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Religious Commitment as a Predictor of Health Behavior and Health Status in a Selected Population

Donald George King

RELIGIOUS COMMITMENT AS A PREDICTOR OF HEALTH BEHAVIOR AND HEALTH STATUS IN A SELECTED POPULATION

by

Donald George King

A Dissertation in Partial Fulfillment of the
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Each person whose signature appears below certifies that this dissertation in his/her opinion, is adequate in scope and quality as a dissertation for the degree Doctor of Public Health.

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TABLE OF CONTENTS

TABLES BY ARTICLES

Article 2

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ABSTRACT OF THE DISSERTATION

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Religious beliefs and behaviors are multidimensional and they profoundly determine the ways we respond to health and illness, suffering and death. Researchers have designed numerous scales to measure different dimensions of religious commitment, beliefs and behaviors. A thorough review of the literature has shown general relationships between religion and health, but no researcher has developed an instrument measuring dimensions of religious commitment specifically relevant to health behaviors.

In this study, scale items were developed to measure three dimensions of religious beliefs thought by Kenneth Vaux (1976) to be related to health behavior--purity of life, peace in existence, and belief in immortality. We developed an instrument to measure these together with dimensions of religious commitment suggested by M. B. King and R. A. Hunt (1975) In a sample of 601 Black church members from three different denominations--Baptists, Roman Catholics, and Seventh-day Adventists--correlations of these scales with health behaviors, stress, perceived health status, and health locus of control were tested.

The study findings suggested that there were significant correlations of religious beliefs and practices with health behaviors. However, for many variables, the pattern of correlations differed from one religious group to another. There were also differences among the groups on religious beliefs and health behaviors.

The study showed that the nature of relationships between religious beliefs and health practices were complex, and studies which treat religious beliefs and health behaviors as unitary constructs may not be doing justice to either.

The study yielded an instrument useful for further investigations into the specific factors in the religion-health relationship.

SECTION I

INTRODUCTION

INTRODUCTION

Background of Study

One of the main purposes for my studying health education was to acquire a knowledge base that would prepare me to integrate health education theory into church health education and pastoral ministry.

For several years in my ministerial career, I have been keenly interested in the relationship between religion and health as broadly defined. During the time of my masters education in both public health and theology, I endeavored to narrow my thinking on the subject but at best was only able to touch the fringes due to the lack of measurement instuments. When I discovered nationally replicated studies on religious commitment by individuals such as King and Hunt, Allport, and others, I realized that the time might now be ripe for developing an instument that would attempt to measure the relationship between religiosity or religious beliefs and health behaviors.

During the second year of my doctoral studies, thanks to the ideas and support of Drs. Joyce Hopp and Jerry Lee, I expanded on a proposal which they had formulated and which became the basis for my own dissertation.

The overall purpose for this research was twofold:

1. To increase the awareness of church leaders and health workers concerning the role that religion plays in

predisposing individuals to taking preventive action in the maintainance of good health.

2. To identify specific religious factors that may influence or predict certain kinds of health behaviors.

Significance of Study

We already know that religion is associated with health behaviors, health status and longevity. However, we do not know what and how dimensions of religious commitment are related to health behavior. For example, do certain religious beliefs predispose individuals to take preventive action to maintain good health? Are there aspects of religion that help people to cope better with stress? On the other hand, are there some religious beliefs that actually inhibit health behavior? Individuals interested in effecting health behavior change need to know.

Since a majority of Americans currently possess a belief in God, it is conceivable that reaching them through these beliefs could expedite the process of health behavior change. Furthermore, tailoring educational programs to their current beliefs would increase the likelihood of adoption of these positive health practices. The instrument I am proposing in this study, with the aid of factor and correlation analysis, would be one of the first steps in enabling health professionals to identify these predisposing religious belief factors.

What about implications for health education? Since

the church, and more specifically the Black church, is an important aspect of public health and has a strong influence in the Black community, it seems appropriate to extend health education research to the church setting. Such an approach could accomplish the following: (a) provide access to whole families rather than the fragmented approach of reaching children in schools and adults at their jobs; (b) keep members informed about current health research and its implications for their religious and health behaviors; (c) provide access to key religious leaders who can provide powerful motivation for the community organization of public health projects.

Aims of the Research

The following are some of the aims:

1. To develop an instrument that will measure religious beliefs relevant to health behaviors and health status.

2. To validate this instrument by testing the relationship of these religious beliefs to health practices, perceived stress, and reported health status among a church-related sampling.

3. To discover which factors in this religious commitment survey are related to specific areas of health behaviors and perceived health status.

4. To examine the relationship of such religious belief factors to perceived control over health outcomes and how such perceived control (or lack of it) influences health lifestyle.

5. To explore the degree to which health is considered an aspect of an individual's perceived relationship to God.

Some Questions to Be Answered from this Study

1. What religious beliefs are the most important predictors of health behaviors?

2. What religious practices are the most important predictors of health behaviors?

3. Is there an association between church attendance and use of drugs, alcohol, and tobacco?

4. How do religious belief factors relate to one's perceived control over health outcomes?

5. Are church organizational activities related to increased reported stress?

6. Can one's belief in immortality inhibit the practice of health habits?

7. Do churches that emphasize health really have healthier members?

8. Do church members who view their body as unimportant tend to smoke, drink and use drugs?

9. Are there any benefits to the self-abnegating beliefs in denying the body of food and rest?

10. Are there differencies between Baptists, Roman Catholics and Seventh-day Adventists on the study variables?

The presentation of this research is divided into two articles. The articles are included in this binding by number and title. In Article One, "Religion and Health Relationships: A Review", a review of the literature is presented. This was done in preparation for conducting the study. Both computer and manual searches were utilized.

Article Two, "Religious Commitment and Health Behaviors in Three Church Groups: Correlates and Implications" covers the construction, pretesting, and administration of the survey instrument used to collect data for the study. It includes the findings together with statistical tables and a discussion of the their implications.

Limitations and Assumptions This study is limited to church-type religious commitment (or "religious involvement," "religiosity," or "religiousness" as it is variously called). By religious committment is meant an individual's beliefs and behavior in relation to the supernatural God or Christ. It does not attempt to measure non-church types of religious commitment or other forms of religious orientations including other world religions.

SECTION II

PAPERS FOR PUBLICATION

RELIGION AND HEALTH RELATIONSHIPS: A REVIEW

by

Donald G. King

Donald G. King received a Bachelor of Theology degree from West Indies College, Jamaica; a Master of Science in Public Health from Loma Linda University; a Master of Arts in Christian Theology from Andrews University; and is presently a Doctor of Public Health in Health Education candidate at Loma Linda University. He is a minister, church administrator, and Health Director for the Seventh-day Adventist Church in Alberta, Canada. He has been researching the relationship between religion and health for the past five years.

ABSTRACT

RELIGION AND HEALTH RELATIONSHIPS: A REVIEW

by

Donald G. King

In this review, various studies showing the relationship between religiosity (religious beliefs and /or practices) and health have been examined. Church attendance and its relationship to drug use was also examined. The role of the church in health promotion is discussed, giving examples of church intervention model programs. Several attempts have been made to measure religiosity and religious commitment, but little has been done to identify specific dimensions of religion as they relate to health behaviors. Even though the literature indicates that religion is generally associated with health behaviors, health status, and longevity, further research on the specifics of this relationship is needed.

RELIGION AND HEALTH RELATIONSHIPS: A REVIEW

Religious beliefs have been closely related to health practices throughout history. From the beginning of time, the mutual influence of religion and health has coexisted in various cultures of the world. In the Judeo-Christian ethic, for example, many of the religious teachings were based on a health and wellness rationale. The principles of diet, rest, and sanitation were all based on religious values. Moses is still considered the world's first sanitation specialist! Researchers have recently begun to look at man's religious value systems to determine their relationship to individual health lifestyles.

First, definitions of religion and health are in order. In view of the fact that concepts regarding religion or religiosity are viewed in many ways by various individuals, Glock has pointed out at least four ways in which religion may be assessed: (1) religious practices--involvement in church activity, ritual or worship; (2) religious feelings--the affective experiences that assist the individual in his lifestyle; (3) religious knowledge--historical perspectives of one's affiliation; (4) religious effect--participation in the rewards and responsibilities of the individual's particular beliefs[1].

Health is also conceptualized in a variety of ways. Leavell defined health in terms of prevention--primary,

secondary, and tertiary.[2] Dunn viewed health as a state of well-being,[3] and Maslow as achieving self-actualization.[4] The integration of primary prevention principles obtained through health education, the state of well-being obtained through emotional, social, and spiritual growth, and self-actualization obtained through the integration of a value system into everyday life are some ways of assisting the individual toward maximum health.

One of the giants of the health education field, Professor Delbert Oberteuffer, once said: "Man in function is man in total." He also argued that the various components of man, physical, intellectual, emotional, social, and spiritual, were in continual interaction as an individual functioned rather than being separate and competing "selves".[5]

Harmon indicated that the integration of religion and its value system into the life of an individual often brought reality and stability to daily living; it allowed him to live with a sense of trust and to organize his thoughts in relationship to other people and not just himself.[6]

Interaction of Religion and Health

To understand the complex relationship between religion (both organized church-type religion and spiritual beliefs) and health, one must understand the functions that religion serves for humans. This has been delineated by several

social scientists, including Durkheim, Yinger, Davis, and Vaux.[7]

Jean Byrne listed at least ten needs that religion fulfills and which interacts with health in the lives of people. The author posited that some of religion's functions, such as providing a source of social support and strength in critical times, may be more dominant than others during different stages of health and illness. Whatever the stage in the life cycle, however, religion in some way affected one's beliefs and actions. What functions religion played, Byrne contended, will depend on one's stage along the life cycle of wellness and illness, one's emotional maturity, and religious orientation.[7]

Religion is viewed by man as an assistive mechanism in organizing his thoughts and actions. Maslow indicated that the religious lifestyle and peak experiences are to be valued as producing health through the impetus it gives for altering possible harmful lifestyles.[4] Certainly if people value God as someone who can give help in alleviating the stressful experiences of life, then religion should have an impact on health.

The literature concerning the healthy personality emphasizes the importance of personality integration which is known to be facilitated by the adoption of a values framework. Religion is considered by some to constitute the most comprehensive values framework. In his dissertation,

Jalali-Tehran studied 30 Christian males and 30 Moslem males and found a positive correlation between religious commitment, purpose of life, and personality integration. Those individuals who were more intrinsically (genuinely) committed to their religious beliefs also had higher degrees of purpose of life and possessed more integrated personalities.[8] The results of this study implied that religion holds a legitimate place in the formation of mental health.

Religious Beliefs and Health Status

A review of the literature comparing religious beliefs and health focuses on groups such as the Mormons[9,10] and Seventh-day Adventists[11] who have definite views regarding health and the environment. Positive health results have been recorded among those adhering to the religious teachings of these groups who practice abstinence from alcohol, tobacco, tea, coffee, and who encourage a close network of communal and family support.

The concept of a social network connection to health was further supported by the follow-up of nearly 7000 people in the California Alameda County study in which Berkman found evidence to confirm the relationship between social networks (including belonging to a church group) and health.[12] Pulisuk, in a study on social support and family stress, argued that individuals who were a part of a

socially supportive network of continuing interpersonal ties, including church affiliation, achieved a measure of protection or immunity from physical and psychological disorders.[13] One year later, Zuckerman reported the results from a two-year follow-up study of 400 elderly poor in Connecticut in which he cited religiousness or adherance to religious beliefs as one of the psychosocial variables that reduced the risk of mortality primarily among the elderly who were in poor health.[14]

Karen Glanz, in a report to the American Public Health Association Meetings in 1983, listed thirteen studies demonstrating the association between religion and physical health status.[15] Among some of the associations found were a lower incidence of smoking-related cancers among Utah Mormons compared to Utah non-Mormons,[16] and among California Seventh-day Adventists compared to general population Californians.[17] Lower rates of cervical cancer were found among the following: Jewish women;[18] Old Order Amish and Seventh-day Adventists;[15] and Mormons.[19] Mormons also had 35% less mortality rates from cardiovascular disease,[20] and Seventh-day Adventists in Australia experenced lower incidence of high blood pressure.[11]

Other studies have corroborated this relationship. For example, Webster made a comparison between Seventh-day Adventists and two other groups in the Australian population. He concluded that the Adventists not only had a

stronger commitment to health-related lifestyles and thereby experienced better health status (the same rationale for Mormons)[21], but he also found less depression, sleeplessness, and use of sedatives and tranquilizers among them as a whole. He found lessened morbidity, delayed mortality, and decreased call on health services in comparison with the general population.[22]

Studies on Seventh-day Adventists in California[23,24] and the Netherlands[25] also show lower mortality from heart disease and cancer due to religio-health beliefs and practices such as abstinence from cigarette smoking.

Few studies have examined the link between religious commitment and its potential impact on diet. Such a relationship was examined by McIntosh, using data from a sample of elderly rural and urban Virginians. It was found that well-integrated elderly persons with strong ties to religion tended to have better diets in terms of greater intakes of protein, vitamins, and minerals than those less well integrated.[26] A prudent diet among Seventh-day Adventists in the Netherlands also demonstrated an association with lower incidence of colon cancer mortality.[25]

Church Attendance and Health

Religion as it relates to health may also be viewed in terms of church attendance. The long-established association of church attendance with mental and physical

health conceivably could result from religious belief, health-related behavior associated with religious belief, health status, social and demographic factors, or support provided by a church group.[27] Compared with people who attend church infrequently, churchgoers responded more favorably to cervical cancer screening programs.[28] Findings from the Washington County studies by Comstock[29] suggest that frequency of church attendance was associated with a wide variety of phenomenon. Churchgoers were found to have a lower risk of arteriosclerotic heart disease, pulmonary emphysema, suicide, cirrhosis of the liver, high blood pressure, and tuberculosis.[30, 31]

In another study by Bradley, an investigation of the influence of spiritual components on personal health was examined. Church membership and frequency of attending religious gatherings were found to be related to beliefs about the existence of the spiritual dimensions of health.[32]

In 1986, Levin & Marksides argued that the claim of epidemiologists who often correlate religious attendance with health and conclude that religion represents a protective factor with respect to health, could not be substantiated. He further argued that these analyses were typically zero-order (i.e., uncontrolled) and did not address the possibility that partialling out the effects of potential explanatory variables might reduce such associations to insignificance. His preliminary findings in

a study of 1,125 18-80 year old Mexican-American Catholics seemed to suggest that religious attendance may indeed represent a proxy for functional health, especially in older people.[33] However, after further exploring the data set in subsequent studies, as well as a review of over 200 epidemiological studies[34] from nine health-related areas, Levin concluded that religious attendance not only had significant effects on life satisfaction of elderly people, but these associations remained significant in females, despite controlling for age, marital status, social class, and health status.[35, 36]

Religious or church attendance, therefore, does appear to have a substantive independent effect on well-being (at least in females) and may account for one possible way of enhancing psychological and physical health. Religious attendance seems to possess a positive value system in terms of influencing attitudinal and behavioral changes that may form the framework for the prevention of deleterious health habits and thereby positively impact health status and well-being.

