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Exploring the Role of Faith in Survival of Breast Cancer

Franklin D. Lewis, Jr.
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Walden University

College of Health Sciences

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Franklin Lewis

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Walden University
2016

Abstract

Exploring the Role of Faith in Survival of Breast Cancer

by

Franklin D. Lewis, Jr.

MS, Walden University, 2007

MA, University of Colorado at Colorado Springs, 2000

BS, Lee University, 1989

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

Walden University

November 2016

Abstract

In 2013, approximately 232,340 women were diagnosed with breast cancer, and an estimated 39,620 women would die as a result of breast cancer. Stage I breast cancer can often be treated, but Stage IV breast cancer presents more difficulties in treatment, as it spreads to the bones, liver, or other areas of the body. Consequently, women with Stage IV breast cancer have very low 18 month and 5-year survival rates. According to some statistics, 79.5% of the United States population claim to be Christian. Much of this segment of the population uses faith to guide most aspects of their lives, including issues pertaining to their health. The purpose of this study was to explore how women integrated faith into their lived experience of combating cancer. This mixed method phenomenological study examined the perceived attributions for survival among a group of 32 breast cancer survivors of various ages and cancer stages in the tristate area of Kentucky, Indiana, and Ohio. Faith related attributions for survival were more commonly reported among women who also reported affiliation to Christianity than women who did not express religious affiliation; however, faith related attributions often also incorporated the restorative effects of standard medical procedures. The implications for positive social change in this study includes the potential inclusion of faith in developing culturally appropriate strategies for treatment and recovery of many illnesses, including cancer.

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Acknowledgements

I want to thank God first and foremost for allowing me the opportunity to complete such a study and literally being the inspiration for a study like this. I have seen Him perform miracles, which was a major part of wanting to see how others view His help.

I also want to offer my sincere gratitude to my committee chair, Dr. Precilla Belin, for the help and guidance she provided. I also appreciate my other committee members, originally Dr. Daniel Roysden and then Dr. Frazier Beatty, who also gave me positive guidance and support. The other support staff and academic advisors at Walden also understood and were helpful in the completion of my study when I had trouble gathering data, and they extended my completion time. I cannot show enough appreciation for that. I want to thank the faculty at Mid-Continent University, where I worked, who gave me guidance and helped as I worked on my dissertation, especially Dr. Keith Roach, who was extremely helpful with the statistics portion of my study as well.

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Chapter 1: Introduction to the Study

Introduction

Next to skin cancer, breast cancer is the most common type of cancer affecting women in the United States (National Cancer Institute [NCI], 2012). Estimates from 2013 reported that 232,340 American women would be diagnosed with breast cancer (NCI, 2013). Breast cancer is diagnosed in different stages from Stage 0 to Stage IV with the letters A, B, and C (NCI, 2012). Stage 0 indicates abnormal cells lining the breast duct that are still attached to the duct and have not invaded nearby breast tissue (NCI, 2012). Early-stage breast cancer is known as Stage I with tumors being no more than two centimeters (3/4 of an inch) across that have not spread to the lymph nodes (NCI, 2012). Stage II tumors are between two and five centimeters across and have usually spread to the underarm lymph nodes (NCI, 2012). This stage could also include tumors that have not invaded underarm lymph nodes if they are greater than five centimeters (about the size of a lime) across (NCI, 2012). Stage III cancer tumors could be less than five centimeters across and spread to underarm lymph nodes and be attached to each other or nearby tissue (NCI, 2012). Stage IIIC is more advanced and has spread to lymph nodes behind the breastbone as well as nodes under the arm and above or below the collarbone (NCI, 2012). Stage IV tumors can be any size and can be located in other parts of the body like the liver, lungs, bones or the brain (NCI, 2012). This is the most dangerous stage (NCI, 2012). Treatments may be available, although success is not always guaranteed.

Many different treatments are available for cancer patients (Lobo, 2012; Susan, 2013). Even when female cancer patients seek every treatment option available, the prognosis for survival still looks dismal for those with advanced cancer (Susan, 2013). The 5-year survival rate for women with Stage IV breast cancer was only 15% (Susan, 2013). At this stage, many patients feel like faith in God is their only hope (Chapple, Swift, & Ziebland, 2011). Although breast cancer affects women of all ages, races, and faiths throughout the world, in this study I focused on breast cancer survivors in the tristate area of Kentucky, Indiana, and Ohio, many of whom were self-identified Christians, a key demographic for this study.

A belief in God's provision covers many public health issues. My focus in this study was to determine if a correlation between survival of breast cancer and faith might exist. I focused on one belief system, Christianity. Including all faiths would make the study too broad; however, future studies including other religions may be worth pursuing. This study was limited to women in the tristate area of Kentucky, Indiana, and Ohio. Some of the women were self-identified Christians who also used medical treatments for cancer, while others did not claim a faith in God but had also undergone medical treatments. Women who did not receive cancer treatments but still recovered were also included in the study. This group might show an even stronger correlation between faith and survival, especially because breast cancer is the second most common cancer affecting women in the United States (NCI, 2012).

