The Relationship Between Meaning in Life & the Utilization of Health Care Services: An Epidemiological Cross-Sectional Study

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Matthew James

1993
THE RELATIONSHIP BETWEEN MEANING IN LIFE AND THE UTILIZATION OF HEALTH CARE SERVICES: AN EPIDEMIOLOGICAL CROSS-SECTIONAL STUDY

A Thesis
Presented to
the Faculty of the Department of Public Health
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
Matthew James Eitutis
August 1993
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THE RELATIONSHIP BETWEEN MEANING IN LIFE
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AN EPIDEMIOLOGICAL CROSS-SECTIONAL STUDY

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Director of Thesis

Wayne Reggin

Jimmie D. Price

College Dean 8/5/93

Graduate Studies 8/10/93
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The purpose of this study was to assess the relationship between meaning in life and utilization of health care services. An epidemiological, cross-sectional study was performed on a sample of 282 students at Western Kentucky University and 49 employees at the Barren River District Health Department. Study participants completed the Life Attitude Profile--Revised and the Participant Data Sheet. The data gathered and analyzed via correlation analysis showed no overall significant relationship between the two variables for this sample. The possible impact that overall mental health status has on the utilization rates of health care services must be examined in the future in order to better meet the medical needs of the general population of United States.
Chapter 1

INTRODUCTION

In 1990, health care costs in the United States increased approximately three times above the overall inflation rate, accounting for more than 12.3% of the 1990 gross domestic product (GDP). It is estimated that by the year 2000 U.S. health care costs will exceed $1.7 trillion, equivalent to 18.0% of the GDP (Agency for Health Care Administration (AHCA), 1993). A notable insufficiency of the system is the lack of adequate health insurance for all American citizens. Even though the U.S. offers the most technologically advanced health care system in the world, there are still approximately 37 million Americans that are uninsured (AHCA, 1993). South Africa and the United States are the only major industrialized nations that do not provide a national health care program for their citizens.

The primary avenue for health care coverage for Americans is through their employers, however, only 56% of American companies offer their employees health benefits (AHCA, 1993). The accessibility of health care coverage for Americans is based on several
factors. Today, affordability is the major component for obtaining health care coverage in American society. The health care system possesses a significant gap which is preventing indigent and lower socioeconomic persons from receiving many health services. One of the primary causes is that impoverished families are earning just above the minimum amount required to receive health care coverage from Medicaid. At the other end of the spectrum are well-insured individuals that choose their health care provider without regard to cost.

**Purpose of the Study**

The purpose of this research study was to assess the relationship, if any, between meaning in life and utilization of health care services. Of particular interest are individuals who may have increased their usage of health care services and simultaneously demonstrated low meaning in life.

**Need for the Study**

The United States' health care system is profit motivated and not equitably accessible. Many citizens suffer from the inadequacies that have resulted from the evolution of this uncoordinated, fragmented system.
It is essential to understand why persons utilize health care services in order to provide a more efficient delivery system to all individuals in need of medical care.

The behavioral model of health services utilization describes predisposing variables such as demographic characteristics (i.e., age, sex, and family size), social structural variables (i.e., race, ethnicity, education, employment status, and occupation), beliefs (i.e., general beliefs about the value of health services of physicians' knowledge of disease) (Torrens, 1993). According to this model such variables as ethnicity, education, and occupation are indicative of the importance of lifestyle and environmental influences on each person's decision to seek medical care. However, this model does not account for all the variance in health utilization behavior.

It is essential that additional factors be identified as underlying reasons that contribute to utilization of health care services. Factors such as meaning in life should be studied to determine whether they influence utilization of health care services.
Hypothesis

The following hypothesis was tested:

1. There will be no association between utilization of health care services and subjective perceptions of meaning in life as measured by the Life Attitude Profile--Revised.

Delimitations

The participants in this research study were delimited to students at Western Kentucky University and employees at the Barren River District Health Department between June 1, 1991 and March 31, 1993.

Limitations

The limitations of this research study were as follows:

1. Study participants were selected from only Western Kentucky University and the Barren River District Health Department, the results are thus not applicable to the general population.

2. Students chosen for the sample may not be representative of the student population at Western Kentucky University.

3. This study was designed to assess each subjects current meaning in life among a sample of
students and employees. It is impossible to determine whether these levels of meaning in life existed within the subjects prior to utilization of health care services. It is not possible to determine if meaning in life levels were the cause of increased utilization of health care services or just a consequence of it.

Assumptions

The assumptions of this study were as follows:

1. It is assumed that the subjects responded to the questionnaires honestly and to the best of their ability.

2. It is assumed that subjects in the study understood how to complete the questionnaires properly and did so.

3. The interviewer presented the questionnaire to the subjects in an unbiased manner.

Definitions

The following terms are used throughout this thesis:

1. Existentialism - an introspective humanism or theory of man that holds that human existence is notably describable or understandable in either
scientific or idealistic terms. It relies upon a phenomenological approach that emphasizes the analysis of critical borderline situations in man’s life and especially of such intensely subjective phenomena as anxiety, suffering, and feelings of guilt. These are essential in order to show the need for making decisive choices through a utilization of man’s freedom in an uncertain, contingent, and apparently purposeless world (Webster’s Third New International Dictionary, 1969).

2. Logotherapy - is a meaning-centered psychotherapy; focuses on the future, on the meanings to be fulfilled by the patient in his/her future (Frankl, 1959).