Religious Beliefs An Obstacle to Health?

Not all religious beliefs and experiences, however, positively impact health behaviors or health status. Will the belief in the immortality of the soul, in religious patients,[37] pose an obstacle to analysis? asks Rubins.

Heskestad studied the correlation between psychiatric morbidity and religiosity (commitment to beliefs) and found that religion can increase psychological stress for some people while serving as a means of self-actualization for others.[38] In two separate studies performed on the mental health of Jehovah's Witnesses, one in Australia, the other in the U.S., it was suggested that members of the church in question were more likely to be admitted to a psychiatric hospital than the general population. Furthermore, followers of the sect were found to be three times more likely to be diagnosed as suffering from schizophrenia and four times from paronoid schizophrenia than the rest of the population at risk.[39]

Religion has also been shown to be a source of stress if one holds to the Protestant ethic of hard work and success as indicators of salvation.[40] Along with creating stress, religion may inhibit health behavior in other ways. Many people, for example, adopt the religious belief that the locus of control of their lives is external to themselves and accept conditions such as chronic infection or hypertension in accord with the adage that "the meek shall inherit the earth." This willingness to accept and comply with external authority is reflected in health behaviors even to the point of refusal of medical aid and sometimes death.[41]

Role of the Church in Health Promotion

Throughout history the church has always been acknowledged as an integral part of community. The church is increasingly being recognized as a potent resource in addressing the mental and physical needs of its community.[42] Bufford called this relationship of church and community health, an unrealized potential, and presented a conceptual model that suggests the role of the church and professionals in fostering positive mental health attitudes.[43] Rosen, in his review of the supportive mental health contributions that clergy make in typical psychiatric situations, went on to argue the clergy's suitability to deal with the whole person, both mental and physical.[44]

Purdy substantiated the above concept in a study done in New York City among Puerto Ricans, Blacks and Whites to discover the relationship between religiosity, ethnicity, and mental health. It was found that the church and pastor exercised a very important role in the consultation process of its parishioners. The study even concluded that if clinicians are to serve all of its people, they need to come to some understanding of the role of religious beliefs and must establish relationships with the pastors, with whom clinicians have much in common.[45]

The literature, however, points to evidence that the church not only has played a potent and substantive role in the mental health arena, but is now becoming a force for

disease prevention and health promotion. For example, Lasater[46] designed a large-scale research project (The Health and Religion Project) in which church volunteers delivered behavior change programming on major cardiovascular risk factors (smoking, elevated blood pressure, elevated serum cholesterol, excess weight, and physical inactivity). The study intended to test the efficacy of churches as sites for health promotion and receptivity of church leaders and members to participation in tightly controlled research efforts in primary prevention. The results not only showed a high receptivity by churches, but also the fact that all of the 20 churches that originally began the study remained involved for at least two and one-half years.

Since the late 1970s, several studies have revealed the role of churches in hypertension management, especially the Black church where its members stand at a high risk of high blood pressure. Berkman's Human Population Laboratory data revealed that among men and women, Blacks had higher mortality rates than Whites and other racial and ethnic groups. However, Blacks belonged more to church groups and had more contacts with relatives and friends than Whites and other ethnic groups.[27] It is conceivable, therefore, that the church could be an excellent intervention site for Blacks who are clearly at risk for certain diseases such as hypertension.

A good example of just such an intervention is the General Baptist State Convention, Inc., who, with Kellogg Foundation funding, has been sponsoring a health project for its Black members since 1981. The project has proven to be a success and a model for Black church interventions elsewhere in the U.S. and overseas.[47] It appears that the church can be a channel for promoting health, changing lifestyles, and preventing disease.

One other note about the impact of the church on the health of Blacks. Both Clemente[48] and Boyer[49] revealed that membership and participation in church-related activities are very important to Black people and has had a most direct influence (more than Whites) on their own perception of health. Therefore, given the historical position of the Black church as preserver and perpetuator of the Black ethos and the much-documented fact that Black Americans are an at-risk and underserved group regarding health-status indicators and the provision of health care,[50] Levin contends that the Black church is a relevant locus for the practice of health promotion and improvement of lives.

Religion, Drugs, and Health

Another area relevant to this review is the impact of religion and religious beliefs on the use of drugs. In 1985, Perkins examined the relationships between religious beliefs/traditions and drinking/drug use among 1514 college students in the context of family backgrounds and peer

relations. Amid peer influences, a strong commitment to a Judeo-Christian tradition was found to be a significant moderating influence on use of alcohol and drugs.[51]

In Ontario, Canada, researchers from the Addiction Research Foundation studied the relationship between drug/alcohol use and religious affiliation, intensity of religious feelings, and frequency of church attendance in a sample of 2066 adolescents. While religious affiliation was not significantly related to drug and alcohol use, church attendance had a stronger negative association with drug use than did religious beliefs; however, the effect of religious beliefs had greater impact among females than among males. Overall, the impact of both variables increased as the drug under examination moved toward the upper end of the licit-illicit continuum.[52]

A sample of 801 young people aged 12-14 from 71 Seventh-day Adventist churches in North America were studied by Dudley, Mutch and Cruise, in an attempt to identify factors which might predict frequency of drug use within a church of conservative religious beliefs. The youth were questioned on frequency of usage of 10 drug categories, reasons for not using drugs, a variety of religious attitudes and behaviors, and educational and membership practices. As reasons for not using drugs, "my commitment to Christ" was the strongest predictor, followed by "I want to be in control of my life" and "concern for my health."

It was interesting to note that as far as religious practices were concerned, regular participation in family worship was highly related to abstinence over all categories. Attendance at Sabbath School was highly related to nonuse of alcohol, and personal prayer to nonuse of tobacco. Watching R-rated movies and listening to hard rock music (both strongly discouraged by the religious beliefs of the church) were both predictive of more frequent use. While membership status of youth, mother, or father, or years of church school education had little influence on frequency of usage, joining the church at a younger age was found to have a weak protective effect.[53]

In another study, while religiosity or religious beliefs were not associated with misuse of alcohol, after controlling for standard sociodemographic variables, the impact of religiosity on alcohol use appeared greatest among denominations that took a strong stand against its consumption. This was mainly because religious beliefs constituted a significant reference group for church members.[54]

Religious Dimensions Relevant to Health Behaviors

Having looked at the broad areas of religion and its influence on health in this review, it is important that we now focus on, or at least inquire, as to the specific dimensions of religion that could possibly account for these relationships.

The multidimensionality of religion has been researched quite extensively for the last 20 years and several attempts have been made to measure religiosity or religious commitment. One of the most extensive studies of the factor structure of religious beliefs and behaviors was done by Morton King and Richard Hunt.[55] In their research, they delineated seven basic factors relative to religious commitment: Creedal Assent, Devotionalism, Church Attendance, Organizational Activity, Financial Support, Religious Despair, and Orientation to Growth and Striving. Wade Roof called it the most comprehensive and sustained effort to test the multidimensions of religion.[56]

The foregoing review in this paper demonstrates that religion is associated with health status and longevity. The studies of King and Hunt demonstrate that religion is multidimensional. These two facts raise the question: What are the specific dimensions of religion and religious commitment that are related to health beliefs and behaviors? For example, do certain religious beliefs predispose individuals to taking preventive action to maintain good health? Are there aspects of religious practice that help people to better cope with stress? Are there some religious beliefs that actually inhibit health behaviors?

Kenneth Vaux postulated that there are three fundamental religious dispositions that form the basis for those beliefs that influence health.[57] The first is the

notion of "purity" -- that one's body is the temple of God, therefore one is responsible to keep it healthy. This belief could influence health practices.

Second is the concept of "peace in existence" -- a sense of contentment and purposefulness in life which comes from an abiding relationship with God as a Savior and a Friend. This belief may prompt the desire to guard one's health, have regular health checks, and reduce the amount of stress in one's life.

A third proposition centers around the idea that belief in immortality leads people to both regard and disregard present health. According to Cullman, for some like the Greek philosophers Plato and Socrates, immortality meant immortality of the soul, the shedding of the outer garment or physical body at death. The body can be destroyed but the soul is immortal and indestructible.[58] Such a religious belief, Vaux contended, could lead individuals to ignore their bodies or to extreme ascetic practices.

Challenge to Further Research in Religion and Health

Vaux has challenged the health professions to research the correlation of religious faith and health attitudes and behaviors. "Beliefs," he said, "prompt moral behaviors; these in turn affect health. . . research confirms the common sense which sees the connection between moral habits--smoking, drinking alcohol, tea and coffee, eating

meat--with health. But how do the beliefs themselves affect health?"

Several health education leaders within the past few years have called for exploration of the religion-health interaction as a basis for health education.[59,60,61] Green's diagnostic approach to health education specifically indicated that factors (including values) which predispose, reinforce, and enable health behaviors, must be understood in order to carry out health education.[62]

Little has been done, however, in the assessment of how religious dimensions relate to health. First, there was the problem of measuring religion, but thanks to the research of King and Hunt and others we now have instruments to do this. Yet, no current scale measuring religiosity provides information regarding the health-relevant religious beliefs. This author is attempting to answer some of the above questions by developing and testing such an intrument. How well the dimensions help in understanding the role of religion in health, and vise versa, or in elucidating the intricate relations between the two--these are the tests of their lasting value insofar as the study of religion and health relationships is concerned.

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RELIGIOUS COMMITMENT AND HEALTH BEHAVIORS IN THREE CHURCH GROUPS: CORRELATES AND IMPLICATIONS

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RELIGIOUS COMMITMENT AND HEALTH BEHAVIORS IN THREE CHURCH GROUPS: CORRELATES AND IMPLICATIONS

by

Donald G. King and Jerry Lee

Abstract:

Religious beliefs and behaviors are multidimensional and they profoundly determine the ways we respond to health and illness, suffering and death. In this study, scale items were developed to measure three dimensions of religious beliefs thought by Kenneth Vaux (1976) to be related to health behavior--purity of life, peace in existence, and belief in immortality. We developed an instrument to measure these together with dimensions of religious commitment suggested by M. B. King and R. A. Hunt (1975). In a sample of 601 Black church members from three different denominations--Baptists, Roman Catholics, and Seventh-day Adventists--correlations of these scales with health behaviors, stress, perceived health status, and health locus of control were examined.

The study findings suggested that there were significant correlations of religious beliefs and practices with health behaviors. However, for many variables, the pattern of correlations differed from one religious group to another. There were also differences among the groups on religious beliefs and health behaviors.

The study showed that the nature of relationships between religious beliefs and health practices were complex, and studies which treat religious beliefs and health behaviors as unitary constructs may not be doing justice to either.

RELIGIOUS COMMITMENT AND HEALTH BEHAVIORS IN THREE CHURCH GROUPS: CORRELATES AND IMPLICATIONS

Religion and health have traditionally been intertwined with man and his culture. The integration of religion and its values into the life of an individual is thought by some to bring reality and stability to his daily life (McClain, 1978; Spilka, 1977). Researchers have recently begun to examine man's religious values system to determine its relationship to the integration of positive health habits into the person's lifestyle.

A review of the literature comparing religious beliefs and health indicates a focus on groups such as the Mormons (Jarvis, 1977; Lyon, 1976) and Seventh-day Adventists (Armstrong, 1977) who have definite views regarding health and the environment. Positive health results have been recorded among those adhering to the dogma of these groups who practice abstinence from alcohol, tobacco, tea, coffee, and who encourage a close network of communal and family support.

Berkman (1977) found evidence to confirm the relationship between social networks (including belonging to a church group) and health. Pulisuk (1983), showed that individuals who are part of a socially supportive network, including church affiliation, achieve a measure of protection or immunity from physical and psychological

disorders. Zuckerman (1984) reported on a study of 400 elderly poor in which he cited religiosity or adherence to religious beliefs as one of the psychosocial variables that reduced the risk of mortality among them.

Karen Glanz, (1983) listed thirteen studies demonstrating the association between religion and physical health. Webster (1979) made a comparison between Seventh-day Adventists and two other groups in Australia. He found that Adventists not only had a stronger commitment to health-related lifestyles and experienced better health status--the same rationale for Mormons (Enstrom, 1975)--but also found less depression, sleeplessness, and use of sedatives and tranquilizers among them as a whole. Studies on the same group in California (Phillips, 1979, 1980) and the Netherlands (Berkel, 1983) show lower mortality from heart disease and cancer due to abstinence from cigarette smoking. A prudent diet among members of this church group also demonstrated an association with lower incidence of colon cancer mortality.

The impact of religion and religious beliefs on the use of drugs was another area of interest. Perkins (1985) found that a strong commitment to a Judeo-Christian tradition had a moderating influence on the use of alcohol and drugs. Dudley (1987) reports that personal devotions, regular participation in family worship, and church attendance were

related to the nonuse of drugs among youth of one church group.

Religion as it relates to health may also be viewed in terms of church or religious attendance. Compared with people who attend church infrequently, churchgoers respond more favorably to cervical cancer screening programs (Naguib, 1968); and have a lower risk of arteriosclerotic heart disease, pulmonary emphysema, suicide, cirrhosis of the liver, high blood pressure, and tubercolosis (Comstock, 1970; Graham, 1978).

Levin recently reported that religious attendance not only had significant associations with life satisfaction of elderly people, but this association remained significant in females, despite controlling for age, marital status, social class, and either of two indicators of health status (Levin, 1987, 1988).

Not all religious beliefs and experiences, however, positively impact health behaviors or health status. Heskestad (1984) found that religion can increase psychological stress for some people while serving as a means of self-actualization for others.

Today the church is increasingly recognized as a potent resource in addressing the mental and physical needs of its community (Uomoto, 1982; Bufford 1982). The literature suggests that the church not only has played a potent and substantive role in the mental health arena, but is now

becoming a force for disease prevention and health promotion. Examples of this are the Health and Religion Project (Lasater, 1986) and the Black Health Project (Hencey, 1985).

The Black church may be an especially relevant group to study the practice of health promotion in a church setting. Historically, the Black church has served as preserver and perpetuator of the Black ethos and Black Americans are an at-risk and underserved group regarding health-status indicators and the provision of health care (Levin, 1984).

Religious Dimensions Relevant to Health Behaviors

In the foregoing review, we have shown that religion is associated with health status and longevity. We now know, through the factor studies of King and Hunt (1975), that religion is multidimensional. But are there specific dimensions of religion and religious commitment that are related to health beliefs and behaviors? For example, are there aspects of religion that help people to better cope with stress? Do certain religious beliefs predispose individuals to take preventive action to maintain good health? Or, conversely, are there religious beliefs that predispose individuals to taking actions deleterious to health?