I will begin Chapter 1 with a discussion of traditional methods of cancer treatment as well the importance of a person's faith in recovery. This discussion will indicate if

there is validity for a faith-based approach dealing with cancer and cancer recovery.

Next, I will explain the threat and potential loss of life due to Stage IV breast cancer.

Then, the research question and hypothesis of the study will be addressed, followed by an explanation of why a phenomenological approach was chosen due to the fact that the unexplained phenomenon of healing is being studied. The chapter will continue with the definitions of terms such as Christian faith, Stage IV breast cancer, and recovery as used in the study, as well as the basic assumptions, limits, and delimitations of the study before ending with a conclusion.

Background of the Problem

According to U.S. Cancer Statistics (USCS), breast cancer is the second leading cause of cancer deaths in women (The Centers for Disease Control and Prevention [CDC], 2012). Accounting for about 27% of new, noncutaneous cancers in women, breast cancer is the most common malignancy (Barcenas et al., 2010). It has been reported recently that breast cancer occurs in approximately one in eight women (Barcenas et al., 2010).

Various traditional treatments exist and have proven to be successful in recovery from cancer (Susan, 2013). However, the survival rate for Stage IV breast cancer is still relatively low. According to the Susan G. Komen Foundation (2013), the 5-year survival rate, which refers to a woman who lives 5 years beyond her diagnosis for Stage IV breast cancer is only 15%. This percentage is drastically different when compared to the 5-year survival rate for Stage I breast cancer, which is 88% (Breastcancer.org, 2014).

Many treatment options exist for women with breast cancer that vary depending upon the patient, the stage of cancer, or the size and location of the tumor (NCI, 2012). Surgery is the most common treatment in which either part of or the complete breast is removed (NCI, 2012). This may include reconstructive surgery after the cancer is removed (NCI, 2012). Radiation therapy kills cancer cells using high-energy rays and affects cells only in the part of the body being treated (NCI, 2012). It can be administered from the inside of the body or outside the body (NCI, 2012).

There are other types of systemic therapies including hormone therapy, chemotherapy, and targeted therapy. With these treatments, a drug enters the bloodstream and either destroys or controls the cancer (NCI, 2012). Hormone therapy prevents the cancer cells from using the body's natural hormones estrogen and progesterone for growth (NCI, 2012). Chemotherapy kills cancer cells with drugs and may be given before or after surgery (NCI, 2012). Targeted therapy may be used if a woman tests high for HER2 protein, the protein that helps cancer cells grow (NCI, 2012). Targeted therapies block cancer cell growth by blocking the action of the extra protein (NCI, 2012).

Clinical trials are also available for some patients. These are experimental treatments with many restrictions that are closely monitored (NCI, 2013b). They may be useful, but they may also have a high risk factor and should not be entered into lightly (NCI, 2013b).

Chapter 2 will go into more detail about these various treatments that will include the various stages at which they can be used and the potential side effects of each

treatment. Sometimes, when these options have failed, a woman's faith in God is all she has left for treatment. This option may also include a strong faith-based support system.

Support for people living with cancer is considered critical for many patients. According to NCI (2012), the patient may often need her family and friends to cope with the feelings that diagnosis can bring. Other types of support include the doctors, nurses, and other members of the healthcare team as well as social workers, counselors, and members of the clergy (NCI, 2012). This support is an area where faith in God seems to be critical to many women (Chapple, Swift, & Ziebland, 2011). According to Matthews (1998) for some people, God is who they can still rely on when medicine fails and prayer takes place, and all the Christians I know feel God is available whenever needed, day or night, with a simple prayer.

Statistics show that 79.5% of the U.S. population claims to be Christian (Pew, 2013). With this many citizens claiming Christianity as their faith, a study about certain impacts of this faith is valuable. In the Christian community, I have observed that many people rely on faith for most aspects of their lives and that many times these individuals are mocked or belittled for their very real beliefs. In this study, I will discuss several studies that have shown evidence that the idea of relying on faith is often valid. One study, conducted by Ross, Hall, Fairley, Taylor, and Howard (2008), showed prayer is the most commonly used form of complementary and alternative medicine (CAM). Ross et al. looked at 2,262 men and women with a history of cancer, and their results showed that 68.5% reported having prayed for their health and 72% of them stated they had a good or better health status. Within this group, 88% of the individuals prayed during the

past year and most of the people who reported good or better health were younger females, had higher levels of education and income, and had no history of additional chronic diseases (Ross et al., 2008). The results showed more prayer was used with cancers, like breast cancer, that have a shorter survival period (Ross, et al., 2008).