3. Utilize - to make useful; turn to profitable account or use (Webster’s Third New International Dictionary, 1969).
Chapter 2
Review of Literature

Predictors of Health Care Utilization

The utilization of health care services is dramatically increasing in the United States, and there are no indications that these rates will decline. However, research has identified several predictors that have a significant impact on the utilization rates of health care services.

Age

Throughout the development of our health care market age has been demonstrated to be a significant influence on the utilization of health care services. The individuals that utilize the health care system most can be found at both ends of the age spectrum. Compared to any other age group, children under six and people 55 and older have utilized certain health care services more often. Specifically, these age groups have shown a significantly higher utilization of physician contacts and average more physician visits than any other age group. Furthermore, children under six had higher rates of telephone contact with physicians than the older people. Individuals 55 and
older were more likely to visit a physicians office
(National Center for Health Statistics (NCHS), 1986a;
National Center for Health Statistics (NCHS), 1991a).
These results show the increased need for care of these
individuals during these intervals in their lives.

Several other variables that are directly related
to age are admissions, discharge, and length of stay.
Omitting hospitalizations for delivery, these items
tend to rise with age. Research indicates that as
persons age they are more likely to undergo certain
operations and diagnostic, nonsurgical procedures. One
particular age group, 25 to 44 years of age, possesses
the highest rate of inpatient psychiatric usage (NCHS,
1991a). Unlike the relationship between age and
overall utilization, children 18 years and younger
maintain the lowest rate of inpatient psychiatric
services (NCHS, 1991a). One area in which utilization
differs greatly is nursing home usage; the majority of
nursing home residents are elderly. The National
Center for Health Statistics (1991a) reports that
persons 85 and older contribute 220.3 residents per
1,000 population to the nursing home industry.
**Gender**

Gender plays a meaningful role in the utilization of health services. Females utilized more services than males. Men tended to seek physician care considerably less than women (Maurana, 1981; Muller, 1986). Males, however, were more inclined to attend emergency rooms and hospital outpatient departments. Females more frequently contacted a physician by phone for medical advice as opposed to males (NCHS, 1986a; NCHS, 1991a). Another notable difference is that males tended to be less likely to attend a physician when they exhibited symptoms of illness than females (Maurana, 1981; Muller, 1986).

When utilization is examined by physician visits females visited a physician on average 5.8 times per year, compared to men at 4.8 visits (NCHS, 1991b). According to the National Center for Health Statistics (1991b), females were hospitalized at a much higher rate than males.

An earlier study, the National Center for Health Statistics Hospital Discharge Survey (1989) indicated that males rated higher, 105.3 per 1000 compared to 111 per 1000 for females, even after all obstetrical care
was eliminated (NCHS, 1990). When hospitalization rates were analyzed even further, this same study identified males spending more days, 7.0, on the average as an inpatient than females, 6.1, in 1989.

Compared to males, females exhibited a threefold utilization increase in nursing homes and other personal care facilities, (Ermann, 1985; NCHS, 1991a). When discussing the extreme elderly, 85 or older, females comprise a majority of this populace. Mental hospital services differ also when comparing gender and rates of utilization. Males have been admitted to state and county mental hospitals almost two times as often as females (NCHS, 1986a; NCHS, 1991a).

This trend is slightly evident in admission rates for private psychiatric hospitals, 92.1 for males and 81.5 for females. However, a different effect was found between nonfederal general hospitals for inpatient psychiatric treatment and gender. Women had an increased rate (335.5) when compared to men (327.6) (NCHS, 1986a; NCHS, 1991a). Nevertheless, females have shown a higher utilization pattern in the past than have males (NCHS, 1983; NCHS, 1991a).
Race

Past research has indicated that African Americans tended to utilize the care of a physician much less than whites. In 1964, 67.3% of whites had visited a physician compared to just 57.0% of African Americans. This variation declined substantially between 1964 to 1989. In 1989, 77.0% of African Americans had seen a physician in contrast to 78.2% of whites (NCHS, 1990).

However, a reverse trend had been occurring regarding the average number of visits each group sought. In 1971, African Americans averaged 4.4 visits annually in contrast to 5.0 visits for their white counterparts. Just eighteen years later this difference enlarged to 5.5 visits annually for whites and just 4.9 for African Americans (NCHS, 1986a; NCHS, 1990; NCHS, 1991a). Other research has shown that African Americans tended to utilize various preventive procedures such as blood pressure checks and pap smears just as often as the white populace (Hankin & Oktay, 1979; NCHS, 1986b).

The National Center for Health Statistics reported that in 1988 only 61.1% of African American
women sought physician care in the first trimester of pregnancy compared to 79.4% of white women (NCHS, 1986a; NCHS, 1991a). Results of this same study revealed that African Americans tended to utilize outpatient departments and emergency rooms more than whites, subsequently, whites were more likely to contact a physician by telephone or an office visit.

According to the National Center for Health Statistics (1986a; 1991a), hospital discharge rates for African Americans began to decline to rates comparable to whites. In 1989, African Americans averaged longer inpatient stays (7.6 days) than whites (6.9 days). Conversely, in 1985 nursing homes were comprised of just 35.0 per 1,000 population of African Americans and 47.7 per 1,000 population of whites (NCHS, 1986a; NCHS, 1991a).

A much larger percentage of whites visited the dentist annually, 58.4%, compared to just 42.6% of African Americans. Furthermore, once contact has been established with a dentist whites tend to average more visits, 2.1 and 1.3, respectively (NCHS, 1986a). Whites were more inclined to use preventive services, while African Americans tended to utilize dental
services that require restorative procedures and treatment of serious conditions more often (U.S. Department of Health and Human Services, 1980; Aday & Forthofer, 1992).