Vaux (1976) challenges the health professions to research the correlation of religious faith and health attitudes and behaviors. "Beliefs," he says, "prompt moral

behaviors; these in turn affect health . . . research confirms the common sense which sees the connection between moral habits--smoking, drinking alcohol, tea and coffee, eating meat--with health. But how do the beliefs themselves affect health?" Others have called for exploration of the religion-health interaction as a basis for health education (Wilson, 1978; Osman, 1979; Banks, 1980). Yet, little has been done in the assessment of the religious dimension in health. No current scale measuring religiosity provides information regarding the health-relevant religious beliefs. In this study we propose to answer some of the above questions by developing and testing such an instrument.

Theoretical Model

The theoretical model on which this research study is based comes in part from the theory of Kenneth Vaux (1976). He postulates that there are certain fundamental religious dispositions that form the basis for those beliefs that influence health. One is the notion of "purity" -- that one's body is the temple of God, therefore one is responsible for keeping it healthy. This belief should influence health practices.

Second is the concept of "peace in existence" -- a sense of contentment and purposefulness in life which comes as a result of an abiding relationship with God as a Friend and a Savior. This sense of well-being may prompt the

desire to guard one's health and have regular health checks, and is also likely to reduce the amount of stress one experiences when faced with the daily trials of life.

A third proposition centers around the idea that immortality (promised to the saved) leads people to either regard and disregard present health. According to Cullman (1965), for some, like Plato and Socrates, it meant immortality of the soul, the shedding of the outer garment or physical body at death. The body can be destroyed, but the soul is immortal. Such a belief can lead individuals to ignore their bodies' health or to practice an extreme ascetic lifestyle. On the other hand, for some, immortality could mean hope in the resurrection of the body and a looking forward to escape from the terror of death. The Hebraic dread of death lead one to preserve life and cling to vitality. Similarly, one today could seek to regard health by resisting disease, aging and death and extending the life span through preventive medicine and biomedical research.

Several other variables are likely to be important in order to establish a basis for the relationship between religion and health. We have already pointed out the landmark study by King and Hunt (1975) in which specific factors were found to measure the level of commitment to religious beliefs and practices. For example, creedal beliefs, devotionalism (the amount of time spent in private

prayer and devotions), church attendance, involvement in church organizational activities, and financial support, are some of the religious variables that will be considered in this study. Other variables include perceived locus of control of health (who or what controls a person's health outcomes: the individual, some powerful other, or chance), how much value one places on health, and of course, health beliefs and behaviors such as exercise, stress management, diet, perceived health status, and others.

Hypotheses

The following hypotheses were basic to the design of this study:

1. Those who believe in living a pure life will tend to practice health habits such as good diet, stress control, and not leave their health up to chance.

2. Experiencing peace with God reduces daily stress.

3. The concept of the immortal soul will lessen importance given to the body.

4. Those who perceive the soul as more important than the body will use more tobacco, alcohol and drugs.

5. Those who are involved in church organizational activities experience less reported stress and may be able to relax more easily.

6. Those with strong devotional practices report less actual stress and practice good dietary habits.

7. Regular churchgoers will use alcohol, tobacco, and drugs less frequently.

Methods

The research under consideration is a correlational study and involved three basic stages. Stage One involved the construction and pretesting of a Health Relevant Religion Scales (HRRS) instrument that would measure Kenneth Vaux's (1976) three aspects of religious beliefs relevant to health -- purity of life, peace with God, and the meaning of immortality. This was done by developing Likert-type statements for each of these three areas. Pretests were conducted on a sample of 40 individuals (church members similar to target study group) and produced alpha reliability scores of .800, .795, and .711 respectively.

The second stage involved the construction of the final questionnaire that would be administered to the selected population. The instrument was called the Religion and Health Questionnaire (RHQ) and incorporated, in the order listed, the six sets of scales described below. Internal consistency values (Cronbach's alpha), where known, are inserted in parentheses:

1. Religious Commitment Scales developed by Morton King and Richard Hunt (1975) includes the factors of Creedal Assent (.83), --agreement with church doctrine; Devotionalism (.85), --defined by King and Hunt as private prayer and the seeking of forgiveness and God's will for the

life; Church Attendance (.82); Orientation to Growth and Striving (.81) --time spent in reading the Bible, church literature, and growing in faith; Organizational Activity (.83) --involvement in church meetings and committees; and Financial Support (.73). (See Table 9 in Appendix for scale items). This study has been called by Roof (1979) the most thorough evaluation of the religiosity dimension.

2. Health Relevant Religion Scales (HRRS) developed by authors Donald King and Jerry Lee for this research includes the factors of Purity of Life (.80), Peace in Existence (.79), and Belief in Immortality (.71). Alpha scores for these three measures were based on a 40 person pretest sample. (See Table 2 for scale items).

3. Multi-dimensional Health Locus of Control Scales (Wallston, Wallston, and Devellis, 1978). This set is made up of Internal (.77), Powerful Other (.67), and Chance (.75) items and have been used extensively in health research (Wallston & Wallston, 1981).

4. Health Values Scales (.74) were developed by the authors, King and Lee, based on data from Milton Rokeach's (1973) research on human values.

5. Health Behaviors Scales (.76). Developed by the U.S. Department of Health and Human Services (1981) and covered health areas such as exercise, stress management, diet, alcohol, tobacco, drugs, and safety.

6. Perceived Health Status Scales. Developed by Ware

(1978) as a part of RAND corporation health insurance study. This scale has a coefficient alpha of .91.

7. Stress Scales (.92). Developed by the authors, Lee and King, for this research. Based on the Life Experiences Survey by Sarason, Johnson, and Siegel (1978).

Having selected and constructed items for the Religion and Health Questionnaire (RHQ) (a combination of all of the above), we ran several pilot tests by administering it to a sample population similar to the target study group. The items in each scale were examined and those with extremely low variability or which did not correlate with each scale total were either restructured or thrown out.

The third stage involved administering the final RHQ instrument to the target population of three Black churches -- one Baptist, one Roman Catholic, and one Seventh-day Adventist (SDA). Black churches were selected because of the primary investigator's interest in the study of health among Blacks. Also, because the church is receiving a growing recognition as an important part of public health and tradionally has had a strong influence in the Black community (Levin, 1984), the authors wished to examine the relationship between church-type religion (beliefs and practices) and health behaviors. The three different denominations were selected because of their considerably different stands on the central issues measured by the HRRS scales.

Clearance for data collection was secured from Loma Linda University's Institutional Review Board. The minister and/or church board of each church also consented to the study.

The target population studied was church members, ages 18 to 80, from all three churches. Target population size for each church was set at 200.

Questionnaires were administered by hand at the end of the services. A cover letter to the subjects requested them to complete the questionnaire, seal it in the attached self-addressed, self-stamped envelope, and either hand it back or mail it in. Subjects were promised confidentiality since only the researchers, who did not know who they were, would see their completed instruments.

As closely as can be determined, a total 1130 intruments were actually given out to the church members, 350 to the Baptists, 400 to the Catholics, and 380 to the Adventists. Of this total, 601 responses were collected: 196 Baptists, 201 Catholics, and 204 Adventists -- a response rate of 53.2%.

Table 1 shows demographic data for each church. All three churches were over 95 percent Black with each church having a mean number of two children per family. The Adventist group tended to be slightly older with only 8 percent of its population earning an annual income of over $35,000 compared to 22% Catholics and 25% Baptist. SDAs had

a male-female ratio closer to the general population. The other groups had higher proportions of females.

INSERT TABLE 1 HERE

Results

The alpha scores of the King-Hunt Religious Commitment Scales have already been discussed under the methods section. Of the factors used by King and Hunt in measuring religious commitment, six were used in this study to form a part of the final questionnaire. A separate factor analysis done on the King and Hunt items confirmed the existence of these six factors, except that the results favored combining two factors together to produce five areas. A Scree Test (Cattell, 1966) on the eigenvalues from the factor analysis also suggested five factors instead of six. The factors were: Organizational Activity and Orientation to Growth and Striving (grouped together), Creedal Assent, Devotionalism, Financial Support, and Church Attendance.

The Health Relevant Religion Scales (HRRS) were factor analyzed using a principle component extraction with varimax rotation. Table 2 shows the factor loadings for this scale. The formulation of the items in this scale were based on three theoretical constructs set forth by Kenneth Vaux (1976), namely--Purity of Life, Belief in Immortality, and Peace in Existence. However, a Scree Test on the

eigenvalues from the factor analysis suggested a grouping of four factors instead of three. Furthermore, the analysis grouped Peace in Existence and Purity of Life together and produced two other factors which we named Unimportance of the Body and Asceticism.

INSERT TABLE 2 HERE

Table 3 shows the factor loadings for the Health Behavior Scales after a principle component extraction and varimax rotation. The Scree Test suggested five factors which we labeled Exercise, Stress Management, Diet, Drugs-Alcohol-Tobacco, and Caution/Safety. When the factor analyses were complete, factor scores were generated for all the scales.

INSERT TABLE 3 HERE

In Table 4, we see the results of the analyses of variance comparing the three churches. Among the religion-oriented factors, Adventists scored significantly higher than the other groups in Financial Support, Devotionalism, and Asceticism, but lower on Belief in Immortality and Unimportance of the Body. Catholics scored higher than the others on Organizational Activity and Growth/Striving, Church Attendance, Immortality, and Unimportance of the

Body, but low on Devotionalism, Asceticism, and Financial Support. Baptists, though lower than Adventists in Financial Support, Devotionalism, and Asceticism, were higher than Catholics in these areas.

INSERT TABLE 4 HERE

As far as the health-oriented factors were concerned, Adventists scored significantly higher in Exercise, Current Health, Internal and Powerful-Other Locus of Control, and Health Values; and significantly lower in the use of Drugs-Alcohol-Tobacco and Reported Stress than the other two groups. Baptists scored lower on Drugs-Alcohol-Tobacco, and Reported Stress than Catholics, but higher on Exercise, Health Status, Powerful-Others Locus of Control, and Health Values. Catholics, however, scored higher than Baptists on Internal Locus of Control.

The correlational analysis assisted us in determining which religious factors were likely to predict certain health behaviors. Tables 5-8 show the correlation matrix for each group taken separately as well as the partial correlations for the combined group after controlling for religious group membership. In each table, Bonferoni Levels of significance were used to reduce the chance of Type One error inherent in multiple significance tests (i.e. the alphas for each of the 99 tests in a table were divided by

99. The correlations reported as significant at the .05 level would have been significant at approximately the .0005 level by the standard significance test).

INSERT TABLES 5-8 HERE

Relationship of Health Relevant Religious Variables with Study Variables -- by Groups

Belief in Immortality. There were no significant correlations for Baptists or Catholics on this variable. Doctrinally, Adventists do not believe that the soul is immortal but that both body and soul is one wholistic unit which ceases to function at death. Hence, they believe, the body and soul do not live separately and both are equally important to God. Thus the association of belief in immortality of the soul with health behaviors for Adventists may simply reflect that Adventist members who fail to adhere to one aspect of their beliefs (non-immortality of the soul) will fail to adhere to other Adventist beliefs (the importance of health behaviors).

Peace with God & Purity of Life. For Catholics and Adventists, Peace and Purity were positively related to the management of stress and diet which seem to suggest that a strong devotional life lends itself to relaxation and preparing oneself for the stresses of daily living. Baptists who responded to Peace/Purity items also responded

negatively to the use of drugs and Chance Locus of Control.

Unimportance of Body. This variable is strongly associated with the use of Drugs-Tobacco-Alcohol among Baptists and Adventists. In other words, those who tend to use drugs also tend to believe their body is not all that important. A plausible explanation for this could be that if one doesn't have to worry about their body because God will take care of it, then it would be alright to smoke and drink even though these might hurt one's health. The fact that this Unimportance variable is also related to Chance Locus of Control in all three groups lends credence to this view.

Asceticism or Self-Abnegation. The notion of denying the body food and sleep, a sort of self-abnegating behavior, seems to be predictive of the way people handle stressful events among the Baptists and Adventists. Might it be that the same discipline it takes to withhold indulging in food could also be used to prepare oneself for stressful events? Overall, Asceticism positively relates to Exercise, Perception of Current Health, and Internal and Powerful-Others Locus of Control--perhaps a reference to self-control.

Relationship of Religious Commitment Variables with Study Variables -- by Groups

Organizational Activity & Growth/Striving. This correlation was the strongest of all. Those who scored high

on Organizational Activities/Growth and Striving not only seemed to manage their stress well, but felt they had less of it. This seemed to be true for all the groups.

Creedal or Doctrinal Assent. No correlations of note here.

Devotionalism. Devotionalism was positively associated with Diet among Catholics and with Current Health among Baptists. For Adventists, devotional acts of public and private prayer was associated with a relaxed and non-stressful experience. Interesting enough, those Adventists who practiced Devotionalism also were more likely to possess a Powerful-Others Health Locus of Control.

Financial Support. Among Baptists, Financial Support related positively to Stress Management. Adventists who contributed financially to their church related positively to Exercise and Diet and did not believe their health was left up to chance.

Church Attendance. Both Baptists and Adventists who attend church regularly had a negative relation with the use of drugs, alcohol, and tobacco.

Partial Correlations of all Groups after Controlling for Religious Group Membership

When the groups were analyzed together, a number of associations became evident--some weak and others strong. Among the stronger ones were Peace and Purity relating to

Stress Management, Diet and negative Chance Locus. The Unimportance of the Body factor was fairly strongly related to the use of drugs, alcohol, and tobacco. Asceticism related to Exercise, Current Health, Internal Locus, Powerful-Other Locus, and Health Values. Organization & Growth related strongly to Stress Management and lowered stress. Devotional practices related positively to Diet and Church Attendance related negatively to the use of drugs, alcohol and tobacco. Those who tended to "not worry about the body" and cared more for the soul also believed in powerful others, such as medical professionals, and chance influences in their life.

An interesting observation that was made while comparing the correlation tables of the three churches was the high incidence of correlations between religious beliefs and health behaviors found in the Adventist group. This observation seems to suggest that religious beliefs and health behaviors are more closely related in a church that emphasizes health behaviors (Armstrong, 1977; Webster, 1979). This, however, should not be surprising in itself, given the health principles and health lifestyle which for decades the Adventists have espoused as a part of their religious beliefs and practices.

Discussion

It seems from the foregoing observations that there are clearly some predictions that can be postulated based on the

results from testing the Religion and Health Questionnaire (RHQ). First, we can say that some religious beliefs do have an association with certain health behaviors. However, the relationship is a complex one with different types of religious beliefs being associated with various health beliefs across the groups. The purpose of this study was to identify variables that might help explain how the two are related.