Galek, Flannelly, Koenig, and Fogg's (2007) study showed that healthcare professionals could help their patients more effectively if they would work with chaplains and consider the importance of spirituality. Galek et al. stated, "Given the centrality of religion and spirituality in healing, it has become increasingly more important to understand how healthcare workers interact with the principal person designated to meet the spiritual needs of patients—the Chaplain" (p. 363). This particular study provided a perspective on the role of the chaplain and patients' emotional, physical, and spiritual health. The National Health Service in the U.K. has encouraged hospitals to appoint chaplains for over 50 years (Galek et al., 2007).

The United States has only recently acknowledged the value of spirituality and health care through the mandates of the Joint Commission on Accreditation for Health Care Organizations and the Commission on Accreditation of Rehabilitation Facilities (Galek et al., 2007). However, these U.S. accreditation organizations have only established minimal standards that hospitals conduct about spiritual assessments and try to meet the patients' spiritual needs (Galek et al., 2007).

The evidence suggesting that religious beliefs impact a patient's treatment decisions is growing (Galek et al., 2007). A study of patients with advanced lung cancer showed that they ranked their faith in God as second among the factors influencing

chemotherapy treatment decisions (Silvestri, Knittig, Zoller, & Nietert, 2003). This faith was followed by the ability of treatment to cure the disease, the side effects, their doctor's recommendations, their spouse's recommendations, and the recommendations from their children (Silvestri et al., (2003). The oncologists' recommendations were the only thing that ranked higher than the patient's faith in God (Silvestri, et al., 2003). However, physicians in the Silvestri et al. (2003) study felt faith in God should be the least important factor to the patient when considering treatment options.

Based on these studies, it would appear that a professional gap exists in patient care when faith is not a consideration. This gap leaves patients without counsel about religion, spirituality, and other related issues, leading some researchers to believe that healthcare professionals should be aware of their patients' spiritual needs and should convey these needs to other members of the treatment team (Galek et al., 2007). Many faith-based and government organizations have started recognizing this importance and have started to participate in religiously affiliated healthcare programs (Brooks & Koenig, 2002).

Religiously affiliated institutions have worked with healthcare services for a long time in the United States. Church-related hospitals cared for over a quarter of all hospitalized patients in the United States by the mid-20th century (Brooks & Koenig, 2002). In recent years, local funding has helped pay for religiously affiliated health programs (Brooks & Koenig, 2002). Many studies have verified that healthcare services were provided through faith-based organizations (Brooks & Koenig, 2002; Galek et al., 2007).

Centers for faith-based and community initiatives have been set up by the five federal cabinet agencies—Health and Human Services, Education, Labor, Housing and Urban Development, and Justice (Brooks & Koenig, 2002). Even with improvements in treatment and care, breast cancer is still a problem and a critical disease that often leads to death and in spite of the evidence supporting faith-based treatments; some people do not accept faith as a legitimate option in healthcare issues.

Statement of the Problem

Breast cancer is decreasing the life expectancy of many women today and many of these same women have a strong belief in God. Some of these women have limited access to healthcare and their faith in God may be all they have to rely on, indicating the importance of faith, if it is valid. Euripides wrote, “Nothing has more strength than dire necessity” (Lattimore, 1970) over 2,400 years ago, possibly supporting the notion that a reliance on faith in God is often out of necessity. This belief has been around for many centuries.

In 2002, 72 out of 126 medical schools in the United States already had curricula about the relationship between spirituality and health (Brooks & Koenig, 2002). Physicians of the future should understand this concept better, according to some, as it could play an important role in a more integrated healthcare system. Brooks and Koenig (2002) felt: “A redefined and carefully framed partnership between government and faith-based organizations could synthesize the best of both worlds and result in a greater health benefit for the nation than either could accomplish alone” (p. 231).

Purpose of the Study

The purpose of this study was to explore the perceived role of faith and a belief in God for the survival of breast cancer. Studies have shown a correlation in physical and emotional health with spirituality and faith. According to a report from the George Mason University, the National Institutes of Health has spent \$3.5 million on questions about faith and healing (Goldin, 2006). Studies look at the interaction of religious practice and everything that comes with it and healing but not the effect of religion itself on healing (Goldin, 2006). Another study demonstrated that highly religious people felt their faith improved healing and also showed that many patients felt their faith increased with their illness (Aukst-Margetic, Jakovljevic, Ivanec, Margetic, Ljubcic, & Samija, 2009). My research in this study may be an addition to the findings of those studies. In this study, I focused on a correlation between faith and healing using measurement tools that have been proven to demonstrate the views of people and their faith.