**Ethnicity**

Access to health care for Mexican Americans is improving; however, they continue to confront obstacles in route to adequate and necessary medical care. In a National Health Interview Survey from 1978 to 1980, 33.1% of Mexican Americans reported they had not seen a physician within the last year (NCHS, 1984). Mexican Americans ranked last compared to all other major Hispanic groups and averaged 4.3 visits overall, the smallest average compared to all other major Hispanic groups. Puerto Ricans averaged 6.1 physician visits, but 20.4% of them had not attended a physician within the last year (NCHS, 1984). Only 76.7% of Cuban-Americans visited a physician with persons averaging just 5.8 visits per year. The remaining Hispanics averaged 5.1 visits per year, and 23.9% of them had no contact with a physician for that year (NCHS, 1984).

Furthermore, Mexican Americans, four years and
older, were rated last among all major Hispanic groups to visit a dentist. Whites visited the dentist 55.8% and African American rates were similar to the Mexican Americans, 36.9%. Mexican Americans were also reported to be the highest in percentage of a sub population (17.4%) that had never seen a dentist. Similar evidence was found to be true about the status of hospital utilization by Mexican Americans. Mexican Americans are considered to be the least likely to be hospitalized and spend fewer days in the hospital when compared to other Hispanic groups (NCHS, 1984).

Anderson, Giachello, and Aday (1986) suggest that an irregular number of Mexican Americans are without medical insurance, which creates an obstacle to their receiving medical care. Other restraints include the inability to communicate, longer waiting times to see a physician, and the attitudes of the providers towards Mexican Americans.

**Education**

An individual's level of education may be indicative of the rate of preventive health care service utilization. Several researchers suggest that
the more highly educated individuals are the more apt they are to utilize such services as immunization, general physical, diagnostic screening, and health promotion practices. The better educated individuals are the more they tend to see a dentist and have more visits once the initial contact has been made. Conversely, the researchers assert that people with less education are more likely to have increased hospitalizations (Aday & Eichhorn, 1972; Maurana, Eichhorn & Lonnquist, 1981).

Medicaid and Medicare

The introduction of Medicaid and Medicare services began in the 1960’s; with these services came a lasting change in the rates of utilization among lower income people. In 1964, of those people with family reported incomes of less than $10,000, only 57.5% reported visiting a physician. However, families with incomes of $35,000 or more reported that 73.0% had received physician care (NCHS, 1986a). In 1989, twenty-five years later, the percentages were 76.2 and 81.9%, respectively. This new trend is also evident in average number of visits to a physician, 6.3 and 5.2, respectively. Several sources have agreed that
the rate at which the lower income families utilize preventive procedures is still much lower than that of their higher income counterparts (Andersen, Aday, & Lyttle, 1987; NCHS, 1986a). Another source reports that lower income subgroups do have a lower rate of physician visits, relative to the disability days or symptoms they experience, than do high income individuals (Aday & Eichhorn, 1972; Maurana, Eichhorn, & Lonnquist, 1981).

**Income**

The National Center for Health Statistics reports that lower income (48.5% for those with less than $14,000 income in 1989) people do report less actual visits to a physicians office than higher income groups (63.4% for those with income of $50,000 or more). Income groups with less than $14,000 income report they use outpatient departments or emergency rooms 18.0% compared to just 10.7% for those whose income is $50,000 or more. Conversely, the higher income individuals noted a 13.6% usage in telephone contacts while lower income groups used the telephone just 10.8% of the time (NCHS, 1986a; 1991a).
A direct correlation was also noted between level of income and dental services rendered. Of persons that make $10,000 or less, 13.4% received no dental care in 1986. Individuals who had incomes of $35,000 or more reported only 7.1% of nonusage (NCHS, 1986a; NCHS, 1991a). Mean visits also varied greatly between the two groups, with the higher income group averaging more visits per year. Rates of hospital admissions, total days of care, and average stays are higher for low income people (NCHS, 1989). This pattern is directly related to the poorer health status and more severe medical problems of this group (Torrens, 1993).

Residence

Place of residence has a significant impact on the utilization of health care services. The results tended to be lower for people who live outside metropolitan statistical areas (MSA) (NCHS, 1986a; NCHS, 1991a). The National Center for Health Statistics (1986a) reports that people who reside outside an MSA tend to be less likely to see a physician at their office and are less likely to attend hospital emergency rooms or outpatient departments than individuals who reside in cities. Another slight
difference occurs when dental care is examined. In 1986, individuals that lived in MSA’s reported 2.0 visits per year, and individuals that did not reside in the MSA’s reported only a 1.7 average. The difference in percentages that visited a dentist in 1986 was 57.8% and 51.8%, respectively (NCHS, 1991a). The number of discharges per 1,000 people for individuals within the MSA were 89.0 and 105.1 for those outside the MSA’s (NCHS, 1991a).

Many of the predictors of health care service utilization have been identified. But perhaps one of the most noteworthy items that has not yet been discussed is the impact that specific types of need has on the health care market.

Perceived Need

The initial type of need is perceived need or the individuals’ perception of their current health status ranging from excellent, good, fair, to poor. Items that are examined range from the degree to which they distress about their health, the signs and symptoms that each report, and whether they had to go to bed or otherwise limit their usual activities because of
illness or injury (Torrens, 1993). These are indicative of consistently reported increased contact with physicians, higher average increased visits once they attend, and increased lengths of stay (Andersen, Aday & Lyttle, 1987; Aday & Eichhorn, 1972; Hulka & Wheat, 1985; Maurana, Eichhorn & Lonnquist, 1981).