One area is the type of religious beliefs that church members possess. Those who were influenced by beliefs of Peace with God and Purity of Life ("Being in touch promotes wellbeing", "God wants me to care for my body") tended to practice certain health behaviors more readily. For example, these individuals were characterized by the attention paid to stress control, good dietary habits, their refusal to depend on chance and health practitioners for good health, and (at least among Baptists) tended to stay away from alcohol, tobacco and drug use.

Those church members who believed in denying oneself of food and rest in order to have full control of the life tended also to practice some good health behaviors. However, the behaviors practiced varied from group to group.

On the other hand, those who believed that the body was unimportant, and that "I don't need to worry about my health because God will take care of it" tended to use alcohol, tobacco, and drugs more readily.

A second area is participation in certain religious practices. A very strong correlation that surfaced in this study was that those who were actively involved in organizational church activities (meetings, committee work, held offices) and were oriented to growth and striving (carried their religion into daily living through witnessing and sharing) were also those who engaged in stress management activities and had less reported stress. Doctrinal or creedal assent, however, had little association with health behaviors across the three groups.

Our results concur with previous research (Dudley, 1987) regarding the importance of church attendance in helping to prevent or limit drug usage. Kenneth Vaux's (1976) theory that belief in the purity of life and peace with God could relate to good health and stress reduction were also upheld in this study. However, the two beliefs, though originally thought to be separate factors by Vaux, were combined into one by the factor analysis and therefore did not fit his model in exactly the same way as he presented it. Apparently individuals who believed in purity of life also tend to feel that they have peace with God.

As far as Vaux's Belief in Immortality factor is concerned, upon close examination of the responses to the items under the Immortality and Unimportance of the Body variables, it seems that thinking the soul is immortal does not necessarily mean that the individual sees the body as

unimportant. From the foregoing study, these two factors are clearly separate. However, further study is needed in order to explore whether there is an interaction between the two in predicting health behaviors.

We have seen that a combination of religious variables is related to health behaviors and health status. These variables include commitment to certain religious beliefs and practices. While correlational studies do not establish either the fact or the direction of causality, they offer valuable insights as to likely positive and negative influences. Health educators, health professionals, and church leaders might well focus on fostering those religious beliefs and practices, in or out of a church setting, which seem to offer the benefits of good health.

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TABLE 1

DEMOGRAPHIC CHARACTERISTICS OF RELIGIOUS GROUPS

	BAPTIST (N=196)	CATHOLIC (N=201)	SDA (N=204)	P VALUE
ETHNICITY				.310
Black	97.45 (191)	95.02 (191)	95.59 (195)	
White	2.55 (5)	3.48 (7)	2.45 (5)	
Hispanic	0.00 (0)	1.49 (3)	.98 (2)	
Asian/Indian	0.00 (0)	0.00 (0)	.98 (2)	
AGE				.035
Mean Age	42.9 (196)	44.7 (201)	46.6 (204)	
SEX				.001
Male	31.63 (64)	28.86 (58)	45.10 (92)	
Female	68.37 (134)	71.14 (143)	54.90 (112)	
MARITAL STATUS				.003
Never married	18.37 (36)	25.37 (51)	24.02 (49)	
Married	53.57 (105)	38.31 (77)	52.94 (108)	
Divorced	15.82 (31)	21.39 (43)	9.80 (20)	
Separated	6.63 (13)	7.96 (16)	3.43 (7)	
Widowed	5.61 (11)	6.97 (14)	9.80 (20)	
NUMBER OF CHILDREN				.730
Mean Number	2.0 (196)	2.0 (201)	1.9 (204)	
EDUCATION				.514
High Sch or less	22.45 (44)	18.41 (37)	25.49 (52)	
College	57.14 (112)	58.21 (117)	54.90 (112)	
Graduate	20.41 (40)	23.38 (47)	19.61 (40)	
INCOME				.002
< $10,000	15.82 (31)	15.42 (31)	20.10 (41)	
$10 - 15,000	12.76 (25)	11.94 (24)	10.78 (22)	
$15 - 25,000	22.45 (44)	26.87 (54)	34.31 (70)	
$25 - 35,000	22.96 (45)	22.89 (46)	26.47 (54)	
> $35,000	25.00 (49)	22.39 (45)	8.33 (17)	

Note. Unless otherwise indicated, numbers are in percentages. Numbers in parentheses are frequencies.

TABLE 1 CONTINUED
DEMOGRAPHIC CHARACTERISTICS OF RELIGIOUS GROUPS

	BAPTIST (N=196)	CATHOLIC (N=201)	SDA (N=204)	P VALUE .05
RELIGION RAISED IN				.0005
Baptist	69.90 (137)	11.94 (24)	21.08 (43)	
Catholic	8.16 (16)	77.11 (155)	6.86 (14)	
SDA	.51 (1)	.50 (1)	53.43 (109)	
Non-denomination	7.14 (14)	2.99 (6)	6.86 (14)	
Other	13.27 (26)	7.46 (15)	11.76 (24)	
PRESENT RELIGIOUS AFFILIATION				.0005
Baptist	100.00 (196)	0.00	0.00	
Catholic	0.00	100.00 (201)	0.00	
SDA	0.00	0.00	100.00 (204)	
AGE BECAME MEMBER OF PRESENT CHURCH				.0005
Pre-teen	11.73 (23)	25.87 (52)	28.92 (59)	
Teenager	15.31 (30)	3.98 (8)	23.04 (47)	
Young Adult	46.94 (92)	34.33 (69)	36.27 (74)	
Middle Age	23.47 (46)	30.85 (62)	7.84 (16)	
Senior Citizen	2.04 (4)	4.98 (10)	3.92 (8)	

Note. Unless otherwise indicated, numbers are in percentages. Numbers in parentheses are frequencies.

P values are from Chi Square tests except for mean age and mean children which are from ANOVA.

TABLE 2

FACTOR LOADINGS FOR HEALTH RELEVANT RELIGION SCALES

Factor				Item Number on Original Scale	
1	2	3	4		
					I. BELIEF IN IMMORTALITY
.88	.08	.22	-.06	4.	When I die my body ceases to exist but my soul lives on in a conscious state of existence.
.86	-.05	.18	.02	41.	When I die my soul remains conscious after death.
.86	.04	.21	-.05	35.	Unlike the body, the soul is immortal -- it cannot die.
-.85	-.04	.04	.13	39.	When I die my body and soul cease to exist.
.83	.07	.20	.02	32.	When death occurs, the Christian's soul leaves the body and goes to heaven.
.79	-.11	.18	.07	26.	The soul can live separate from the body.
-.71	.02	-.02	.10	43.	Death is an unconscious state of the soul.
.51	.06	.42	.02	10.	Health of the soul is more important than health of the body.
					II. PEACE IN EXISTENCE & PURITY OF LIFE
.07	.71	.11	.19	28.	Prayer helps me to relax.
-.01	.70	-.07	.05	34.	I feel I can talk to God about personal matters and call on Him for help when needed.
.03	.69	-.05	.14	2.	My relationship with God helps me to cope with my daily stresses.
.03	.69	-.06	.07	6.	Knowing God gives me a sense of contentment.
.20	.66	-.02	.01	21.	I feel at peace with God.
.01	.60	.13	.14	9.	My sense of well-being is due to my relationship with God.
.09	.60	-.11	.14	24.	Being in touch with God promotes a sense of well-being and relaxation.
-.06	.59	-.02	.19	30.	Whenever I start the day with devotions with God, it helps me to cope better on my job.
-.01	.53	-.12	.21	17.	Being in touch with God reduces the impact of daily stresses.
-.29	.49	-.17	-.01	22.	I believe that my body is as important to God as my soul.
-.02	.47	-.19	.39	25.	As a Christian, I must learn to control my body and keep it pure.
-.19	.46	-.27	.30	5.	I try hard to carry my religion over into my eating and health habits.
-.07	.43	-.22	.38	1.	I believe that what I do with my body matters to God.
-.16	.42	-.37	.33	16.	I believe that practicing good health behaviors is an important part of my Christian religion.
-.19	.40	-.13	.17	3.	I believe that my physical well-being is as important as my religious well-being.

TABLE 2 CONTINUED
FACTOR LOADINGS FOR HEALTH RELEVANT RELIGION SCALES

Factor				Item Number on Original Scale	
1	2	3	4		
					III. UNIMPORTANCE OF THE BODY
.07	.07	.79	-.01	11.	I don't need to worry about my health because God will take care of it.
.01	.12	.71	.18	8.	The more devoted I am to God the less responsible I feel for my own health.
.20	-.01	.66	-.02	12.	The body is not that important because it will be cast off at Christ's return.
.16	-.28	.61	.05	18.	My beliefs about death mean that what I do with my body is not important.
.22	.06	.57	.17	36.	If I work hard for the Lord, He will take care of my health.
.03	-.31	.49	.03	14.	How I treat my body does not affect my relationship with God.
.27	30	.45	-.12	40.	I never view what I eat, how much I eat, and how fit I am, as being a part of my religion.
.07	-.28	.45	.06	23.	Peace and contentment with God has little to do with my health.
.22	.06	.40	.24	29.	Wearing my body out working for the Lord, even if it means running down my health, is still better than doing little or nothing in service for Him.
-.01	-.19	.38	.35	37.	My body hinders me from performing my Christian duties.
.04	.10	-.30	.27	15.	Hope in the resurrection of the body in the last day should not prevent one from caring for the body here and now.
					IV. ASCETICISM
.07	-.05	.16	.67	31.	Denying the needs of the body (such as food and sleep) brings me closer to God.
.16	.05	.05	.56	19.	As a Christian, I should sometimes withhold food and sleep from my body in order to bring it under control.
-.42	.06	.01	.55	33.	Smoking will hurt my relationship with God.
-.12	.11	.11	.47	42.	When I'm not at peace with God I often act irritable toward my work associates or neighbors.
.01	.26	-.10	.44	45.	The body must be purged of sinful habits.
-.05	.29	.06	.44	38.	Worshiping God with others helps me to cope with life's trials.
.09	.22	.04	.43	27.	I am more likely to guard my health and get health checks when I feel close to God.
-.13	.15	.11	.42	44.	Cleanliness is next to Godliness.
-.07	.25	.08	.40	13.	I lose control over daily stresses when I am not in touch with God.
-.31	.21	-.03	.38	20.	Christians should not use drugs or alcohol for pleasure.
-.25	.24	.02	.27	7.	Death is an enemy, therefore, whatever that can be done to preserve a quality life and maintain good health should be done.

TABLE 3

FACTOR LOADINGS FOR HEALTH BEHAVIORS SCALES

Factor					Item Number on Original Scale	
1	2	3	4	5		
						I. EXERCISE
.84	.15	-.01	-.09	.09	13.	I do exercises that enhance my muscle tone for 15-30 minutes at least 3 times a week (examples include yoga and calisthenics).
.84	.14	.01	-.15	.04	12.	I do vigorous exercises for 15-30 minutes at least 3 times a week (examples include running, swimming, brisk walking).
.66	.18	.13	-.11	.04	11.	I maintain a desired weight, avoiding overweight and underweight.
.60	.15	.40	.04	.10	9.	I limit the amount of fat, saturated fat, and cholesterol I eat (including fat on meat eggs, butter, cream, shortenings, and organ meats such as liver).
.60	.42	.01	-.03	.09	14.	I use part of my leisure time participating in individual, family, or team activities that increase my level of fitness (such as gardening, bowling, golf,and baseball).
.49	.03	.48	.08	.12	10.	I limit the amount of salt I eat by cookingwith only small amounts, not adding salt at the table, and avoiding salty snacks.
						II. STRESS MANAGEMENT
.16	.73	.17	-.14	.01	16.	I find it easy to relax and express my feelings freely.
.06	.72	.14	-.14	.13	19.	I participate in group activities (such as church and community organizations) or hobbies that I enjoy.
.22	.68	.16	-.05	.13	17.	I recognize early, and prepare for, events or situations likely to be stressful for me.
.07	.68	.01	-.11	-.05	18.	I have close friends, relatives, or others whom I can talk to about personal matters and call on for help when needed.
.22	.61	.07	.06	.06	15.	I enjoy the work that I do each day.
.33	.34	.13	-.07	.10	20.	I wear a seat belt while riding in a car.

TABLE 3 CONTINUED
FACTOR LOADINGS FOR HEALTH BEHAVIORS SCALES

Factor					Item Number on Original Scale	
1	2	3	4	5		
						III. DIET
-.29	.01	-.58	.14	.07	6.	I eat a lot of sugar (especially frequent snacks of sticky candy or soft drinks).
-.39	-.13	-.54	.15	-.02	8.	I snack between meals.
.32	.28	.45	-.01	.06	7.	I eat a variety of foods each day, such as fruits and vegetables, whole grain breads and cereals, lean meats, dairy products, dry peas and beans, and nuts and seeds.
-.01	.23	.43	-.12	.02	29.	The number of glasses of water I drink daily is _____ glasses.
.16	.25	.41	.18	.34	21.	I obey traffic rules and the speed limit when driving.
-.08	-.03	.39	-.18	.04	28.	The number of hours of sleep I get at night is _____hours.
-.03	.07	.36	.03	.13	5.	I read and follow the label directions when using prescribed and over-the-counter drugs.
.25	.23	.36	-.32	.17	25.	I eat breakfast each day.
						IV. DRUGS, ALCOHOL & TOBACCO
.03	-.17	-.17	.78	-.10	4.	I use alcohol or other drugs (including illegal drugs) as a way of handling stressful situations or the problems in my life.
-.07	-.04	-.15	.77	-.14	3.	I have one or more alcoholic drinks per day.
-.22	-.11	.01	.71	-.01	1.	I smoke cigarettes.
						V. CAUTION & SAFETY
.11	.03	.01	-.18	.86	23.	I am careful not to drink alcohol when takingcertain medicines (for example, medicine for sleeping, pain, colds, and allergies).
.12	.04	.04	-.28	.83	22.	I avoid driving while under the influence of alcohol and other drugs.
.06	.13	.28	.10	.64	24.	I am careful when using potentially harmfulproducts or substances (such as household cleaners, poisons, and electrical devices).

TABLE 4

DIFFERENCIES AMONG RELIGIOUS GROUPS ON STUDY VARIABLES

VARIABLE	BAPTIST	CATHOLIC	SDA	N	P VALUE
		MEAN FACTOR SCORE*			
Belief in Immortalty	0.580	0.629	-1.219	567	<.0005
Peace in Existence & Purity of Life	0.010	0.026	0.036	567	.821
Unimportance of Body	0.050	0.196	-0.248	567	<.0005
Asceticism	0.102	-0.256	0.156	567	<.0005
Organizational Activity & Growth/Striving	-0.125	0.122	-0.002	590	<.05
Creedal Assent	0.108	-0.104	0.001	590	.112
Devotionalism	0.068	-0.298	0.234	590	<.0005
Financial Support	-0.100	-0.387	0.485	590	<.0005
Church Attendance	0.011	0.125	-0.116	590	<.05
Exercise	-0.160	-0.225	0.390	580	<.0005
Stress Management	0.044	-0.132	0.091	580	.067
Diet	-0.104	-0.025	0.129	580	.066
Use of Drugs, Alcohol & Tobacco	0.064	0.357	-0.430	580	<.0005
Caution & Safety	0.052	-0.039	-0.011	580	.657
		MEAN SCORES			
Current Perceived Health Status	3.775	3.687	3.984	600	<.001
Daily Stress (actual)	78.832	84.239	68.902	571	<.0005
Internal Locus of Control	3.490	3.562	3.722	601	<.0005
Powerful Others Locus of Control	2.910	2.769	2.982	601	<.026
Chance Locus of Control	2.586	2.422	2.345	601	<.006
Health Values	3.117	2.929	3.282	601	<.0005

* A zero score is equivalent to the church scoring at the average. Negative scores mean the church scored lower than the average of all churches and positive scores indicate that the church scored higher.