Research Question

Will a woman credit her faith in God as a primary factor in recovery of breast cancer or will she credit modern medicine for survival? Some women may give credit to a combination of faith and medicine. However, my belief was that one method or the other would receive more credit.

Research Hypothesis

The hypothesis was that a woman's faith in God would be considered to be more effective than modern medicine for survival of breast cancer. The null hypothesis was that there is no significant difference between faith leading to surviving breast cancer and other factors, like modern medicine, leading to survival. The dependent variable for the

study was surviving breast cancer. The independent variable was the woman's faith in God contributing to survival of breast cancer or the medical care being the main factor for survival. I used tools that are available to measure faith in this phenomenological study.

Theoretical Framework

The framework for this study is the theoretical framework of phenomenology. This framework seemed most appropriate for this study because, according to Sokolowski (2008), "Phenomenology is the study of human experience and of the ways things present themselves to us in and through such experience" (p. 2). Sokolowski felt phenomenology could clarify human experience and demonstrate how it fits with other forms of evidence. Another reason I chose a phenomenological study design is that this research attempted to identify the experiences of the subjects. As suggested by Lester (1999), phenomenological approaches are based on personal knowledge and subjectivity, which is open to personal interpretation. This study attempted to demonstrate if faith in God or other methods were considered the main contributing factors for survival of breast cancer. I will provide further details describing the connections between faith and recovery in Chapter 2.

The theory being studied in this paper was that a woman's faith in God would positively impact her chances for survival of breast cancer when other options have seemingly failed. This notion of faith's positive impact on health issues has been studied for many years. These studies will be discussed in detail in Chapter 2.

The participant group was selected from medical clinics or university hospitals in Indiana, Ohio, and Kentucky through the Susan G. Komen Foundation for this tristate area as well as visiting survivor groups in western Kentucky. Because this is a phenomenological study, a smaller sample of 30–45 female subjects was used. Some participants were self-identified Christians and others did not identify themselves as Christians at all. The study tried to determine if women felt their faith was or was not a factor for survival. The area for the study included many rural locations, so finding many more than 30–45 participants that have survived breast cancer was difficult, giving more justification for a phenomenological study. This should also make the study more valuable for this region.

Tools to measure faith are available and were used when appropriate to help determine the results of the study. The tools I used in this study included the 10-item Hoge Intrinsic Religiosity Scale (Hoge, 1972) and the Duke University Religion Index (DUREL; Koenig, Meador, & Parkerson, 1997). Because these scales are nominal, this was a quantitative study. These scales have been used in other similar studies and seem to be effective measurements for religiosity. However, a study focusing on the relationship of faith in God and survival of breast cancer has not been conducted. This study will address that gap in research.

Significance of the Study

Faith can cross all economic and racial barriers and applies to people of all ages. Faith in God has also been used by many cultures throughout history. Because of this, faith might be considered a relevant ancillary method that could help some women with

recovery and survival of cancer. However, other types of medical care have also been used for centuries and cannot be overlooked. With this study, I attempted to determine which of these methods more women credited for survival.

In spite of recent and historical evidence, many do not consider faith in God relevant. Many view it as a negative practice and this view of faith is not new. In a Harvard mental health letter, Harold Koenig (1999) quoted Freud as stating religion was “the universal obsessional neurosis of humanity” (para. 1). Freud also described religious teaching as “neurotic relics” (para. 1) in *The Future of an Illusion* (Koenig, 1999). Freud was not alone in his negative views of faith and religion. Gordon Allport (1967) stated:

Persons with this orientation find their master motive in religion. Other needs, strong as they may be, are regarded as of less ultimate significance, and they are, so far as possible, brought into harmony with the religious beliefs and prescriptions. Having embraced a creed, the individual endeavors to internalize it and follow it fully. (Allport & Ross, 1967, p. 434)

Studies have shown that depressed medical patients recover faster when religion is important to those patients (Koenig, 1999). These findings show the value of including an individual’s spiritual beliefs in health-related treatment plans. It seems valuable to research ways that might help reduce the number of breast cancer deaths, whether recovery is a result of faith or other medical treatments. This study might give more validity to patients that claim faith in God has positively affected their health, or it could validate modern medical technology.

Definitions of Terms

For the purposes of this study, the following terms were defined as:

- Christian*: This individual will have an active relationship with, and a steadfast faith in, the deity known as God as described in the Holy Bible. They will also acknowledge that they have accepted the personal truth of Jesus Christ as the Son of God, Lord of creation, and the Savior of all humanity (Holy Bible, [King James Version]).
- Complementary and alternative medicine (CAM)*: The National Center for Complementary and Alternative Medicine (NCCAM) defines CAM as “a group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine” (NCCAM, 2012, p. 1).
- Non-Christian*: A person who does not have a close personal relationship with Jesus Christ of the Bible. However, this person may have a belief in God, or a god (Holy Bible [King James Version]).
- Recovery*: Surviving the breast cancer prognosis given by a medical doctor (Susan, 2013).
- Stage IV breast cancer*: Cancer that has spread to other organs of the body. These organs often include the lungs, liver, bone, or brain (BreastCancer.org, 2010). BreastCancer.org (2010) stated:

‘Metastatic at presentation’ means that breast cancer has spread beyond the breast and nearby lymph nodes, even though this is the first diagnosis of breast cancer. The reason for this is that the primary breast cancer was not found when it was only inside the breast. Metastatic cancer is considered stage IV.