**Evaluated Need**

The second type of need is defined as evaluated need which includes the providers' assessment of the seriousness of displayed symptoms or complaints and diagnoses. Evaluated need is established based on laboratory tests and clinical judgement (Andersen, Aday & Lyttle, 1987; Aday & Eichhorn, 1972; Hulka & Wheat, 1985; Maurana, Eichhorn & Lonnquist, 1981). More research suggests that as the seriousness of physician evaluations increases so does the usage of physician services (Maurana, Eichhorn & Lonnquist, 1981; Wartman, Morlock & Malitz, 1983).

**Medical Insurance**

Today there are nearly 37 million people in the United States that have no health insurance (AHCA, 1993). South Africa and the United States are the only major industrialized nations that do not provide a
national health care program for their citizens. It is estimated that the primary avenue for health care coverage for Americans is through their employers; however, only 56% of American companies offer their employees health benefits (AHCA, 1993).

Many factors present barriers to obtaining adequate health insurance coverage, of them affordability is a fundamental concern. Many indigent and lower socioeconomic persons are not receiving necessary medical care because of the costly rates. Many impoverished families are earning just above the minimum amount required to receive health care coverage from Medicaid. At the other end of the spectrum are the well-insured individuals that may choose their health care provider without regard to cost.

A 1982 national survey collected data on access, utilization, and insurance coverage all of which were examined as significant predictors of health care utilization. Results indicated that people who were uninsured tended not to have seen a physician, were less likely to be admitted to a hospital, and sustained shorter stays once admitted (Andersen, Aday & Lyttle,
1987). These findings substantiate other research confirming a positive relationship between insured persons and utilization rates of health care services (Aday & Eichhorn, 1972; Hulka & Wheat, 1985; Maurana, Eichhorn & Lonnquist, 1981).

**Existentialism**

Existentialism utilizes Freudian concepts as the infrastructure of a culminating new theory and therapy. The development of existentialism resulted directly from moral and societal crises in the nineteenth and twentieth centuries. These crises dealt with several aspects other than philosophy—including identifying one’s being, politics, wisdom, honesty, science, technology, and religion (Gould & Truitt, 1973). The escalation of existentialism coincides with the receding societal decentralization of religious beliefs and customary morals. Existentialism also interrogates the legitimacy and merit of technology and science (Gould & Truitt, 1973). Today it is very difficult for man to even attempt to identify the meaning in one’s life primarily because of societies focus on materialism, the impact of media, and other cultural controversies. One essential key of existential
thought is for the thinker to disconnect man from himself and the world (Blackham, 1952).

Ungersma (1961) defines existentialism as the philosophical method of reacting to these crises. The lineage of existentialism can be sketched back to the advent of several European philosophers, though Kierkegaard is commonly referred to as the initiator of the existential movement. However, it is Pascal who should be given recognition for linking the evolution of existentialism to human nature (Ungersma, 1961).

The theory of existentialism has redirected the spotlight on the person. Corey (1991) describes the central facts of human existence: self-consciousness and the consequent freedom. Of all the contributions that existentialism has given to the philosophical world the most innovative is the picture of death as a positive force, not a morbid prospect to fear, which gives life meaning (Corey, 1991). If persons realize that death is the ultimate conclusion of their existence this realization may add more meaning to their life.

Existentialists are often criticized for dramatizing the customary. It is suggested that
logical people accept the contingency of this world and proceed with life and its enduring tasks (Blackham, 1952). Perhaps, the most emphasized characteristic of existentialism is the freedom that people possess. Persons are viewed as free to choose how each examines and reciprocates to their worlds (Nicholson, 1993).

Some of the noteworthy existentialists are as follows. Jean-Paul Sartre produced an immense amount of work in the field of existentialism, but he particularly concerned himself with the moral problems and became known by many as humanity's "freedom-fighter" (Sabbaghi, 1992). Soren Kierkegaard emphasized the relationship an individual develops with God and that the actions of each person are indelibly responsible to God. He continues by claiming that one should exist as an individual no matter what type of status this individual carries but be dedicated to God's meaning and method of living (Blackham, 1952). Friedrich Nietzsche's work coincides, perhaps, with the irrational approach of existentialism better than any other philosopher in this person-focused theory. Blackham notes that Nietzsche had a personal struggle with his own fate, his psychological approach
to problems, and placed an emphasis on developing a secure ego (Blackham, 1952). According to Johnson (1956):

The central problems of modern Western man are not psychosexual but religio-philosophical. In general they are problems which deal with values. They are problems which raise the question whether life itself is meaningful or without meaning. The problems of contemporary man are no longer the sex and hunger which relate him to the animal but are the varied existential anxieties which arise from the core of man as man (p.36)

Johnson's statement symbolizes the current situation in the Western world today. Ungersma (1961) suggests that the most effective method of dealing with persistent situations is through logotherapy, which advises a realization of the situation and the subsequent evolving of a suitable technique to challenge it (Ungersma, 1961). Corey (1991) describes the dimensions that existentialists believe to be principal considerations of the human state (a) the capability for self-awareness, (b) freedom and responsibility, (c) inventing one's identity and
initiating purposeful relationships, (d) the quest for meaning, (e) anxiety as a part of life, and (f) realization of death and nonexistence.

Furthermore, Nicholson (1993) expresses that such a realization of self-awareness may leave people separated from all other beings in this world. People are subsequently left to select their own reactions to life's crises. Nicholson, however, emphasizes that each of us is not always free to control many aspects of the environment in which we live.