TABLE 5

PEARSON CORRELATION MATRIX OF RELIGIOUS GROUPS

BAPTISTS

VARIABLE	BELIEF IN IMMORTALITY	PEACE & PURITY	UNIMPORTANCE OF BODY	ASCETICISM	ORGANIZATION & GROWTH	CREEDAL ASSENT	DEVOTION	FINANCIAL SUPPORT	CHURCH ATTENDANCE
EXERCISE	0.21	-0.02	0.03	0.21	0.09	0.04	0.19	0.12	-0.22
STRESS-MGT	0.25	-0.05	-0.04	0.32**	0.45****	-0.06	0.12	0.26+	0.15
DIET	0.02	0.11	-0.14	0.04	0.19	-0.08	0.03	0.03	-0.08
DRUGS-ALC-TBCCO	-0.08	-0.28*	0.37****	-0.08	-0.10	-0.05	-0.12	-0.10	-0.26+
CAUTION	-0.06	0.14	0.01	0.03	0.06	-0.02	0.14	0.07	0.16
CURR/HEALTH	0.17	0.06	-0.15	0.24	0.18	0.01	0.29**	0.22	0.06
STRESS (REPORTED)	-0.16	0.02	0.11	-0.12	-0.11	0.04	-0.14	-0.19	-0.02
INTERNAL LOCUS	0.10	0.04	-0.12	0.34***	0.17	-0.06	0.08	0.12	-0.21
POW-OTHERS LOCUS	0.10	-0.37****	0.32**	0.41****	0.20	-0.08	0.07	0.08	-0.15
CHANCE LOCUS	-0.08	-0.37****	0.50****	0.13	0.04	-0.17	-0.01	-0.02	-0.18
HEALTH VALUES	-0.08	0.09	0.24	0.19	0.25	-0.01	0.14	-0.06	-0.15

Number of Observations: 163

Note. Bonferoni adjusted significance levels are indicated as follows: + <.10; * <.05; ** <.01; *** <.001; **** <.0001

TABLE 6

PEARSON CORRELATION MATRIX OF RELIGIOUS GROUPS

ROMAN CATHOLICS

VARIABLE	BELIEF IN IMMORTALITY	PEACE & PURITY	UNIMPORTANCE OF BODY	ASCETICISM	ORGANIZATION & GROWTH	CREEDAL ASSENT	DEVOTION	FINANCIAL SUPPORT	CHURCH ATTENDANCE
EXERCISE	0.03	-0.17	-0.13	0.09	-0.13	-0.19	-0.10	0.04	-0.12
STRESS-MGT	0.01	0.34****	-0.01	-0.13	0.40****	0.19	-0.01	0.01	0.06
DIET	-0.01	0.25+	-0.04	0.07	0.08	0.14	0.29**	-0.03	0.12
DRUGS-ALC-TBCCO	0.03	-0.06	-0.00	-0.16	-0.09	-0.17	0.02	-0.09	-0.10
CAUTION	0.05	0.19	-0.04	0.07	0.07	-0.02	0.11	0.01	0.04
CURR/HEALTH	0.05	0.23	0.09	0.07	0.05	0.21	0.02	0.04	-0.10
STRESS (REPORTED)	0.09	-0.23	-0.08	-0.05	-0.24+	-0.12	-0.07	-0.07	-0.01
INTERNAL LOCUS	0.02	0.16	-0.12	0.17	0.06	0.20	0.07	-0.04	-0.04
POW-OTHERS LOCUS	0.08	-0.07	-0.01	0.19	0.06	-0.18	-0.01	0.03	-0.02
CHANCE LOCUS	-0.12	-0.15	0.28**	0.02	0.00	-0.19	-0.05	-0.10	-0.05
HEALTH VALUES	0.02	-0.10	0.01	0.18	-0.05	-0.01	-0.02	0.00	-0.16

Number of Observations: 188

Note. Bonferoni adjusted significance levels are indicated as follows: + <.10; * <.05; ** <.01; *** <.001; **** <.0001

TABLE 7

PEARSON CORRELATION MATRIX OF RELIGIOUS GROUPS

SEVENTH-DAY ADVENTISTS

VARIABLE	BELIEF IN IMMORTALITY	PEACE & PURITY	UNIMPORTANCE OF BODY	ASCETICISM	ORGANIZATION & GROWTH	CREEDAL ASSENT	DEVOTION	FINANCIAL SUPPORT	CHURCH ATTENDANCE
EXERCISE	-0.28*	0.16	-0.19	0.22	0.29**	-0.13	0.20	0.31**	-0.04
STRESS-MGT	-0.31**	0.40****	-0.05	0.26*	0.51****	0.04	0.34***	0.13	-0.21
DIET	-0.22	0.33***	-0.18	0.40****	0.33***	0.14	0.22	0.32**	0.00
DRUGS-ALC-TBCCO	-0.21	-0.06	0.31**	0.17	0.12	-0.12	0.17	0.04	-0.37****
CAUTION	-0.09	0.27*	-0.00	0.16	0.32**	0.16	0.24	-0.01	0.03
CURR/HEALTH	-0.32***	0.21	-0.16	0.17	0.28*	0.03	0.14	0.21	-0.03
STRESS (REPORTED)	0.27*	-0.30**	0.02	-0.13	-0.32**	-0.16	-0.26*	-0.16	0.11
INTERNAL LOCUS	0.02	0.17	-0.13	0.34***	0.17	0.06	0.12	0.13	-0.13
POW-OTHERS LOCUS	-0.34***	-0.07	0.48****	0.28**	0.17	-0.10	0.35***	-0.13	-0.25+
CHANCE LOCUS	-0.13	-0.34***	0.61****	0.05	-0.21	-0.09	0.11	-0.25+	-0.21
HEALTH VALUES	-0.35***	0.07	0.19	0.38****	0.16	-0.01	0.24	0.05	-0.06

Number of Observations: 171

Note. Bonferoni adjusted significance levels are indicated as follows: + <.10; * <.05; ** <.01; *** <.001; **** <.0001

TABLE 8

PEARSON CORRELATION MATRIX OF RELIGIOUS GROUPS

PARTIAL CORRELATIONS OF ALL GROUPS COMBINED
AFTER CONTROLLING FOR RELIGIOUS GROUP MEMBERSHIP

VARIABLE	BELIEF IN IMMORTALITY	PEACE & PURITY	UNIMPORTANCE OF BODY	ASCETICISM	ORGANIZATION & GROWTH	CREEDAL ASSENT	DEVOTION	FINANCIAL SUPPORT	CHURCH ATTENDANCE
EXERCISE	-0.02	-0.03	-0.10	0.16*	0.06	-0.11	0.07	0.14	-0.13
STRESS-MGT	-0.02	0.24****	-0.03	0.12	0.45****	0.08	0.14	0.12	0.01
DIET	-0.07	0.23****	-0.11	0.14	0.19***	0.08	0.19***	0.10	0.03
DRUGS-ALC-TBCCO	-0.05	-0.14	0.20***	-0.07	-0.06	-0.11	0.00	-0.07	-0.19***
CAUTION	-0.03	0.19***	-0.01	0.08	0.13	0.03	0.15+	0.03	0.07
CURR/HEALTH	-0.03	0.17**	-0.06	0.16*	0.16*	0.10	0.14	0.15+	-0.03
STRESS (REPORTED)	0.07	-0.17**	0.02	-0.10	-0.22****	-0.09	-0.15+	-0.14	0.02
INTERNAL LOCUS	0.05	0.12	-0.12	0.27****	0.13	0.08	0.09	0.07	-0.12
POW-OTHERS LOCUS	-0.06	-0.17**	0.27****	0.30****	0.15+	-0.11	0.15+	0.00	-0.14
CHANCE LOCUS	-0.11	-0.29****	0.46****	0.07	-0.05	-0.15+	0.02	-0.12	-0.14
HEALTH VALUES	-0.13	0.01	0.14	0.23****	0.11	-0.01	0.11	0.00	-0.13

Number of Observations: 522

Note. Bonferoni adjusted significance levels are indicated as follows: + <.10; * <.05; ** <.01; *** <.001; **** <.0001

S U M M A R Y

SUMMARY

In summarizing this study, I wish to refer to the original aims listed on page four of this paper, all of which have been addressed in this research. The questions raised on pages 5 and 6 are repeated here for ease of reference followed by the answers:

1. What religious beliefs are the most important predictors of health behaviors?

The religious belief variables that were the most important predictors of health behaviors include Peace and Purity, Unimportance of the body--a belief found to be separate from the Immortality of the Soul concept, and Asceticism. It should be noted that the Immortality variable was not a strong predictor of health behaviors by itself, except for Adventists, and that the importance of religious beliefs in predicting health behaviors differed from one group to another.

2. What religious practices are the most important predictors of health behaviors?

The religious practices which seem to be most related to health behaviors are Organizational Activity with Orientation to Growth and Striving. This measure of commitment variable remained stable across all the churches in relationship to Stress Management. Church Attendance, Devotionalism, and Financial Support each had a marginal relationship to health behaviors and health status.

3. Is there an association between church attendance and use of drugs, alcohol, and tobacco?

Yes. There was a significant correlation between Church Attendance and Drug Use among Baptists and Adventists, and a weak correlation among Catholics.

4. How do religious belief factors relate to one's perceived control over health outcomes?

We found that Unimportance of the Body variable tended to have a positive association with Powerful Others and Chance Health outcomes while Asceticism leaned more towards relating with Internal control.

5. Are church organizational activities related to increased reported stress?

Active participation in Church Organizational Activities was related to less Reported Stress, not more.

6. Can one's belief in immortality inhibit the practice of health habits?

Belief in Immortality seemed to inhibit some health behaviors but only among Adventists.

7. Do churches that emphasize health really have healthier members?

The literature suggests that religious beliefs and health behaviors are more closely related in a church that emphasizes health behaviors. Whether this could be the reason for the high incidence of correlations between religion and health behaviors in the Adventist group (a

church known for its promotion of health principles) is a question worthy of further investigation.

8. Do church members who view their body as unimportant tend to smoke, drink and use drugs?

Yes. According to the findings of this study, those who see their body as unimportant (e.g. "My beliefs about death mean that what I do with my body is not important") tend to smoke, drink, and use drugs. This correlation was strong for both Adventists and Baptists, but among Catholics, these factors had no correlation.

9. Are there any benefits to the self-abnegating beliefs in denying the body of food and rest?

Beliefs in denying the body of food and rest appears to be a self-disciplinary characteristic related to the management of stress (in Baptists and Adventists only) and diet control (in Adventists only). This variable had an intriguing correlation to both internal and powerful-others health locus of control, a combination that may appear to be mutually exclusive. This anomaly may be indicative of both the internalized self-willed determination to control one's health outcomes and the aim of "Denying the needs of the body (food and sleep) in order to bring me closer to God."

10. Are there differencies between the responses of Baptists, Roman Catholics and Seventh-day Adventists on the study variables?

Adventists scored the highest of the groups on Devotionalism, Asceticism, and Financial Support and the lowest on Immortality and Unimportance of the Body. This was probably due to their doctrinal belief on body and soul as a wholistic unit and not subject to being separate. Catholics scored the highest on Church Attendance, Church Activities, and the lowest on Devotionalism, Asceticism, and Financial Support. Baptists, though lower than Adventists on Financial Support, were higher than Catholics. Adventists seemed to exercise more and used considerably less alcohol, drugs, and tobacco than the others--again probably because of their stand on health principles.

Implications for Health Education

The following implications for health education are indicated by the findings from both the literature review and the correlational study:

1. This study has identified certain religious beliefs and practices which are among some of the predisposing factors that can enable individuals to take preventive action to maintain good health.

2. The successful use of the Health Relevant Religious Scales developed in this study has provided information concerning the role religious beliefs and practices plays in health education. The findings will be of interest to those in the health education arena as well as those connected with any of the three churches involved.

The data could provide support for new grant applications and further study (see Recommendations for Further Study below).

3. Health educators and those involved in the health professions must be aware that religion is multidimensional. By tuning into the religious and spiritual beliefs of their clients, they may attempt to maximize those aspects of their belief system that help to promote a healthy lifestyle. This may also require health workers to vary their methods considerably according to the individual's background in order to achieve optimum physical and emotional functioning.

4. It is known from this and other studies that the church is a very influential part of people's lives. It would therefore seem appropriate to extend health education to the church setting. This forum for health education would provide access to whole families rather than the disjointed approach of trying to reach people in various isolated places, such as the school, job, or hospital.

5. Health educators and other health professionals should endeavor to participate in their churches by keeping their members informed about current health research and its implications for religious growth ("My sense of well-being is due to my relationship with God" and vise versa) and healthful lifestyle.

6. Well chosen religious leaders including hospital chaplains should be asked to participate in health education programs at the school, community, and patient education settings.

7. The integration of the religious component in health education calls for community organizational techniques that include the utilization of organized religious groups in initiating and implementing public health projects. Clergymen (who are seen as authority figures in the community) can be enlisted as powerful allies to motivate public participation through their extensive contacts and personal visits.

8. Blacks in society are an at-risk group for various health problems. Knowing how Blacks have responded in this study will provide valuable information to key community leaders (religious, health, civic, and social workers) using the church as an intervention site for public health education.

Recommendations for Further Study

Further investigation into this area of research could:

1. Identify and test causal pathways between the study variables, for which this correlational study was only a small beginning.

2. Explore the meaning of the immortality of the soul concept with reference to checking whether or not there is

an interaction with importance or unimportance given to the body.

3. Revise the Religion and Health Questionnaire instrument so as to include a non-religious sampling for further study.

4. Study further into the matter of health locus of control with regards to the influence of religion and how it impacts on personal health attitudes.

5. Explore the relationship between the intrinsic spirituality of man and formal or traditional religious beliefs especially as it relates to health attitudes, beliefs, and behaviors.

6. Develop a clear definition of the religio/spiritual dimension of health with the aim of exploring the feasibility of including this dimension in the health education professional preparation program.