- The Duke University Religion Index (DUREL)*: An index that measures religiosity in epidemiological studies examining the relationship between health outcomes and religion (Koenig & Bussing, 2010).

- The 10-Item Hoge Intrinsic Religiosity Scale*: A scale that uses 10 items to show the religiosity of an individual to help demonstrate that person's religious motivation (Hoge, 1972).

Basic Assumptions

The study was based on the assumptions that the following data is accurate and true based on the responses given by the participants. First, the subjects have all had breast cancer and are all female. Some women were self-identified Christians and credited their faith in God as a correlative factor for survival. Other women did not declare a faith in God and had more faith in medical care and treatment. Most subjects have tried medical options and some may have considered these options for survival did not appear effective for them; implying faith had an impact on their survival. Subjects will currently reside in Kentucky, Ohio, and Indiana to narrow down the search.

Limitations

This study was limited to women in the tristate area of Kentucky, Ohio, and Indiana who felt they had done everything medically possible for survival of breast cancer. Some subjects for this study may have felt their faith was all they could hold on to for comfort, help, and survival, while others had nearly complete faith in their medical care. The study was also limited to only breast cancer.

Potential weaknesses of the study included the limited size and location of the sample group and the fact that faith is what was being studied as a primary factor for survival after other methods for survival were used. These other factors for survival were considered and some viewed these factors as the reasons for survival instead of the woman's faith. Another weakness of the study is the opinion that faith is just a placebo and is not relevant in actual medical recovery. This attitude may be summed up in information put out by the NCI (2013a):

Although it is known that a small percentage of people with cancer experience remissions of their disease that cannot be explained, available scientific evidence does not support claims that faith healing can actually cure physical ailments.

When a person believes strongly that a healer can create a cure, a "placebo effect" can occur. The placebo effect can make the person feel better, but it has not been found to induce remission or improve chance of survival from cancer. The patient usually credits the improvement in how he or she feels to the healer, even though the perceived improvement occurs because of the patient's belief in the treatment. Taking part in faith healing can evoke the power of suggestion and affirm one's faith in a higher power, which may help promote peace of mind. This may help some people cope more effectively with their illness. (p. 1)

These are types of attitudes that make a study such as this valid, but they also present potential limits in its acceptance by some groups.

Delimitations

This topic covers a wide variety of public health issues, but the main focus of this study will be on determining if surviving breast cancer had a correlation to faith or not. It focused on one belief system, Christianity, for those who felt faith was the main factor for survival. Including all faiths would not allow the study to be specific enough; however, this may be a good topic for future studies. The study was limited to women living in the tristate area of Kentucky, Ohio, and Indiana that used medical treatments for cancer and included those that felt medicine had done everything possible for survival.

Summary

Early stages of breast cancer are more survivable, and Stage IV breast cancer usually implies a circumstance that is not survivable. At this stage, cancer has already spread to other parts of the body. Certain medical treatments may help the patient, but they often have a low 5-year survival rate (NCI, 2014). Some people do not have access to these treatments. In such cases, a woman's faith in God may be the best option from her perspective. Because 79.5% of Americans call themselves Christian (Pew, 2013), this view seems more relevant, or possibly necessary, as a viable option in certain circumstances.

This phenomenological study looked at 30–45 women in Kentucky, Ohio, and Indiana. Some credited their faith for survival of breast cancer, and others credited medical care. Measurement tools for faith-based epidemiological studies were used to measure the religiosity of the participants. The view that a person's faith can have an impact on their health is gaining more acceptance in medical schools and with healthcare professionals as well (Galek et al., 2007). Faith could be a reason for survival regardless

of race, age, or any other factor, and although many patients feel faith is a major contributing factor for survival of breast cancer, other factors for survival had to be considered as well.

Survival can vary for different reasons. For example, one study by Blesch, Freels, Furner, Davis, and Miles (1996) showed that “Cancer relative survival rates for the same number of years tend to decline as age at diagnosis increases” (p. 579). This is one study that seems to indicate age is a contributing factor for survival. Race has also been shown to be a factor in breast cancer survival. Black women tend to have higher mortality rates than other major racial groups (Barcenas, Wells, Chong, French, Looney, & Samuel, 2010). Even if studies verified that the Christian faith was the main factor for surviving breast cancer, future studies to see if spirituality of other religions might be warranted.