Meaning in life must be discovered individually through loving, striving, and sharing with others as well as the environment. Through living, an individual may find the meaning that is the heart of human existence (Corey, 1991).

Anxiety is interconnected to human freedom. Nicholson (1993) notes, "...anxiety is considered part of the basic human condition; anxiety is the normal result of facing the stresses of life" (p. 26). When confronting anxiety individuals should approach it candidly and honestly.

Albert Camus's novel, The Stranger, supports the idea that life begins with the realization and
knowledge of death (McGuire, 1991). He illuminates further by hypothesizing that the act of living is found neither in birth nor death but in their paradoxical co-existence. Death awareness should be a source of enthusiasm for life. Once it is comprehended that our existence is terminal, this realization should be utilized as an incentive to squeeze our human existence of all it’s worth.

Viktor E. Frankl has been recognized as one of the foremost theorists and therapists in existentialism throughout the latter portion of the twentieth century. Frankl has used the three years he spent in Nazi concentration camps as an inspiration for persons to realize the meaningfulness of human existence. Like many other existentialists, Frankl (1959) concedes that each of us has the freedom to react in any manner to all of life’s crises and challenges.

Logotherapy is a meaning-centered psychotherapy which concentrates on eventuality and on the meanings to be achieved by the sufferer (Frankl, 1959). The premise of logotherapy is solely dependent on man’s freedom to manipulate his/her attitudes. In order to attain meaning in one’s life the patient must embrace
responsibility. Several dimensions exist within an individual's attempt at discovering purpose in life. Of them, existential vacuum, a feeling of a meaningless in life, is caused by a restrained effort to reach one's capacity for meaning. Frankl (1959) hypothesizes that individuals that suffer a vacuum as such are often affected by items independent of the individual, "...impersonal world rather than specific pathology within the individual" (p. 28).

Frankl (1959) identifies the unifying factors that embody the foundation of logotherapy: will to meaning, existential vacuum, realities and potentialities, personal choice and responsibility, and death transcendence. These five items mold an inseparable existential design of human behavior and therapeutic reconciliation.

It is essential that additional factors be identified as underlying reasons that contribute to the utilization of health care services. Factors such as meaning in life should be studied to determine whether they influence utilization of health care services. The task of establishing a link between utilization of health care services and meaning in life is difficult.
Up to this point substantial research and studies have been performed on the suspected predictors of health care utilization—age, gender, income, need, and so on. However, it appears no research regarding the two items of utilization and purpose in life has been done. This effort is necessitated by the condition of the United States health care system. Meaning in life may be an attribute of overall mental health. As such, it might logically contribute to utilization of health care services.
Chapter 3

METHODOLOGY

The purpose of this study was to assess the relationship between meaning in life and utilization of health care services. A cross-sectional research project was performed to study the relationship between specific health care utilization variables and the various scales of the Life Attitude Profile--Revised (Reker, 1991).

Hypothesis

The following hypothesis was tested:

1. There will be no association between utilization of health care services and subjective perceptions of meaning in life as measured by the Life Attitude Profile--Revised.

Population

Graduate and undergraduate students at Western Kentucky University and employees of the Barren River District Health Department made up the population for this study.
Sample Selection

The sample selection was composed of graduate and undergraduate students at Western Kentucky University (WKU) and employees at the Barren River District Health Department who voluntarily participated in answering the Life Attitude Profile--Revised and the Participant Data Sheet. This sample consisted of part-time and full-time students. The majority of the sample taken from WKU consisted of students enrolled in health courses. The researcher announced that the survey would be completely voluntary, anonymous, and would not affect the grades of the participants.

Design and Procedures

This study was an epidemiological, cross-sectional design. The sample consisted of students at Western Kentucky University and employees from the Barren River District Health Department who were used to analyze meaning in life and its possible relationship to utilization of health care services. The instruments used to measure the variables were the Life Attitude Profile--Revised and the Participant Data Sheet.

Students completed the surveys at the beginning of class and the employees completed the survey while
working at their facility. Completion time was approximately fifteen minutes for both questionnaires. All testing was administered by this researcher and a faculty member in the Department of Public Health at Western Kentucky University.

Instrumentation

Participant Data Sheet (PDS)

The Participant Data Sheet (PDS) is a brief, one page questionnaire developed by a public health specialist, health care expert, and a psychologist to collect relevant participant information on each subject (Appendix A). The data sheet is designed to collect information on the following areas (a) demographic data, (b) past utilization of health care services, (c) health insurance status, (d) total family income, and (e) overall health status (Nicholson, 1993).

Life Attitude Profile--Revised (LAP-R)

The LAP-R consists of 36 self-reported items. It is a multidimensional instrument designed to measure attitudes towards life according to specific concepts devised by Viktor Frankl (Appendix B). Developed by Reker and Peacock (1991), it consists of 36, seven
point, Likert scale items that measure six dimensions of attitudes toward life. These scales are Purpose (PU), Coherence (CO), Existential Vacuum (EV), Life Control (LC), Goal Seeking (GS), and Death Acceptance (DA) (Frankl, 1959). The reported internal consistency reliability estimates for these scales range from .66 to .83. The reliability of the complete instrument is .82. The test-retest reliability estimate was .75 for the complete instrument and the scales scores ranged from .56 to .83.

