 11, 210-226.

Templeton, J.M. (1997). *The world-wide laws of life.* Radnor, PA: Templeton Foundation Press.

Thoresen, Carl E., Harris, Alex H.S., and Oman, Doug. "Spirituality, Religion, and Health: Evidence, Issues, and Concerns." Chapter 2, *Faith and Health: Psychological Perspectives.* New York: The Guilford Press, 2001.

Vande Kemp, H. (1996). Historical perspective: Religion and clinical psychology in America. In E.P. Shafranske (Ed.), *Religion and the clinical practice of psychology* (pp.71-112). Washington, DC: American Psychological Association.

Willis, A. Sandra, Wallston, Kenneth A., and Johnson, Kamau R.S. "Tobacco and Alcohol Use among Young Adults: Exploring Religious Faith, Locus of Health Control, and Coping Strategies as Predictors." Chapter 9, *Faith and Health: Psychological Perspectives*. New York: The Guilford Press, 2001.

Willis, A.S., Wallston, K.A., Smith, M.S., Plante, T.G., Johnson, K., Christenbery, T., Reeves, J.E., Dutton, G., & Geiger, B.F. (1999, June). *Religious faith and health locus of control predict smoking behaviors in adolescents.* Poster presented at the annual convention of the American Psychological Society, Denver, CO.

Wink, Paul and Dillon, Michele. "Religious Involvement and Health Outcomes in Late Adulthood: Findings from a Longitudinal Study of Women and Men." Chapter 4, *Faith and Health: Psychological Perspectives.* New York: The Guilford Press, 2001.

Woods, P.J., & Burns, J. (1984). Type A behavior and illness in general. *Journal of Behavioral Medicine,* 7, 411-415.

Woods, T.E., Antoni, M.H., Ironson, G.H., & Kling, D.W. (1999). Religiosity is associated with affective and immune status in symptomatic HIV-infected gay men. *Journal of Psychosomatic Research,* 46, 165-176.

Worthington, Jr., Everett L., Berry, Jack W., and Parrott III, Les. "Unforgiveness, Forgiveness, Religion, and Health." Chapter 5, *Faith and Health: Psychological Perspectives.* New York: The Guilford Press, 2001.

For each of the following statements, write in the number from the scale, which best describes how you feel about the statement.

1=Strongly disagree 2=Disagree 3=Undecided 4=Agree 5=Strongly agree

1. Spiritual reading and exploration are very important activities.
2. I strive to find a deep connection to all living things.
3. I often feel intimately connected to a higher presence, when I am in the mountains or at the seashore.
4. I look for a spark of the divine in every person I meet.
5. My spiritual life is my highest priority.
6. I try to find meaning when I carry out everyday activites, such as washing the dishes or mowing the lawn.
7. Finding the good in people brings me a sense of inner peace.
8. I often feel at one with all people, even those who are very different from me.
9. Prayer, contemplation or meditation is an important part of my daily life.
10. Synchronicity, or amazing coincidences, reinforce my belief in a reality we cannot see.
11. It is important to devote a significant effort to maintain a high standard of living.
12. If I had $1,000,000, life would be really worthwhile.
13. Sometimes I feel "at one" with the whole world.
14. There are some crimes that are so brutal, the perpetrators should never be forgiven.
15. I will experience "inner peace" when I have "external success."
16. Faith in some sort of higher power or natural order is necessary for a truly happy life.
17. Finding meaning in my life is my highest priority.
18. I may not always understand why things happen, but I do believe there is a reason behind events.
19. "Bad things happen to good people" because events are largely random.
20. Attributing meaningful forces behind daily events is believing in magic, rather than in reality.
21. Suffering can be an important means of spiritual growth.
22. I look for ways to be of service to others.
23. I believe that "God helps those who help themselves."
24. "Charity begins at home" is an important guideline for my actions.
25. There are some people who do not deserve the good will of others.
26. Even the most trivial action can have important consequences.
27. I have a reverence for the earth and the natural world.
28. Sometimes we have to sacrifice a wilderness area, or a little-known species, to maintain the welfare of human life.
29. I tend to make up my mind about people pretty quickly.
30. There are people who just don't deserve to live.
31. Hard work and following the rules are more important to a good life, than spending a lot of time in meditation and prayer.