In Chapter 2, I will examine the historical literature concerned with the influence of a person’s faith in God and positive health outcomes. Studies examining the relationship between faith and health will be reviewed. I will also examine the fact that many American medical schools are now teaching the value of a person’s faith in classes (Brooks & Koenig, 2002). Some general cancer information will be given as a reference to the potential negative impacts of cancer and showing the importance of other alternatives like faith in God to medical care. In Chapter 3, I will present the methodology used to conduct the research. In Chapter 4, I will discuss the data that was collected and show the results of the study. In Chapter 5, I will review the key findings and make recommendations for potential future studies.

Chapter 2: Literature Review

Introduction

Many epidemiological studies have been done about faith and its impact on health issues. However, research specifically related to breast cancer and a person's faith leading to survival has not been done. In this chapter, I will address general data about cancer and current cancer treatments with a focus on breast cancer. In Chapter 2, I will also discuss current breast cancer treatments as well as recovery and survival rates related to medical care and compare this data with survival rates related to faith. Chapter 2 will also include a history of faith and its impact on health issues.

I located sources for this study in databases that included EBSCO, Academic Search Premier, Pub Med, Medline, and many other sources, including the National Cancer Institute and the U.S. Department of Health and Human Services. Key words used to access the literature were *cancer*, *breast cancer*, *prayer*, *faith*, *spirituality*, and *recovery*. These sources were also easy to navigate and useful for this type of study.

General Cancer Information

Definition of Cancer

Cancer is a broad term used to describe over 100 diseases characterized by uncontrolled cell division (Lobo, 2012). These diseases are not contagious and cannot be caught by somebody else (Lobo, 2012). Cancer happens from one faulty cell undergoing genetic changes (Lobo, 2012; NCI, 2013). The cells are the building blocks that make up the breasts (NCI, 2013). Uncontrolled cell division is the most common factor in cancers (Lobo, 2012; NCI, 2013). Because cancer is such a diverse category of disease, the

methods of diagnosis and recognition are also diverse (Lobo, 2012; NCI, 2013). This diversity may lead to a variety of outcomes from these different types of cancer.

Potential Outcomes of Cancer

Most deaths, approximately 90%, associated with cancer have occurred because a tumor has moved to another part of the body, which is known as metastasis (Lobo, 2012). Staging tests can help determine if metastasis has occurred (Breastcancer.org, 2010; NCI, 2013). This ability to affect surrounding tissue develops from the cancer cells' lack of adhesion molecules that keep them where they originated (Lobo, 2012). Many cancer cells will not survive this journey; however, if the original tumor is large enough it could shed a large number of cells into the bloodstream on a regular basis, which allows the cells to migrate to other organs or tissues (Breastcancer.org, 2010; Lobo, 2012).

Specific types of cancer cells tend to migrate and 'stick' to specific organs (Breastcancer.org, 2010; Lobo, 2012). These different organs have different adhesion molecules on their surfaces causing the cells to move towards a similar organ (Lobo, 2012). For example, lung tissue and breast cancer cells have similar adhesive molecules (Lobo, 2012). This often causes breast cancer cells to metastasize and move to the lungs. These metastasized cells have similar characteristics to the primary tumor, which explains why cancer cells in the lungs are often similar to primary breast cancer cells when identified (Lobo, 2012). Metastatic cells may survive for periods of months or even years after the original cancer is eradicated. This is why a person previously treated for cancer a second time is considered to have a metastatic tumor from primary cancer (Breastcancer.org, 2010; Lobo, 2012).

Worldwide, the most common form of cancer among women is breast cancer, (English, Wilson, & Keller-Olaman, 2008; NCI, 2013) and it is also the second leading cause of cancer-related deaths in women (English et al., 2008). The highest rates of breast cancer are found in North American White women (Jones, 2007). Although no one knows the exact causes of breast cancer, doctors do know that women with certain risk factors may develop breast cancer more often than others (NCI, 2009). Risk factors like drinking alcohol can be avoided while other factors, like a family history of breast cancer, cannot be avoided (NCI, 2009). There are other risk factors that may lead to breast cancer including: age, personal health history, family health history, certain genome changes, radiation therapy to the chest, reproductive and menstrual history, race, breast density, history of taking diethylstilbestrol, being overweight or obese after menopause, and the lack of physical activity (NCI, 2009). However, the fact that these risk factors are present does not necessarily mean the woman will develop breast cancer. As a matter of fact, most women with these factors do not develop breast cancer (NCI, 2009).