In addition, the LAP-R has two composite scales: Personal Meaning Index (PMI) and Life Attitude Balance Index (LABI). The PMI consists of a two component design which includes possessing life goals; possessing a mission in life; possessing a sense of direction from past, present, and future; and possessing a logically consistent and integrated understanding of self, others, and life in general. The LABI makes a universal measurement of attitudes about meaning in life which includes the motivation to discover the degree of purpose in life. The internal consistency reliability of the LAP-R dimensions and composite scores range from .63 to .87 (Reker, 1991).
The scoring of the LAP-R is straightforward ranging from 1 (strongly disagree) to 7 (strongly disagree) for each item. The items for each respective dimension are added to obtain the scale score. The scores for each of the six dimensions, Purpose, Coherence, Life Control, Existential Vacuum, Death Acceptance, and Goal Seeking range from 6 to 42 (Reker, 1991). Composite scale scores for the LABI range from -60 to 156 while scores for the PMI range from 12 to 84 (Reker, 1991).

**Data Analysis**

The data were transcribed into a computer data file and analyzed using the Statistical Analysis System (Statistical Analysis System (SAS), 1992).

**Health Index (HINDEX)**

A comprehensive measure of health care utilization among the sample will be assessed through the development of the health index (HINDEX). The HINDEX consists of the summation of days spent in the hospital, number of physician visits, incidents of hospitalization, number of work days missed due to illness or injury, number of days confined to bed as a result of illness or injury, subjective perception of
health status, and health insurance status, all of which were obtained from the PDS.

The purpose of designing this assessment technique was to obtain a more comprehensive measurement of the impact that meaning in life has on the health care system. This weighted scale was designed according to the data supplied by the National Center for Health Statistics. According to NCHS (1989), persons 15-44 years old reported 4.6 mean number of physician visits annually. Therefore, if the reported number of physician visits was five or greater the score was doubled. Individuals 15-44 years old also reported a mean hospital stay of 5.5 days (NCHS, 1989). Individuals that claimed they spent six or more days in the hospital within the last year had their score doubled as well. This method places more emphasis on days spent in the hospital and number of physician visits primarily because these variables have proven to impact the health care system significantly more than the other items that have been discussed.

Variables

The independent variable is meaning in life. The dependent variable is utilization of health care services.
Statistical Procedures

Research Hypothesis 1: There will be no association between the utilization of health care services and subjective perceptions of meaning in life as measured by the LAP-R.

A Pearson correlation coefficient was performed to analyze the associations between the LAP-R scales and the following health care utilization variables: number of times hospitalization occurred within the last year, number of days spent in a hospital within the last year, number of physician visits within the last year, number of work days missed due to illness or injury within the last year, and the number of days confined to bed due to illness or injury within the last year. A Point Biserial correlation was utilized to determine the relationship between meaning in life, as measured by the LAP-R, and health insurance status. Finally, a Spearman correlation was utilized to detect any relationship between health status and the LAP-R scales because they are ordinal level data. The Pearson procedure was also used to analyze the relationship between the scores on the Health Index (HINDEX) and meaning in life, as measured by the LAP-R.
Chapter 4

RESULTS

Description of Study Sample

A total of 346 individuals participated in the study. The race distribution consisted of 90.4% white (n=310), 8.2% African Americans (n=28), 0.3% Hispanic (n=1), 0.3% Oriental (n=1), 0.6% Native American (n=2), and 1 other (0.3%). There were 114 male subjects (33.1%) while females contributed 230 cases (66.9%). The sample consisted of 282 students (85.2%) from Western Kentucky University and 49 employees (14.8%) from Barren River District Health Department. The mean age of the sample was 24.39 years (Standard Deviation=8.3; Range=18 years to 64 years).

Income was categorized into five levels. The first level, $15,000 or less (n=49), yielded 14.67%; the second level, $15,001 to $30,000 (n=53), consisted of 15.86%; the third level, $30,001 to $45,000 (n=95), contained 28.44%; while the fourth level, $45,001 to $60,000 (n=62), resulted in 18.56%; and greater than $60,001 (n=75) made up 22.45% of the sample.
Descriptive Data

Table 1 describes the mean data for each health care utilization variable that was measured. When subjects were asked how many times they had been hospitalized within the last year, 92.7% indicated zero days of hospitalization (n=319). Each subject had been hospitalized just 0.23 times within the last year. Number of days spent in a hospital within the last year exhibited relatively small results as well. The total number of physician visits within the last year had a mean of 2.61 visits annually (Standard Deviation=3.99). Descriptive data for missed days of work and days confined to bed due to illness or injury within the last year can also be found in Table 1.

Of the remaining health care utilization variables obtained from the PDS, 304 subjects (88.1%) reported having health insurance, 34 subjects (9.9%) did not, while 7 subjects (2.0%) admitted they were unsure. Self perceived health status results exhibited a mean response of 2.15 (Standard Deviation=0.70; Range=1 to 5). A response of excellent elicited a 15.7% response rate (n=54), 55.4% reported good health status (n=190), 26.2% indicated average health status (n=90), while
Table 1

Descriptive Statistics for Health Care Utilization

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Times hospitalized</td>
<td>344</td>
<td>0.23</td>
<td>2.27</td>
</tr>
<tr>
<td>Days in hospital</td>
<td>335</td>
<td>0.55</td>
<td>5.10</td>
</tr>
<tr>
<td>Physician visits</td>
<td>343</td>
<td>2.61</td>
<td>3.99</td>
</tr>
<tr>
<td>Missed work days</td>
<td>338</td>
<td>1.75</td>
<td>2.86</td>
</tr>
<tr>
<td>Days confined to bed</td>
<td>342</td>
<td>1.97</td>
<td>5.90</td>
</tr>
<tr>
<td>Health insurance status</td>
<td>345</td>
<td>1.14</td>
<td>0.40</td>
</tr>
<tr>
<td>Health status</td>
<td>343</td>
<td>2.16</td>
<td>0.71</td>
</tr>
<tr>
<td>Health index score</td>
<td>340</td>
<td>10.97</td>
<td>13.20</td>
</tr>
</tbody>
</table>

Note. All data reported for the variables are based on incidents that have occurred within the last year.
only 2.6% indicated poor health status (n=9). There were no very poor responses.