32. I am more interested in "getting on with life" than thinking about the "meaning of life."
33. Swift and sure justice would do a lot to improve the quality of our communities.
34. I am always searching for a better way to live my life.
35. I strive to be in harmony with nature and to disturb the earth as little as possible.
36. Natural resources are here for us to use, to improve our daily life.
37. I need daily periods of quiet reflection.
38. Experiencing moments of quiet joy is the best indicator of a life well-lived.
39. I search for meaning in everyday life.
40. I notice the beauty in simple acts or everyday things.
41. I often stop to consider the greater message in common situations, people or things.
42. It is important to consider a greater being before acting or making decisions.
43. My life is marked by an acquaintance with something larger than or beyond myself.
44. It is possible to believe in something that can't be seen.
45. I feel a strong connection or bond with the people in my life.
46. I feel a connection to things beyond myself, be they people, objects, nature, or a greater power.
47. I feel more connected to everything when I am surrounded by nature or involved in a creative hobby.
48. I sense an energy in other people and/or things.
49. I learn or know about things through means other than the five senses; sometimes I think I have a "sixth" sense.
50. At times, I step back from the activity in my environment, to contemplate the bigger picture.
51. When the daily hassles of life upset me, I try to put things in perspective.
52. I feel a calling or feel led by a higher power or greater being than myself.
53. I search for meaning in my life, my environment, my behavior.
54. I desire to be connected to other people and/or things.
55. I sense a unity between man and nature.
56. I search for those things, which cannot be known through the five senses.
57. There is a divine essence in people or things.
58. I believe that humans can be more than they now are.
59. I desire to reach my full human potential.
60. The idea of becoming "fully human" interests me.
61. I believe we can achieve great things, if we strive to reach our full potential.
62. The act of creating something, whether music, art or cooking, makes me feel connected and more fully human.
63. Sometimes the objects in my environment "speak" to me.
64. The glimmer of the transcendent can be seen in ordinary, even frustrating moments.
65. I believe that every experience in life, even a small insignificant one, has the potential to teach me.
66. I believe in the idea of one spirit, many paths.
67. Meditation facilitates concentration and a tranquil mind.
68. I think I am a sensitive person.
69. I think I am a compassionate person.

70. I ponder or think about an issue or experience, in order to understand it and myself better.
71. I find it difficult to control my anger.
72. I believe wisdom can be attained, only when one has a clear understanding of oneself.
73. I criticize myself for my failings, hoping that this will help me to improve.
74. I think I am generally satisfied with life.
75. I look at every living thing in life as something beautiful, rather than something ordinary.
76. Sometimes my awareness of ordinary events, such as a sunset or prayer, is significantly altered.
77. I feel connected to my world.
78. I question the workings of my faith.
79. I believe in a higher power.
80. I believe everything in life happens for a reason.
81. I'm continuously searching for meaning in life.
82. I trust there is meaning of life that I can't fully grasp.
83. I continue to question how the world works.
84. In relation to the universe, I feel rather small.
85. I am a spiritual person.
86. There are times when I feel at one with the universe.
87. I am mindful of the spiritual everyday.
88. I often see signs that point to a spiritual existence.
89. I can sense the presence of a spiritual reality.
90. I take time off to think about or experience spirituality.
91. I feel connected to all people.
92. There are places that I consider special or sacred.
93. Religion is necessary to experience spirituality.
94. I have mystical or peak experiences.
95. I believe that people are spiritual beings.
96. I believe there is a realm beyond the physical one we know.
97. I believe there is a higher intelligence or order directing our world.
98. There are many mysteries in this world that science cannot explain.
99. I am certain that there is a spiritual aspect to all things.
100. Sometimes, I feel guided down a spiritual path.
101. I believe that things happen for a reason.
102. I believe in some existence beyond death.
103. I try to think spiritually when I deal with people.
104. I see or feel the spiritual in all things.
105. I take time to acknowledge the spiritual.
106. I believe in a higher power.
107. I am at peace with myself.
108. Once I die, that's it, there is nothing more.
109. I feel a sense of emptiness with everyday life.
110. Spiritual people are weak people.
111. Without belief in a higher power, life would be meaningless.