Other Risk Factors

Studies are being undertaken to examine other risk factors. One such study focuses on the types of food women eat (NCI, 2011). Researchers are trying to determine if women with a diet high in saturated fat or women exposed to certain environmental substances have an increased risk of developing breast cancer (NCI, 2011). A woman will want to be aware of the potential causes of breast cancer and be aware of the symptoms.

Symptoms of Breast Cancer

Symptoms of breast cancer do not always show up early in the disease but instead show up more as the tumor grows (NCI, 2009). These symptoms may include a thickening area or lump near the breast, or in the underarm, the breast size and shape may change, the skin of the breast may develop dimpling or puckering, the nipple may turn inward, potentially bloody fluid may be discharged from the nipple. In addition, the breast, nipple, or areola may become red, swollen, or scaly, resembling the skin of an orange (NCI, 2009). These symptoms are not usually due to cancer; a healthcare provider can give a definitive diagnosis (NCI, 2009).

Before these symptoms occur, cancer cells have to be present (NCI, 2012). All organs and tissues are composed of cells, and normally, the cells grow and divide to form new cells as needed (Lobo, 2012; NCI, 2012). Normal, healthy cells grow old or get damaged and die so new cells take their place (Lobo, 2012; NCI, 2012). If this process goes wrong and the older damaged cells do not die, they can build up and form a tumor, which may show up as a lump or growth on the breast (Breastcancer.org, 2010; NCI, 2012). These tumors are not always cancerous; noncancerous tumors are benign, which means they're probably not harmful, will not metastasize or grow back once removed (Breastcancer.org, 2010; NCI, 2012). Cancerous, also known as malignant, tumors may threaten a person's life and could invade other organs and tissues, like the chest wall and lungs (Lobo, 2012; NCI, 2012). These tumors may spread to other parts of the body as well, including the liver, bones, and brain (Lobo, 2012; NCI, 2012). If they are malignant, they could be removed but might grow back. Breast cancer cells leave the

breast and travel through blood vessels or lymph vessels to invade the other parts of the body (Breastcancer.org, 2010; Lobo, 2012; NCI, 2012).

Quite often the lymph nodes near the breast, just above the collarbone, behind the breastbone, or under the arms, are the first tissues to be invaded by breast cancer cells (NCI, 2012). Breast cancer cells may also spread to the lungs, making the disease metastatic breast cancer, not lung cancer so it will be treated as breast cancer. This is still known as breast cancer because it is made up of the same abnormal cells that originated in the breast; however, this is not the most common type of breast cancer (NCI, 2012).

Common Forms of Breast Cancer

The most common form of breast cancer affecting 70% of women, begins in cells lining the breast duct, known as ductal carcinoma (Breastcancer.org, 2010; NCI, 2012). Lobular carcinoma is the second most common form of breast cancer which originates in a lobule of the breast. Ten percent of women suffer from this form, (NCI, 2012). A less common type of breast cancer is found in some women that have a mixture of both ductal and lobular carcinoma (NCI, 2012). One rare form of breast cancer is inflammatory breast cancer, which only affects one of every 100 American women in the United States with invasive breast cancer (NCI, 2012). This type of cancer is a Stage IIIB, if not more advanced, and blocks the lymph vessels in the skin of the breast causing it to look red and swollen (Breastcancer.org, 2010; NCI, 2012). Several treatments are available for most stages of breast cancer, and many treatments involve traditional medicine, while others involve alternative methods (Crammer, Caw, Gansler, & Stein, 2011).

Current Cancer Treatments

According to NCI (2012) and Lobo (2012), the most common medical options for treating cancer include surgery, radiation therapy, chemotherapy, hormone therapy, and targeted therapy. Another medical option for some patients might include clinical trials; however, these have certain limitations and may not be available to all patients (Lobo, 2012; NCI, 2012). Doctors from different specialties often work together to treat breast cancer seeking the best possible outcome (CDC, 2010). This is a discussion the patient will have to have with her physician (NCI, 2013b). The next few paragraphs show more detail about these treatments.

Surgery

The most common treatment for breast cancer is surgery (NCI, 2014). According to Lobo (2012), this is often the first course of treatment. A patient should talk to their surgeon to decide which type of the different surgery options is best for them. A lumpectomy removes the tumor and a small amount of healthy tissue surrounding it (NCI, 2014). Another type of surgery, known as breast-sparing surgery, or a partial mastectomy, removes part of the breast (NCI, 2014). This operation removes cancer and some of the normal tissue surrounding it (NCI, 2014). It is quite often followed by radiation therapy (NCI, 2014). Some women have to have a mastectomy, which removes the whole breast. A total mastectomy removes the breast and leaves the underarm lymph nodes (NCI, 2014). Another option is a modified radical mastectomy, where the whole breast and most, if not all, of the lymph nodes under the arm are removed (NCI, 2014). Sometimes lining over the chest muscle is also removed or a small chest muscle could be

taken out so the lymph nodes can be more easily removed (NCI, 2014). After a mastectomy, a woman could have plastic surgery to reconstruct the breast (NCI, 2014).