The desired direction for the scores on the LAP-R is positive, the higher the score the greater the level of meaning in life for each subject. High Existential Vacuum scores, however, were indicative of lack of meaning, apathy, as well as indecisiveness in search of meaning. Table 2 illustrates the results of each dimension.

**Test of Hypothesis**

There will be no association between utilization of health care services and subjective perceptions of meaning in life as measured by the Life Attitude Profile--Revised.

The Pearson correlation coefficients between five of the health care utilization variables and the LAP-R scales can be found in Table 3. Of all the scores, there was only one statistically significant score (p<.05) between Life Control and the number of times hospitalization occurred within the last year (r=-.15). There were no significant Point Biserial correlations found between health insurance status and any of the LAP-R scales (see Table 4). The Spearman correlation
Table 2

Descriptive Statistics for the Life Attitude Profile--Revised (LAP-R) Scales

<table>
<thead>
<tr>
<th>LAP-R Scales</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Scale Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAPPU</td>
<td>335</td>
<td>30.33</td>
<td>6.15</td>
<td>9-42</td>
</tr>
<tr>
<td>LAPCO</td>
<td>335</td>
<td>31.19</td>
<td>5.53</td>
<td>7-42</td>
</tr>
<tr>
<td>LAPEV</td>
<td>335</td>
<td>23.25</td>
<td>6.78</td>
<td>6-42</td>
</tr>
<tr>
<td>LAPLC</td>
<td>335</td>
<td>33.40</td>
<td>5.25</td>
<td>12-42</td>
</tr>
<tr>
<td>LAPDA</td>
<td>335</td>
<td>26.78</td>
<td>6.94</td>
<td>8-42</td>
</tr>
<tr>
<td>LAPGS</td>
<td>335</td>
<td>31.73</td>
<td>5.29</td>
<td>14-42</td>
</tr>
<tr>
<td>LAPPMI</td>
<td>335</td>
<td>61.54</td>
<td>10.71</td>
<td>17-84</td>
</tr>
<tr>
<td>LAPLABI</td>
<td>335</td>
<td>66.77</td>
<td>20.82</td>
<td>14-127</td>
</tr>
</tbody>
</table>
Table 3

Pearson Correlation Coefficients Between Health Care Utilization Variables and the Life Attitude Profile--Revised (LAP-R) Scales (N=329 for all values).

<table>
<thead>
<tr>
<th>LAP-R scales</th>
<th>Days in hospital</th>
<th>Times hosp.</th>
<th>Physician visits</th>
<th>Work days</th>
<th>Bed days</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAPPU</td>
<td>0.08</td>
<td>0.005</td>
<td>0.04</td>
<td>0.01</td>
<td>0.04</td>
</tr>
<tr>
<td>LAPCO</td>
<td>0.07</td>
<td>-0.01</td>
<td>-0.02</td>
<td>0.003</td>
<td>0.05</td>
</tr>
<tr>
<td>LAPEV</td>
<td>-0.02</td>
<td>0.007</td>
<td>-0.04</td>
<td>0.05</td>
<td>-0.001</td>
</tr>
<tr>
<td>LAPLC</td>
<td>0.06</td>
<td>-0.15*</td>
<td>-0.05</td>
<td>-0.08</td>
<td>0.03</td>
</tr>
<tr>
<td>LAPDA</td>
<td>0.02</td>
<td>0.009</td>
<td>-0.01</td>
<td>-0.04</td>
<td>-0.02</td>
</tr>
<tr>
<td>LAPGS</td>
<td>-0.07</td>
<td>-0.03</td>
<td>-0.005</td>
<td>-0.05</td>
<td>-0.002</td>
</tr>
<tr>
<td>LAPPMI</td>
<td>0.08</td>
<td>-0.002</td>
<td>0.01</td>
<td>0.01</td>
<td>0.05</td>
</tr>
<tr>
<td>LAPLABI</td>
<td>0.08</td>
<td>-0.03</td>
<td>0.005</td>
<td>-0.03</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Note. All data reported for the dependent variables are based on incidents that have occurred within the last year. Times hosp. = times hospitalized within the last year.

* p<.05
Table 4

Point Biserial Correlation Coefficients Between Health Insurance Status and Life Attitude Profile--Revised (LAP-R) Scales (N=339 for all values).

<table>
<thead>
<tr>
<th>Health insurance</th>
<th>LAP-R scales</th>
<th>status</th>
<th>Sign.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LAPPU</td>
<td>-0.08</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>LAPCO</td>
<td>-0.05</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>LAPEV</td>
<td>0.06</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>LAPLC</td>
<td>0.03</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>LAPDA</td>
<td>0.01</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>LAPGS</td>
<td>0.03</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>LAPPMI</td>
<td>-0.07</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>LAPLABI</td>
<td>-0.05</td>
<td>ns</td>
</tr>
</tbody>
</table>

*Note.* ns = not significant at .05.
coefficient used to analyze the relationship between health status and the LAP-R scales (Table 5) showed several significant results (p<.05). The first significant relationship occurred between the Purpose (LAP-R) scale and health status. The second finding was between the Coherence (LAP-R) scale and level of health status. The final significant correlation was found between the Personal Meaning Index (PMI) and health status. Table 5 shows the remainder of the test scores.