A P P E N D I C E S

APPENDIX A

HUMAN STUDIES CONSENT

INSTITUTIONAL REVIEW BOARD

Approved Project Period

4/87 to 4/88

RESEARCH REPORT FORM

The research protocol identified below was approved by the Institutional Review Board of Loma Linda University. As a condition of that approval, you were asked to report back to the board regarding the results of your study. This continuing review is in accordance with Federal regulations and the University's policy of protection of the rights and welfare of participants in research. Please use this form for your report.

Principal Investigator JERRY W. LEE/Donald G. King Phone No. _____

Faculty Advisor (if above is graduate student) _____

Department Health Promotion & Education Assigned risk None

Project Title "Religion and Health Study: A Questionnaire"

Please provide the following information. Use another page if necessary.

1. How many subjects were enrolled in the project during approved period? 200

2. Were there significant procedural changes? ✓ No ___ Yes. Describe fully.

3. Were there problems or adverse reactions to experimental drugs or procedures?
✓ No ___ Yes. Describe fully.

4. Please indicate the status of your project:

___ Completed ___ Terminated ___ Never initiated.

✓ Extension requested to 6/88. There have been no changes in protocol.

___ Extension requested with modifications or changes in protocol. Protocol will be resubmitted to the board for approval.

5. Please attach a copy of the consent form currently used in this study.

"I accept responsibility for the factual content of this report and would be available for discussion if additional questions are raised."

Jerry W Lee
Signature of Principal Investigator

Please return form to ~~Grants Management, Room 218, Business Center~~ Sponsored Research, Rm 108, Griggs Hall

Loma Linda University

Grants Management
Loma Linda, California 92350
714/824-4531

April 8, 1987

Jerry W. Lee, Ph.D.
Dept. of Health Promotion and Education
School of Health
Loma Linda University

Dear Dr. Lee:

Your proposal for a study entitled "Religion and Health Study (A Questionnaire)" was reviewed by expedited process on behalf of the Institutional Review Board of Loma Linda University on April 8, 1987.

The actions of the review are as follows:

The subjects are at no risk.
The protocol is approved from 4/87 to 4//88.

If there are any modifications to the proposed research protocol or consent form, or problems arising from the study, please notify the Board in writing. If you have any questions, please feel free to contact us.

You are required to provide a progress report on this study in one year indicating the number of subjects enrolled and any side effects incurred by the participants.

Best wishes for success in this project.

Sincerely yours,

William C. Eby

William C. Eby, M.D. Ph.D.
Chairman
Institutional Review Board

n

APPENDIX B

PILOT STUDY QUESTIONNAIRE

****

RELIGION AND HEALTH STUDY

****

The following are some statements about RELIGIOUS BELIEFS as they relate to HEALTH BELIEFS AND FEELINGS. Please read each statement carefully, and then circle one of the numbers on each line to indicate whether you agree or disagree with the statement. THERE ARE NO RIGHT OR WRONG ANSWERS. Answer according to your own beliefs and feelings.

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	I believe that what I do with my body matters to God.	5	4	3	2	1
2.	My relationship with God helps me to cope with my daily stresses.	5	4	3	2	1
3.	I believe that my physical well-being is as important as my religious well-being.	5	4	3	2	1
4.	When I die my body ceases to exist but my soul lives on.	5	4	3	2	1
5.	I try hard to carry my religion over into my eating and health habits.	5	4	3	2	1
6.	Knowing God gives me a sense of contentment.	5	4	3	2	1
7.	Death is an enemy, therefore, whatever that can be done to preserve a quality life and maintain good health should be done.	5	4	3	2	1
8.	The more devoted I am to God the less responsible I feel for my own health.	5	4	3	2	1
9.	My sense of well-being is due to my relationship with God.	5	4	3	2	1
10.	Health of the soul is more important than health of the body.	5	4	3	2	1
11.	I don't need to worry about my health because God will take care of it.	5	4	3	2	1
12.	I lose control over daily stresses when I am not in touch with God.	5	4	3	2	1
13.	How I treat my body does not affect my relationship with God.	5	4	3	2	1
14.	Hope in the resurrection of the body in the last day should not prevent one from caring for the body here and now.	5	4	3	2	1
15.	I believe that practicing good health behaviors is an important part of my Christian religion.	5	4	3	2	1

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
16.	Being in touch with God reduces the impact of daily stresses.	5	4	3	2	1
17.	My beliefs about death mean that what I do with my body is not important.	5	4	3	2	1
18.	Christians should not use drugs and alcohol for recreation.	5	4	3	2	1
19.	I feel at peace with God.	5	4	3	2	1
20.	I believe that my body is as important to God as my soul.	5	4	3	2	1
21.	Peace and contentment with God has nothing to do with my health.	5	4	3	2	1
22.	Being in touch with God promotes a sense of well-being and relaxation.	5	4	3	2	1
23.	The soul can live separate from the body.	5	4	3	2	1
24.	I am more likely to guard my health and get health checks when I feel close to God.	5	4	3	2	1
25.	Prayer helps me to relax.	5	4	3	2	1
26.	Wearing my body out working for the Lord, even if it means running down my health, is still better than doing little or nothing in service for Him.	5	4	3	2	1
27.	Whenever I start the day with devotions with God, it helps me to cope better on my job.	5	4	3	2	1
28.	When death occurs, the Christian's soul leaves the body and ascends to heaven.	5	4	3	2	1
29.	Smoking will not only destroy my body but hurt my relationship with God as well.	5	4	3	2	1
30.	I feel I can talk to God about personal matters and call on Him for help when needed.	5	4	3	2	1
31.	Unlike the body, the soul is immortal--it cannot die.	5	4	3	2	1
32.	If I work hard for the Lord, He will take care of my health.	5	4	3	2	1
33.	Worshiping God with others helps me to cope with life's trials.	5	4	3	2	1
34.	When I die my body and soul cease to exist.	5	4	3	2	1

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
35.	I never view what I eat, how much I eat, and how fit I am, as being a part of my religion.	5	4	3	2	1
36.	My beliefs about death mean that when I die my soul remains conscious after death.	5	4	3	2	1
37.	When I'm not at peace with God I often act irritable toward my work associates or neighbors.	5	4	3	2	1
38.	Death is an unconscious sleep of the soul.	5	4	3	2	1
39.	I believe that cleanliness is next to Godliness.	5	4	3	2	1

CONGRATULATIONS! YOU'RE ALMOST THROUGH!

PLEASE ANSWER ALL QUESTIONS.

		Always	Almost Always	Sometimes	Almost Never	Never
40.	I smoke cigarettes.	5	4	3	2	1
41.	I smoke only low tar and low nicotine cigarettes or I smoke a pipe or cigars.	5	4	3	2	1
42.	I have one or more alcoholic drinks per day.	5	4	3	2	1
43.	I am careful not to drink alcohol when taking certain medicines (for example, medicine for sleeping, pain, colds, and allergies).	5	4	3	2	1
44.	I use alcohol or other drugs (including illegal drugs) as a way of handling stressful situations or the problems in my life.	5	4	3	2	1
45.	I read and follow the label directions when using prescribed and over-the-counter drugs.	5	4	3	2	1
46.	I eat too much sugar (especially frequent snacks of sticky candy or soft drinks).	5	4	3	2	1
47.	I eat a variety of foods each day, such as fruits and vegetables, whole grain breads and cereals, lean meats, dairy products, dry peas and beans, and nuts and seeds.	5	4	3	2	1

		Always	Almost Always	Sometimes	Almost Never	Never
48.	I snack in between meals.	5	4	3	2	1
49.	I limit the amount of fat, saturated fat, and cholesterol I eat (including fat on meats eggs, butter, cream, shortenings, and organ meats such as liver).	5	4	3	2	1
50.	I limit the amount of salt I eat by cooking with only small amounts, not adding salt at the table, and avoiding salty snacks.	5	4	3	2	1
51.	I maintain a desired weight, avoiding overweight and underweight.	5	4	3	2	1
52.	I do vigorous exercises for 15-30 minutes at least 3 times a week (examples include running, swimming, brisk walking).	5	4	3	2	1
53.	I do exercises that enhance my muscle tone for 15-30 minutes at least 3 times a week (examples include yoga and calisthenics).	5	4	3	2	1
54.	I use part of my leisure time participating in individual, family, or team activities that increase my level of fitness (such as gardening, bowling, golf,and baseball).	5	4	3	2	1
55.	I enjoy the work that I do each day.	5	4	3	2	1
56.	I find it easy to relax and express my feelings freely.	5	4	3	2	1
57.	I recognize early, and prepare for, events or situations likely to be stressful for me.	5	4	3	2	1
58.	I have close friends, relatives, or others whom I can talk to about personal matters and call on for help when needed.	5	4	3	2	1
59.	I participate in group activities (such as church and community organizations) or hobbies that I enjoy.	5	4	3	2	1
60.	I wear a seat belt while riding in a car.	5	4	3	2	1
61.	I avoid driving while under the influence of alcohol and other drugs.	5	4	3	2	1
62.	I obey traffic rules and the speed limit when driving.	5	4	3	2	1
63.	I am careful when using potentially harmful products or substances (such as household cleaners, poisons, and electrical devices).	5	4	3	2	1
64.	I eat breakfast each day.	5	4	3	2	1

Indicate your answer to the following question by circling one number on each line on the scale below.

HOW MUCH STRESS HAVE YOU HAD FROM EACH OF THE FOLLOWING SOURCES IN THE PAST YEAR?

	None			Moderate				Severe
PEOPLE	↓			↓				↓
65. Spouse	1	2	3	4	5	6	7	8	9
66. Girl or Boyfriend	1	2	3	4	5	6	7	8	9
67. In-laws	1	2	3	4	5	6	7	8	9
68. Children	1	2	3	4	5	6	7	8	9
69. Parents	1	2	3	4	5	6	7	8	9
70. Other Relatives	1	2	3	4	5	6	7	8	9
71. Neighbors	1	2	3	4	5	6	7	8	9
72. Friends	1	2	3	4	5	6	7	8	9
WORK									
73. Boss	1	2	3	4	5	6	7	8	9
74. Co-workers	1	2	3	4	5	6	7	8	9
75. Subordinates	1	2	3	4	5	6	7	8	9
76. The Nature of Your Job	1	2	3	4	5	6	7	8	9
77. Too many Responsibilities	1	2	3	4	5	6	7	8	9
78. Concerns About Job Security	1	2	3	4	5	6	7	8	9
79. Lack of Work	1	2	3	4	5	6	7	8	9
HEALTH									
80. Personal Health Problems	1	2	3	4	5	6	7	8	9
81. Family Health Problems	1	2	3	4	5	6	7	8	9
82. Personal Use of Drugs or Alcohol	1	2	3	4	5	6	7	8	9
ENVIRONMENT									
83. Car Troubles	1	2	3	4	5	6	7	8	9
84. Change of Residence	1	2	3	4	5	6	7	8	9
85. Trouble with Your Dwelling	1	2	3	4	5	6	7	8	9
86. General Environmental Concerns (e.g. Earthquake, Toxic Waste, etc.)	1	2	3	4	5	6	7	8	9
OTHER									
87. Finances	1	2	3	4	5	6	7	8	9
88. Retirement	1	2	3	4	5	6	7	8	9
89. Police or Legal Problems	1	2	3	4	5	6	7	8	9
90. Outstanding Achievement	1	2	3	4	5	6	7	8	9
91. Prejudice & Discrimination (Race, Sexual, Age, etc.)	1	2	3	4	5	6	7	8	9
92. Unexpected Pregnancy	1	2	3	4	5	6	7	8	9
93. Sexual Difficulties	1	2	3	4	5	6	7	8	9
94. Concerns About Meaning of Life	1	2	3	4	5	6	7	8	9
95. Loneliness	1	2	3	4	5	6	7	8	9
96. Too Many Things to Do	1	2	3	4	5	6	7	8	9
97. Concerns About Death	1	2	3	4	5	6	7	8	9

APPENDIX C

PILOT STUDY PARTICIPANTS

Churches and Contact Persons for Pilot Studies

Pastor Elliott C. Osborne
Fontana-Juniper Ave. SDA Church
7347 Juniper Ave.
Fontana, CA 92336

Pastor Allen Sovory
San Bernardino 16th Street SDA Church
1601 N. 16th Street
San Bernardino, CA 92411

APPENDIX D

RELIGION AND HEALTH STUDY QUESTIONNAIRE

Loma Linda University

School of Health
Loma Linda, California 92350
714/824-4546

Dear Church Member:

Enclosed with this letter is a survey questionnaire entitled Religion and Health Study, the purpose of which is to try and discover the relationships, if any, between religious beliefs and health practices. In other words, is it possible that one's beliefs about religion and their relationship to church involvement can influence one's health.

Your responses are very important to us. The more responses, the better we can rely on the study's findings. Therefore, please complete the enclosed survey as soon as possible.

Your participation in this survey is **entirely voluntary.** Your responses will be kept **strictly confidential.** No one, including the researchers signed below, will be able to identify how you in particular answered the questions from any report we make on the results. Your survey response sheet will have a code on it for mailing purposes only. Therefore, please do not put your name on the survey response sheet when you fill it out.

If you have any questions, please feel free to call the number listed below and leave a message about how we can contact you.

Please help us. Just take a few moments to complete the entire survey. Put it in the postage-paid envelope, and drop it in the mail as soon as possible. Who knows, the Christian religion may benefit healthwise by your participation. Thanks a million!

Sincerely yours for a healthy lifestyle,

Jerry W Lee

Jerry Lee, PhD
Associate Professor, Department of Health Promotion
School of Health, Loma Linda University

Donald G. King, MSPH, MA
Doctoral Candidate
School of Health, Loma Linda University

To leave messages, call (714) 824-4994

RELIGION AND HEALTH STUDY

This study consists of several parts. Each part involves a short questionnaire. Please record YOUR ANSWER (that is, what you feel is right for you) to each question in the space provided, according to the instructions given for that part. Try to answer every question. Your responses are strictly confidential. Thank you very much for participating in this research project.

PART A -- BACKGROUND INFORMATION

Please place an "X" in the box next to the answer you choose, or write the information requested in the space provided.