112. I believe in the power of prayer.
113. My soul longs for joy.
114. All I need for fulfillment are high moral values.
115. I believe that there is a purpose and meaning to life.
116. There is a unity in nature, that is not explained by human science.
117. I believe in something larger than myself.
118. I believe life is a quest for meaning and purpose.
119. Life has no particular meaning, it just is.
120. Searching for meaning and purpose in life is a waste of time and energy.
121. Life means whatever you want it to mean.
122. There is beauty to the universe that exceeds the comprehension of human beings.
123. The mysteries of life hold great appeal for me.
124. I find spiritual teachings inspiring.
125. Religion is the "opiate of the masses."
126. Knowing the purpose in life is a wondrous, but unattainable, goal.
127. I am not particularly spiritual.
128. I often contemplate the meaning of life.
129. I agree with the old saying, that there are more things in heaven and earth than we have ever imagined.
130. Life is simply what you make of it.
131. Although I do not necessarily practice in the conventional way, I consider myself to be a religious person.
132. Humankind invented religion as a means of coping with the tribulations of life.
133. It is inconceivable to me that life is only "you're born, you live, and you die," without greater purpose or meaning.
134. Life is what you do, while you are waiting to die.
135. Life is "the round about way to death."
136. I find evidence of harmony in almost everything I do.
137. Human beings are incapable of conceiving of the ultimate.
138. There is something of the divine in all of us.
139. The sacred in life is beyond our comprehension.
140. I put my trust in rationality, rather than in holiness.
141. I think everyone is better off, if they believe in a force that is larger than oneself.
142. I feel I am somehow connected to everything and everyone in the universe.
143. There is no point to searching for the sacred in life.
144. There is much good in people.
145. People are basically selfish.
146. Life is capricious and meaningless.
147. There is no meaning to life beyond its existence.
148. I believe the ultimate is good.
149. Sometimes I wonder whether there is any purpose to the fact that I have lived.
150. I believe everything happens for a reason.
151. The opposite of life is infinite void.
152. I would rather live not believing in God, and discover God exists when I die, than live believing in God, and discover God does not exist when I die.
153. There is no such thing as luck or chance.

154. You have to find joy and happiness where you can, without being concerned about the ultimate good or purpose of life.
155. Religion and spirituality are myths invented by people, to help us sleep at night.
156. All things in life serve some greater and better purpose than what they appear.
157. The idea of the infinite is just man's way of denying the finality of death.
158. I am a seeker of spiritual truth.
159. There are many gifts in life, of which spirituality may be the greatest.
160. I have faith in faith.
161. I have a great reverence for creation.
162. Whether it's booze or religion, I believe in whatever gets you through the night.
163. I am devoted to seeking meaning and purpose beyond the material and the immediate.
164. I search for the real meaning in all things.
165. I believe nothing to be sacred.
166. I often have experiences that cannot be explained.
167. I believe in God or a higher power.
168. I am on the path to a meaningful life.
169. My existence is connected to everything in Nature.
170. I believe that God or a higher power can be found in all things.
171. I believe I have a soul or spirit.
172. I am a member of a religious denomination.
173. I attend religious observances _____times per _____(insert week, month or year).

Spirituality Scale Revised: 21 items

Criterion item:
85. I am a spiritual person.

Related spiritual realm:
88. I often see signs that point to a spiritual existence.
89. I can sense the presence of a spiritual reality.
105. I take time to acknowledge the spiritual.

Higher power:
79. I believe in a higher power.
96. I believe there is a realm beyond the physical one we know.
97. I believe there is a higher intelligence or order directing our world.

Connection:
46. I feel a connection to things beyond myself, be they people, objects, nature or a greater power.
45. I feel a strong connection or bond with the people in my life.
69. I think I am a compassionate person.

Nature:
76. Sometimes my awareness of ordinary events, such as a sunset or prayer, is significantly altered.
161. I have a great reverence for creation.

Meaning:
53. I search for meaning in my life, my environment, my behavior.
115. I believe that there is a purpose and meaning to life.
102. I believe in some existence beyond death.

Other:
34. I am always searching for a better way to live my life.
65. I believe that every experience in life, even a small insignificant one, has the potential to teach me.
112. I believe in the power of prayer.
171. I believe I have a soul or spirit.
138. There is something of the divine in all of us.
124. I find spiritual teachings inspiring.

CHIPS

Please indicate (on the answer sheet) how much, if any, each experience has been a part of your life *over the past month*, using the following scale.