The final correlation analysis performed was a Pearson Correlation Coefficient between the Health Index (HINDEX) and the LAP-R scales. No significant differences were found and all results are described in Table 6.
Table 5

Spearman Correlation Coefficients Between Health Status and the Life Attitude Profile—Revised (LAP-R) Scales (N=337 for all values).

<table>
<thead>
<tr>
<th>LAP-R scales</th>
<th>Health status</th>
<th>Sign.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAPPU</td>
<td>-0.20</td>
<td>.001</td>
</tr>
<tr>
<td>LAPCO</td>
<td>-0.18</td>
<td>.001</td>
</tr>
<tr>
<td>LAPEV</td>
<td>0.10</td>
<td>ns</td>
</tr>
<tr>
<td>LAPLC</td>
<td>-0.05</td>
<td>ns</td>
</tr>
<tr>
<td>LAPDA</td>
<td>-0.003</td>
<td>ns</td>
</tr>
<tr>
<td>LAPGS</td>
<td>0.005</td>
<td>ns</td>
</tr>
<tr>
<td>LAPPMI</td>
<td>-0.20</td>
<td>.001</td>
</tr>
<tr>
<td>LAPLABI</td>
<td>-0.16</td>
<td>ns</td>
</tr>
</tbody>
</table>

Note. ns = not significant at .05.
Table 6

Pearson Correlation Coefficients Between the Health Index and the Life Attitude Profile--Revised (LAP-R) Scales (N=335 for all values).

<table>
<thead>
<tr>
<th>LAP-R scales</th>
<th>HINDEX scores</th>
<th>Sign.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAPPU</td>
<td>0.05</td>
<td>ns</td>
</tr>
<tr>
<td>LAPCO</td>
<td>0.01</td>
<td>ns</td>
</tr>
<tr>
<td>LAPEV</td>
<td>-0.01</td>
<td>ns</td>
</tr>
<tr>
<td>LAPLC</td>
<td>-0.06</td>
<td>ns</td>
</tr>
<tr>
<td>LAPDA</td>
<td>-0.02</td>
<td>ns</td>
</tr>
<tr>
<td>LAPGS</td>
<td>-0.02</td>
<td>ns</td>
</tr>
<tr>
<td>LAPPMI</td>
<td>0.03</td>
<td>ns</td>
</tr>
<tr>
<td>LAPLABI</td>
<td>0.006</td>
<td>ns</td>
</tr>
</tbody>
</table>

Note. ns = not significant at .05.
Chapter 5

CONCLUSION

An epidemiological, cross-sectional study was performed to determine the relationship between meaning in life and the utilization of health care services for Western Kentucky University students and employees of the Barren River Area District Health Department. Subjects completed the Life Attitude Profile--Revised and the Participant Data Sheet.

Summary of Results

After correlating the scores on the LAP-R with the health care utilization variables obtained from the PDS, there were no overall significant differences found, as measured by correlation coefficients. There was, however, one very weak negative significant relationship between Life Control of the LAP-R and the total number of times hospitalized within the last year. Similarly, there were several very weak relationships between health status and the specific LAP-R scales. They exist between Purpose, Coherence, and the Personal Meaning Index scales of the LAP-R and health status.
Correspondingly, no significant differences were found between the Health Index (HINDEX) and the LAP-R scales as measured by the Pearson correlation coefficient.

Discussion

The most significant problem encountered with this study was the sample population. The sample studied did not include an equivalent representation of race, gender, or age. The majority of this sample were students at Western Kentucky University. The mean age for this sample was 24.39 years old. Since the majority of this sample was so young the health status and morbidity rates were very low. Therefore, it would be very difficult to determine the relationship between meaning in life and health care utilization in such a young and healthy sample.

Another difficulty with this study was developing a comprehensive health care utilization variable. Once the data were collected and entered on the data base, it became apparent that the statistical analysis would not include a comprehensive look at how the overall health care system would be impacted by meaning in life, as measured by the LAP-R. Using the
health care variables from the PDS a weighted scale was designed to form the Health Index (HINDEX).

Several ingredients of the HINDEX had a much more significant impact on total health care utilization; thus, they were weighted more. Days spent in the hospital within the last year and total number of physician visits were considered to be the prime impactors according to the health care expert. Data from the National Center for Health Statistics were used as a guide in weighting these two variables. If the score for each of these variables was higher than the mean then the score was doubled. The actual number for all other variables of the HINDEX were just incorporated into the model.

The final problem experienced was the difficulty in finding relevant literature that links these two variables. It appears that research has not yet been performed to determine this possible relationship.

Limitations

The major limitation of this study was the sample population used. As noted in the results, no overall significant relationship was found between meaning in
life and health care utilization. Thus, the results are not applicable to the general population. The sample selected for this study was not representative of population race, gender, age, and income levels.

It was also impossible to determine whether the subjects evaluated level of meaning in life existed within the subjects prior to utilization of health care services. It is very difficult to determine whether a level of meaning in life was the cause of increased utilization of health care services or just a consequence of it.

**Conclusions**

Within the context of this study and its limitations, there was no overall significant relationship found between meaning in life and utilization of health care services. However, very weak correlations were found to between LAP-R scales and specific health care utilization variables.

**Recommendations**

1. Future research should attempt to obtain a more representative sample.

2. Future research should develop a more sensitive model of overall health care utilization.
3. Future research should attempt to discover the impact that meaning in life, as well as overall mental health, has on the health care system.
References


Western Kentucky University, Bowling Green, Kentucky.