1. Month and year of birth: Month _____ Year _____

2. Sex
   [ ] 1 Female
   [ ] 2 Male

3. Marital Status
   [ ] 1 Never married
   [ ] 2 Married
   [ ] 3 Divorced
   [ ] 4 Separated
   [ ] 5 Widowed

4. How many children do you have?

   _____ Children

5. In what religion were you raised?
   [ ] 1 Baptist
   [ ] 2 SDA
   [ ] 3 Roman Catholic
   [ ] 4 Non-denominational
   [ ] 5 Other (Please specify) _____

6. What religion are you now?
   [ ] 1 Baptist
   [ ] 2 SDA
   [ ] 3 Roman Catholic
   [ ] 4 Non-denominational
   [ ] 5 Other (Please specify) _____

7. How many years of schooling have you had?
   [ ] 1 High school or less
   [ ] 2 College
   [ ] 3 Graduate school or more

8. What is your income category?
   [ ] 1 $10,000 or less
   [ ] 2 $10,001 to $15,000
   [ ] 3 $15,001 to $25,000
   [ ] 4 $25,001 to $35,000
   [ ] 5 $35,001 or more

9. What is your ethnic background?
   [ ] 1 Black/Negro
   [ ] 2 Hispanic/Mexican
   [ ] 3 Asian/Indian
   [ ] 4 White
   [ ] 5 Other _____

10. At what time did you become a member of your present church?
    [ ] 1 Pre-teen
    [ ] 2 Teenager
    [ ] 3 Young Adult
    [ ] 4 Middle Age
    [ ] 5 Senior Citizen

The following statements have to do with your BASIC RELIGIOUS BELIEFS AND ATTITUDES. Please read each statement carefully and then circle one of the numbers on each line to indicate whether you agree or disagree with the statement. THERE ARE NO RIGHT OR WRONG ANSWERS. Answer according to your own beliefs and feelings.

PART B	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I believe in God as a Heavenly Father who watches over me and to whom I am accountable.	5	4	3	2	1
2. I believe that the Word of God is revealed in the Scriptures.	5	4	3	2	1
3. I believe that Christ is a living reality.	5	4	3	2	1
4. I believe that God revealed Himself to man in Jesus Christ.	5	4	3	2	1
5. I believe in salvation as release from sin and freedom for new life with God.	5	4	3	2	1
6. I believe in eternal life.	5	4	3	2	1
7. Private prayer is one of the most important and satisfying aspects of my religious experience.	5	4	3	2	1
8. I frequently feel very close to God in prayer, during public worship, or at important moments in my life.	5	4	3	2	1
9. Church activities (meetings, committee work, etc.) are a major source of satisfaction in my life.	5	4	3	2	1
10. I keep pretty well informed about my congregation and have some influence on its decisions.	5	4	3	2	1
11. I enjoy working in the activities of the Church.	5	4	3	2	1
12. I try hard to grow in understanding of what it means to live as a child of God.	5	4	3	2	1
13. Religion is especially important to me because it answers many questions about the meaning of life.	5	4	3	2	1

PART C	Always	Almost Always	Sometimes	Almost Never	Never
1. How often do you pray privately in places other than at church?	5	4	3	2	1
2. How often do you ask God to forgive your sins?	5	4	3	2	1
3. When you have decisions to make in your everyday life, how often do you try to find out what God wants you to do?	5	4	3	2	1
4. How often do you spend evenings at church meetings or in church work?	5	4	3	2	1
5. How often do you read the Bible?	5	4	3	2	1

PART C (continued)	Always	Almost Always	Sometimes	Almost Never	Never
6. How often have you taken Holy Communion (The Lord's Supper, the Eucharist) during the past year?	5	4	3	2	1
7. During the last year, how often have you made contributions to the church in addition to the general budget and Sunday School?	5	4	3	2	1
8. How often do you read literature about your faith (or church)?	5	4	3	2	1
9. How often in the past year have you shared with another church member the problems and joys of trying to live a life of faith in God?	5	4	3	2	1
10. How often do you talk about religion with your friends, neighbors, or fellow workers?	5	4	3	2	1
11. How often have you personally tried to convert someone to faith in God?	5	4	3	2	1
12. During the last year, how often have you visited someone in need, besides your own relatives?	5	4	3	2	1

13. If not prevented by unavoidable circumstances, I attend church:
    [ ] 1 More than once a week
    [ ] 2 About once a week
    [ ] 3 Less than once a week but more than once a month
    [ ] 4 About once a month
    [ ] 5 Less than once a month but more than twice a year
    [ ] 6 Twice a year or less

14. During the last year, how many Sundays/Sabbaths per month on the average have you gone to a worship service?
    [ ] 1 None
    [ ] 2 One
    [ ] 3 Two
    [ ] 4 Three or more

15. How would you rate your activity in your congregation?
    [ ] 1 Inactive
    [ ] 2 Somewhat active
    [ ] 3 Active
    [ ] 4 Very Active

16. How many church offices, committees, or jobs of any kind have you served in during the past twelve months?

    _____ (Write the number in this space.)

17. Last year, approximately what percentage of your income was contributed to the Church?
    [ ] 1 1% or less
    [ ] 2 2% to 5%
    [ ] 3 6% to 10%
    [ ] 4 11% to 15%
    [ ] 5 16% or more

18. During the last year, what was the average monthly contribution of your family to your church?
    [ ] 1 Under $5
    [ ] 2 $5 to $24
    [ ] 3 $25 to $50
    [ ] 4 $51 to $100
    [ ] 5 Over $100

19. In proportion to your income, do you consider that your contributions to the church are:
    [ ] 1 Small
    [ ] 2 Average
    [ ] 3 Generous

20. I make financial contributions to the Church:
    [ ] 1 Never
    [ ] 2 Seldom
    [ ] 3 Sometimes
    [ ] 4 In regular, planned amounts

The following statements are about RELIGIOUS BELIEFS, HEALTH BELIEFS AND FEELINGS. Please read each statement carefully, and then circle ONE of the numbers on each line to indicate whether you agree or disagree with the statement. THERE ARE NO RIGHT OR WRONG ANSWERS. Answer according to your own beliefs and feelings.

PART D	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I believe that what I do with my body matters to God.	5	4	3	2	1
2. My relationship with God helps me to cope with my daily stresses.	5	4	3	2	1
3. I believe that my physical well-being is as important as my religious well-being.	5	4	3	2	1
4. When I die my body ceases to exist but my soul lives on in a conscious state of existence.	5	4	3	2	1
5. I try hard to carry my religion over into my eating and health habits.	5	4	3	2	1
6. Knowing God gives me a sense of contentment.	5	4	3	2	1
7. Death is an enemy, therefore, whatever that can be done to preserve a quality life and maintain good health should be done.	5	4	3	2	1
8. The more devoted I am to God the less responsible I feel for my own health.	5	4	3	2	1
9. My sense of well-being is due to my relationship with God.	5	4	3	2	1
10. Health of the soul is more important than health of the body.	5	4	3	2	1
11. I don't need to worry about my health because God will take care of it.	5	4	3	2	1
12. The body is not that important because it will be cast off at Christ's return.	5	4	3	2	1
13. I lose control over daily stresses when I am not in touch with God.	5	4	3	2	1
14. How I treat my body does not affect my relationship with God.	5	4	3	2	1
15. Hope in the resurrection of the body in the last day should not prevent one from caring for the body here and now.	5	4	3	2	1
16. I believe that practicing good health behaviors is an important part of my Christian religion.	5	4	3	2	1
17. Being in touch with God reduces the impact of daily stresses.	5	4	3	2	1
18. My beliefs about death mean that what I do with my body is not important.	5	4	3	2	1

PART D (continued)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
19. As a Christian, I should sometimes withhold food and sleep from my body in order to bring it under control.	5	4	3	2	1
20. Christians should not use drugs or alcohol for pleasure.	5	4	3	2	1
21. I feel at peace with God.	5	4	3	2	1
22. I believe that my body is as important to God as my soul.	5	4	3	2	1
23. Peace and contentment with God has little to do with my health.	5	4	3	2	1
24. Being in touch with God promotes a sense of well-being and relaxation.	5	4	3	2	1
25. As a Christian, I must learn to control my body and keep it pure.	5	4	3	2	1
26. The soul can live separate from the body.	5	4	3	2	1
27. I am more likely to guard my health and get health checks when I feel close to God.	5	4	3	2	1
28. Prayer helps me to relax.	5	4	3	2	1
29. Wearing my body out working for the Lord, even if it means running down my health, is still better than doing little or nothing in service for Him.	5	4	3	2	1
30. Whenever I start the day with devotions with God, it helps me to cope better on my job.	5	4	3	2	1
31. Denying the needs of the body (such as food and sleep) brings me closer to God.	5	4	3	2	1
32. When death occurs, the Christian's soul leaves the body and goes to heaven.	5	4	3	2	1
33. Smoking will hurt my relationship with God.	5	4	3	2	1
34. I feel I can talk to God about personal matters and call on Him for help when needed.	5	4	3	2	1
35. Unlike the body, the soul is immortal -- it cannot die.	5	4	3	2	1
36. If I work hard for the Lord, He will take care of my health.	5	4	3	2	1
37. My body hinders me from performing my Christian duties.	5	4	3	2	1
38. Worshiping God with others helps me to cope with life's trials.	5	4	3	2	1
39. When I die my body and soul cease to exist.	5	4	3	2	1
40. I seldom view what I eat, how much I eat, and how fit I am, as being a part of my religion.	5	4	3	2	1
41. When I die, my soul remains conscious after death.	5	4	3	2	1
42. When I'm not at peace with God I often act irritable toward my work associates or neighbors.	5	4	3	2	1
43. Death is an unconscious state of the soul.	5	4	3	2	1

PART D (continued)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
44. Cleanliness is next to Godliness.	5	4	3	2	1
45. The body must be purged of sinful habits.	5	4	3	2	1
46. If I become sick, I have the power to make myself well again.	5	4	3	2	1
47. Often I feel that no matter what I do, if I am going to get sick, I will get sick.	5	4	3	2	1
48. If I see an excellent doctor regularly, I am less likely to have health problems.	5	4	3	2	1
49. It seems that my health is greatly influenced by accidental happenings.	5	4	3	2	1
50. I can only maintain my health by consulting health professionals.	5	4	3	2	1
51. Other people play a big part in whether I stay healthy or become sick.	5	4	3	2	1
52. I am directly responsible for my health.	5	4	3	2	1
53. Whatever goes wrong with my health is my own fault.	5	4	3	2	1
54. When I am sick, I just have to let nature run its course.	5	4	3	2	1
55. Health professionals keep me healthy.	5	4	3	2	1
56. When I stay healthy, I'm just plain lucky.	5	4	3	2	1
57. My physical well-being depends on how well I take care of myself.	5	4	3	2	1
58. The type of care I receive from other people is what is responsible for how well I recover from an illness.	5	4	3	2	1
59. When I feel ill, I know it is because I have not been taking care of myself properly.	5	4	3	2	1
60. Even when I take care of myself, it's easy to get sick.	5	4	3	2	1
61. When I become ill, it's a matter of fate.	5	4	3	2	1
62. I can pretty much stay healthy by taking good care of myself.	5	4	3	2	1
63. Following doctor's orders to the letter is the best way for me to stay healthy.	5	4	3	2	1
64. My health is more important than social recognition.	5	4	3	2	1
65. My health is more important than self-respect.	5	4	3	2	1
66. My health is more important than family security.	5	4	3	2	1
67. My health is more important than happiness.	5	4	3	2	1
68. My health is more important than friendship.	5	4	3	2	1
69. My health is more important than salvation.	5	4	3	2	1

The following statements are about BEHAVIORS RELATED TO YOUR HEALTH. Please read each statement carefully, and then circle ONE of the numbers on each line to indicate how often you engage in each behavior.

PART E	Always	Almost Always	Sometimes	Almost Never	Never
1. I smoke cigarettes.	5	4	3	2	1
2. I smoke only low tar and low nicotine cigarettes or I smoke a pipe or cigars.	5	4	3	2	1
3. I have one or more alcoholic drinks per day.	5	4	3	2	1
4. I use alcohol or other drugs (including illegal drugs) as a way of handling stressful situations or the problems in my life.	5	4	3	2	1
5. I read and follow the label directions when using prescribed and over-the-counter drugs.	5	4	3	2	1
6. I eat a lot of sugar (especially frequent snacks of sticky candy or soft drinks).	5	4	3	2	1
7. I eat a variety of foods each day, such as fruits and vegetables, whole grain breads and cereals, lean meats, dairy products, dry peas and beans, and nuts and seeds.	5	4	3	2	1
8. I snack in between meals.	5	4	3	2	1
9. I limit the amount of fat, saturated fat, and cholesterol I eat (including fat on meats eggs, butter, cream, shortenings, and organ meats such as liver).	5	4	3	2	1
10. I limit the amount of salt I eat by cooking with only small amounts, not adding salt at the table, and avoiding salty snacks.	5	4	3	2	1
11. I maintain a desired weight, avoiding overweight and underweight.	5	4	3	2	1
12. I do vigorous exercises for 15-30 minutes at least 3 times a week (examples include running, swimming, brisk walking).	5	4	3	2	1
13. I do exercises that enhance my muscle tone for 15-30 minutes at least three times a week (examples include yoga and calisthenics).	5	4	3	2	1
14. I use part of my leisure time participating in individual, family, or team activities that increase my level of fitness (such as gardening, bowling, golf,and baseball).	5	4	3	2	1
15. I enjoy the work that I do each day.	5	4	3	2	1
16. I find it easy to relax and express my feelings freely.	5	4	3	2	1
17. I recognize early, and prepare for, events or situations likely to be stressful for me.	5	4	3	2	1
18. I have close friends, relatives, or others whom I can talk to about personal matters and call on for help when needed.	5	4	3	2	1
19. I participate in group activities (such as church and community organizations) or in hobbies that I enjoy.	5	4	3	2	1
20. I wear a seat belt while riding in a car.	5	4	3	2	1

PART E (continued)	Always	Almost Always	Sometimes	Almost Never	Never
21. I obey traffic rules and the speed limit when driving.	5	4	3	2	1
22. I avoid driving while under the influence of alcohol and other drugs.	5	4	3	2	1
23. I am careful not to drink alcohol when taking certain medicines (for example, medicine for sleeping, pain, colds, and allergies).	5	4	3	2	1
24. I am careful when using potentially harmful products or substances (such as household cleaners, poisons, and electrical devices).	5	4	3	2	1
25. I eat breakfast each day.	5	4	3	2	1

26. My current weight in pounds is _____lbs (If unknown give approximate weight).

27. My current height is _____feet, _____inches.

28. The number of hours of sleep I get at night is _____hours.

29. The number of glasses of water I drink daily is _____ glasses.

The following statements are about YOUR CURRENT HEALTH. Please read each statement carefully, and then circle ONE of the numbers on each line to indicate how true the statement is.

PART F	Definitely True	Mostly True	Don't Know	Mostly False	Definitely False
1. According to the doctors I've seen, my health is now excellent.	5	4	3	2	1
2. I feel better now than I ever have before.	5	4	3	2	1
3. I am somewhat ill.	5	4	3	2	1
4. I'm not as healthy now as I used to be.	5	4	3	2	1
5. I'm as healthy as anybody I know.	5	4	3	2	1
6. My health is excellent.	5	4	3	2	1
7. I have been feeling bad lately.	5	4	3	2	1
8. Doctors say that I am now in poor health.	5	4	3	2	1
9. I feel about as good now as I ever have.	5	4	3	2	1

PART G

Indicate your answer to the following question by circling one number on the scale below.