1=not at all part of my life
2=only slightly part of my life
3=distinctly part of my life
4=very much a part of my life

1. Sleep problems (can't fall asleep, wake up in the middle of the night or early morning)
2. Weight changes (gain or loss of 5 pounds or more)
3. Back pain
4. Constipation
5. Dizziness
6. Diarrhea
7. Faintness
8. Constant fatigue
9. Headache
10. Migraine headaches
11. Nausea and/or vomiting
12. Acid stomach of indigestion
13. Stomach pain (e.g., cramps)
14. Hot or cold spells
15. Hands trembling
16. Heart pounding or racing
17. Poor appetite
18. Shortness of breath when not exercising or working hard
19. Numbness or tingling in parts of your body
20. Felt weak all over
21. Pains in heart or chest
22. Feeling low in energy
23. Stuffy head or nose
24. Blurred vision
25. Muscle tension or soreness
26. Muscle cramps
27. Severe aches and pains
28. Acne
29. Bruises
30. Nosebleed
31. Pulled (strained) muscles
32. Pulled (strained) ligaments
33. Cold or cough
34. Asthma or wheezing
35. Severe itching or rashes
36. Twitching of eyelid
37. Sore throat
38. Eyes watering
39. Cold sore or fever blister
40. Painful hemorrhoids

ALL

Correlations

		SPIRIT	STRESS	CHIPS	EXIS	REL
SPIRIT	Pearson Correlation	1.000	-.054	.059	-.016	.440**
	Sig. (2-tailed)	.	.675	.643	.901	.000
	N	201	63	63	63	63
STRESS	Pearson Correlation	-.054	1.000	.585**	-.035	-.216
	Sig. (2-tailed)	.675	.	.000	.787	.089
	N	63	63	63	63	63
CHIPS	Pearson Correlation	.059	.585**	1.000	-.011	-.045
Health	Sig. (2-tailed)	.643	.000	.	.934	.728
	N	63	63	63	63	63
EXIS	Pearson Correlation	-.016	-.035	-.011	1.000	.191
	Sig. (2-tailed)	.901	.787	.934	.	.133
	N	63	63	63	63	63
REL	Pearson Correlation	.440**	-.216	-.045	.191	1.000
	Sig. (2-tailed)	.000	.089	.728	.133	.
	N	63	63	63	63	63

**. Correlation is significant at the 0.01 level (2-tailed).

marginal

MEN

Correlations

		SPIRIT	STRESS	CHIPS	EXIS	REL
SPIRIT	Pearson Correlation	1.000	.366	.357	-.254	.133
	Sig. (2-tailed)	.	.123	.133	.295	.587
	N	52	19	19	19	19
STRESS	Pearson Correlation	.366	1.000	.649**	-.272	-.271
	Sig. (2-tailed)	.123	.	.003	.260	.262
	N	19	19	19	19	19
CHIPS	Pearson Correlation	.357	.649**	1.000	-.162	-.372
Health	Sig. (2-tailed)	.133	.003	.	.508	.116
	N	19	19	19	19	19
EXIS	Pearson Correlation	-.254	-.272	-.162	1.000	.328
	Sig. (2-tailed)	.295	.260	.508	.	.171
	N	19	19	19	19	19
REL	Pearson Correlation	.133	-.271	-.372	.328	1.000
	Sig. (2-tailed)	.587	.262	.116	.171	.
	N	19	19	19	19	19

**. Correlation is significant at the 0.01 level (2-tailed).

marginal

WOMEN

Correlations

		SPIRIT	STRESS	CHIPS	EXIS	REL
SPIRIT	Pearson Correlation	1.000	-.147	-.117	.025	.557**
	Sig. (2-tailed)	.	.343	.450	.870	.000
	N	148	44	44	44	44
STRESS	Pearson Correlation	-.147	1.000	.616**	.062	-.216
	Sig. (2-tailed)	.343	.	.000	.692	.158
	N	44	44	44	44	44
CHIPS	Pearson Correlation	-.117	.616**	1.000	-.022	-.046
Health	Sig. (2-tailed)	.450	.000	.	.890	.767
	N	44	44	44	44	44
EXIS	Pearson Correlation	.025	.062	-.022	1.000	.026
	Sig. (2-tailed)	.870	.692	.890	.	.865
	N	44	44	44	44	44
REL	Pearson Correlation	.557**	-.216	-.046	.026	1.000
	Sig. (2-tailed)	.000	.158	.767	.865	.
	N	44	44	44	44	44

**. Correlation is significant at the 0.01 level (2-tailed).

marginal