QUESTION: HOW MUCH STRESS HAVE YOU HAD FROM EACH OF THE FOLLOWING SOURCES IN THE PAST YEAR?

	No Stress			Moderate Stress			Severe Stress			Does not apply
PEOPLE										
1. Spouse	1	2	3	4	5	6	7	8	9	0
2. Girl or Boyfriend	1	2	3	4	5	6	7	8	9	0
3. In-laws	1	2	3	4	5	6	7	8	9	0
4. Children	1	2	3	4	5	6	7	8	9	0
5. Parents	1	2	3	4	5	6	7	8	9	0
6. Other Relatives	1	2	3	4	5	6	7	8	9	0
7. Neighbors	1	2	3	4	5	6	7	8	9	0
8. Friends	1	2	3	4	5	6	7	8	9	0
WORK										
9. Boss	1	2	3	4	5	6	7	8	9	0
10. Co-workers	1	2	3	4	5	6	7	8	9	0
11. Subordinates	1	2	3	4	5	6	7	8	9	0
12. The Nature of Your Job	1	2	3	4	5	6	7	8	9	0
13. Too many Responsibilities	1	2	3	4	5	6	7	8	9	0
14. Concerns About Job Security	1	2	3	4	5	6	7	8	9	0
15. Lack of Work	1	2	3	4	5	6	7	8	9	0
HEALTH										
16. Personal Health Problems	1	2	3	4	5	6	7	8	9	0
17. Family Health Problems	1	2	3	4	5	6	7	8	9	0
18. Personal Use of Drugs or Alcohol	1	2	3	4	5	6	7	8	9	0
ENVIRONMENT										
19. Car Troubles	1	2	3	4	5	6	7	8	9	0
20. Change of Residence	1	2	3	4	5	6	7	8	9	0
21. Trouble with Your Dwelling	1	2	3	4	5	6	7	8	9	0
22. General Environmental Concerns (e.g. Earthquake, Toxic Waste, etc.)	1	2	3	4	5	6	7	8	9	0
OTHER										
23. Finances	1	2	3	4	5	6	7	8	9	0
24. Retirement	1	2	3	4	5	6	7	8	9	0
25. Police or Legal Problems	1	2	3	4	5	6	7	8	9	0
26. Outstanding Achievement	1	2	3	4	5	6	7	8	9	0
27. Prejudice & Discrimination (Race, Sexual, Age, etc.)	1	2	3	4	5	6	7	8	9	0
28. Unexpected Pregnancy	1	2	3	4	5	6	7	8	9	0
29. Sexual Difficulties	1	2	3	4	5	6	7	8	9	0
30. Concerns About Meaning of Life	1	2	3	4	5	6	7	8	9	0
31. Loneliness	1	2	3	4	5	6	7	8	9	0
32. Too Many Things to Do	1	2	3	4	5	6	7	8	9	0
33. Concerns About Death	1	2	3	4	5	6	7	8	9	0
34. Filling Out This Survey	1	2	3	4	5	6	7	8	9	0

CONGRATULATIONS !! THANKS FOR SPENDING THE TIME AND EFFORT TO FILL OUT THIS SURVEY.

****

PLEASE CHECK TO SEE IF ALL QUESTIONS ARE ANSWERED.
PLACE SURVEY IN SELF-ADDRESSED ENVELOPE PROVIDED AND RETURN IMMEDIATELY.
YOUR RESPONSE IS VITALLY IMPORTANT TO THE PROJECT.

APPENDIX E

PARTICIPATING CHURCHES AND CONTACT PERSONS

Loma Linda University

School of Health
Loma Linda, California 92350
714/824-4546

January 26, 1987

Pastor Chuck Singleton
Loveland Church
16888 Baseline Ave.
Fontana, Ca 92335

Dear Chuck:

It was a real pleasure meeting you at Loveland recently. You have a good program going there. Congratulations!

I'm following up my conversation with you regarding the research I'm presently undertaking in connection with Loma Linda University, where I'm presently a doctoral student. In this survey, entitled Religion and Health Study, we're trying to establish the relationships, if any, between one's religious committment **and** their health practices and health status.

Your church has been selected, primarily because of its non-denominational format, as one of three Black churches that we hope to survey. We will therefore need at least 350 names that are randomly selected from your membership list to whom we would send a onetime questionnaire in the mail along with a stamped self-addressed envelope. Please see enclosed a copy of the questionnaire for your approval.

We sincerely hope that you will grant permission for this study. I've been in touch with your associate, L. Kay Davis, who suggested I write to you.

I'm also very pleased that one of your members, Charlie Redd, has made himself available to help us with the Black Hypertension Taskforce for Riverside/San Bernardino Counties of which I am the chairman.

Thanks again for considering this request and may God's continued blessings attend your church.

Sincerely yours . . . and HIS,

Donald G. King
Doctoral Candidate

Joyce Hopp RN

Joyce Hopp, Ph. D
Research Committee Chairperson

Loma Linda University

School of Health
Loma Linda, California 92350
714/824-4546

January 26, 1987

Rev Paul Banet, SSJ, Pastor
St. Brigid Catholic Church
Parish Community
5214 So. Western Avenue
Los Angeles, CA 90062

Dear Rev. Paul:

It was a real pleasure meeting you at St Brigid this past Sunday. My family immensely enjoyed the warm fellowship and beautiful music. You have a good program going there. Congratulations!

I'm following up my conversation with you regarding the research I'm presently undertaking in connection with Loma Linda University, where I'm presently a doctoral student. In this survey, entitled Religion and Health Study, we're trying to establish the relationships, if any, between one's religious committment **and** their health practices and health status.

Your church has been selected as one of three Black churches that we hope to survey. We will therefore need at least 350 names that are randomly selected from your membership list to whom we would send a onetime questionnaire in the mail along with a stamped self-addressed envelope. I left a copy of the questionnaire for your approval with the Director of Religious Education, Mrs. Marion Fussey.

We sincerely hope that you will grant permission for this study.

Thanks again for considering this request and may God's continued peace and blessings attend your church.

Sincerely yours . . . and HIS,

Donald G. King
Doctoral Candidate

Joyce Hopp, R.N.
Joyce Hopp, Ph. D
Research Committee Chairperson

Loma Linda University

School of Health
Loma Linda, California 92350
714/824-4546

January 26, 1987

Elder Gerald D. Penick
Riverside Kansas Avenue
Seventh-day Adventist Church
4491 Kansas Avenue
Riverside, CA 92507

Dear Gerald:

I'm following up my conversation with you regarding the research I'm presently undertaking in connection with Loma Linda University, where I'm presently a doctoral student. In this survey, entitled Religion and Health Study, we're trying to establish the relationships, if any, between one's religious committment **and** their health practices and health status.

Your church has been selected as one of three Black churches that we hope to survey. We will therefore need at least 350 names that are randomly selected from your membership list to whom we would send a onetime questionnaire in the mail along with a stamped self-addressed envelope. Please see enclosed a copy of the questionnaire for your approval.

We sincerely hope that you will grant permission for this study.

Thanks again for considering this request and may God's continued blessings attend your church.

Sincerely yours . . . and HIS,

Donald G. King
Doctoral Candidate

Joyce Hopp, Ph. D
Research Committee Chairperson

APPENDIX F

INVITATIONS TO SUBMIT MANUSCRIPTS OF STUDY

PRINCETON
THEOLOGICAL
SEMINARY

May 26, 1987

Donald G. King
25744 Mira Monte Street
Redlands CA 92373

Dear Mr. King:

Thank you for your letter of May 21. The topic that you describe falls under the purview of the journal. I would not be able to judge whether we would have interest in publishing the study until we had a chance to see it. Since ours is a refereed journal, you would need to send three copies.

Sincerely,

Donald Capps

Donald Capps, Editor, *Journal for the Scientific Study of Religion*
Princeton Theological Seminary, CN 821, Princeton, NJ 08542 609-921-8300, Ext. 364

UNIVERSITY OF MARYLAND
DIVISION OF HUMAN AND COMMUNITY RESOURCES
COLLEGE OF PHYSICAL EDUCATION, RECREATION, AND HEALTH
COLLEGE PARK 20742

DEPARTMENT OF HEALTH EDUCATION
PERH BUILDING, VALLEY DRIVE

PHONE: 301 - 454-2629

To: Health Education Researchers

From: Robert H. L. Feldman and James H. Humphrey, Editors, HEALTH EDUCATION: CURRENT SELECTED RESEARCH

Re: Volume II

AMS Press, Inc. will continue with this annual and at the present time we are beginning to make preparations for Volume II. We are in the process of contacting those individuals who have conducted and/or directed quality research over the years in health education. If you, any of your associates, or graduate students have completed or expect to complete a research study in health education we invite you to submit it for consideration for publication.

We look forward to hearing from you and hope you will have a paper to submit. (See enclosure for details).

Abstract looks interesting
Please send final paper
to be included in yearbook RHLF

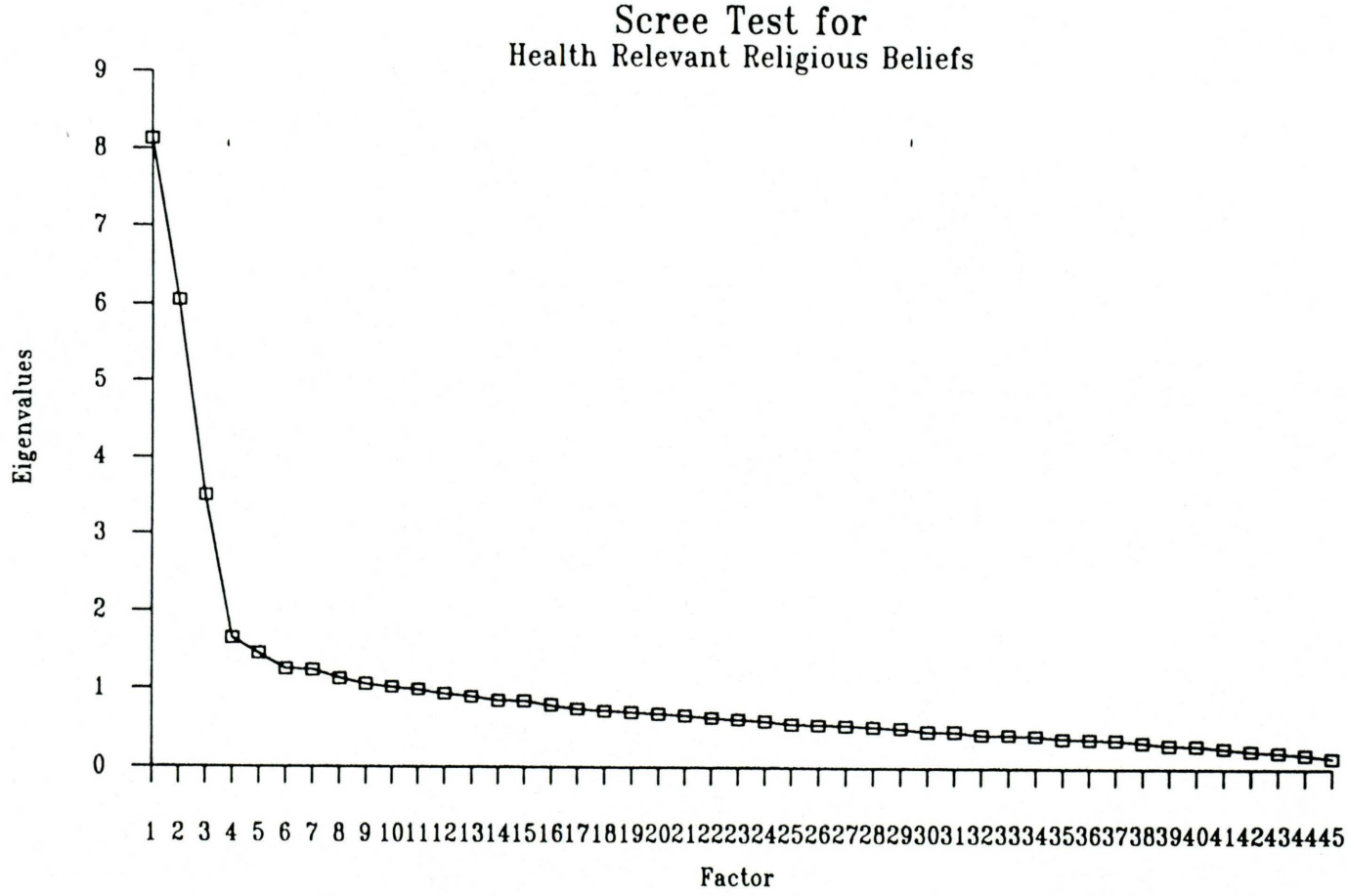
APPENDIX G

STATISTICAL TABLES

TABLE 9

FACTOR LOADINGS FOR RELIGIOUS COMMITMENT SCALES

Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Item Number on Original Scale	
						I. ORGANIZATIONAL ACTIVITY & ORIENTATION TO GROWTH/STRIVING
.75	.13	.21	.16	.05	B10.	I keep pretty well informed about my congregation and have some influence on its decisions.
.74	.19	.19	.13	.14	B11.	I enjoy working in the activities of the Church.
.71	.08	.09	.24	.31	C15.	How would you rate your activity in your congregation? (Inactive, Active, Very Active)
.70	.07	.31	.29	.09	C4.	How often do you spend evenings at church meetings or in church work?
.68	.18	.26	.04	.05	B9.	Church activities (meetings, committee work, etc.) are a major source of satisfaction in my life.
.60	.05	-.14	.06	.35	C16.	List the number of church offices, committees, or jobs of any kind in which you served during the past twelve months. (None, One to three, Four or more)
.55	.15	.41	.32	.01	C9.	How often in the past year have you shared with another church member the problems and joys of trying to live a life of faith in God?
.54	.15	.39	.36	-.08	C11.	How often have you personally tried to convert someone to faith in God?
.54	.09	.39	.27	-.07	C10.	How often do you talk about religion with your friends, neighbors, or fellow workers?
.47	.01	.30	.23	.19	C6.	How often have you taken Holy Communion (The Lord's Supper, the Eucharist) during the past year?
.45	-.07	.35	.36	-.30	C12.	During the last year, how often have you visited someone in need, besides your own relatives?
						II. CREEDAL ASSENT
.05	.85	.10	.14	.09	B3.	I believe that Christ is a living reality.
.09	.83	.08	.12	.09	B4.	I believe that God revealed Himself to man in Jesus Christ.
.12	.79	.15	.06	.13	B1.	I believe in God as a Heavenly Father who watches over me and to whom I am accountable.
.01	.79	.14	.08	.14	B2.	I believe that the Word of God is revealed in the Scriptures.
.15	.74	.15	.08	-.14	B5.	I believe in salvation as release from sin and freedom for new life with God.
.06	.72	.14	.08	.01	B6.	I believe in eternal life.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