Radiation Therapy

Radiation therapy, which may be used after surgery, uses high-energy rays to kill cancer cells (NCI, 2012). Radiation therapy only targets the cells in the part of the body being treated and is used to destroy breast cancer cells that remain in the chest area.

Radiation therapy can treat breast cancer in two ways. The first, external radiation therapy, uses a machine outside of the body (NCI, 2012). Women will go to the hospital or clinic for this treatment, which usually takes place once a day, 5 days a week for 3 to 6 weeks and only lasts a few minutes per session (NCI, 2012). This is the most common type of radiation treatment for breast cancer (NCI, 2012).

The other type, brachytherapy, puts material inside the body (NCI, 2012). With this type of treatment, tubes are placed inside the breast through a tiny incision (NCI, 2012). A radioactive substance is placed in the tubes to treat cancer and then is removed so that no radioactivity remains in the body (NCI, 2012). This treatment could last for a few minutes and may be repeated every day for a week (NCI, 2012). Side effects, like dry, tender, itchy, or red skin may occur. The side effects depend on upon what type of radiation is used and the amount given (NCI, 2012).

Hormone Therapy

Hormone therapy, which is also called anti-hormone treatment, may be an option if tests show the breast cancer cells have hormone receptors (NCI, 2012). This type of therapy prevents the cancer cells from using or getting the natural hormones (estrogen

and progesterone) needed for growth (NCI, 2012). These options vary whether one has gone through menopause or not. Women who have not gone through menopause may use tamoxifen, which blocks estrogen's activity in the body, surgery to remove the ovaries that make estrogen, or use the luteinizing hormone-releasing hormone (LH-RH) antagonist that reduces the amount of estrogen made by the ovaries (NCI, 2012). If a woman has gone through menopause, she could use aromatase inhibitor to prevent the body from making estrogen or tamoxifen (NCI, 2012). These hormone therapies could all have side effects depending on the type used, including the most common side effects of hot flashes, vaginal discharge, and nausea (NCI, 2012).

Chemotherapy

Chemotherapy is another option for treatment. This treatment uses drugs to kill cancer cells and can be administered during Stage I, II, III, or IV breast cancer, before or after surgery (NCI, 2012). Breast cancer drugs are usually given intravenously (directly into a vein) using a thin needle or given orally (NCI, 2012). Drugs may be combined and given in a clinic, at a doctor's office, or at home. Women usually do not have to stay in the hospital for this type of treatment (NCI, 2012). Chemotherapy will kill rapidly growing cancer cells; however, the treatment could also harm normal cells that divide rapidly as a side effect (NCI, 2012). Some cancer drugs given before menopause could damage the ovaries and cause hot flashes, vaginal dryness, and other symptoms of menopause (NCI, 2012). A woman could lose the ability to become pregnant after having taken these drugs; however, some other anticancer drugs will not damage the ovaries. A

doctor can discuss these possible side effects and other treatment issues with the patient (NCI, 2012).

Targeted Therapy

If the breast cancer has a large amount of HER2 protein, which helps the cells grow, targeted therapy may be an option (NCI, 2012). These therapies block cancer cell growth by blocking the action of the extra HER2 protein, which will be discovered in lab tests (NCI, 2012). These drugs can be administered intravenously or as a pill, and the type of drug given determines what side effects are present. These side effects may include nausea, vomiting, and diarrhea with heart damage, heart failure, and serious breathing problems (NCI, 2012). The doctor will monitor for these side effects during treatment (NCI, 2012).

Clinical Trials

The stage of cancer will often determine what type of treatment is given (NCI, 2012). Clinical trials are also available in some cases. Participating in a clinical trial should include discussions with a doctor. Clinical trials are studies involving people with research results that has led to most of the treatments used today (CDC, 2011; NCI, 2013b; NIH, 2008). The goals of clinical trials include treating, diagnosing, and preventing cancer (CDC, 2011; NCI, 2013b; NIH, 2008). They have also led to managing symptoms of cancer as well as aiding with the side effects from treatments. They are available for all stages of cancer and are heavily monitored by the person in charge of the trial, usually a doctor (NCI, 2013b).

A person will want to carefully review the facts related to a clinical trial before joining the trial (NCI, 2013b). Clinical trials have both benefits and risks (NCI, 2013b). Some benefits are having access to a new treatment that is not available to people outside the trial and being monitored closely by the research team. If it is effective, a woman might be one of the first people to benefit, and the trial could help scientists learn more about cancer and help people in the future (NCI, 2013b). Possible risks might include the risk of the treatment not being better, or even as good as, current treatments with side effects the doctors do not expect, These could be worse than current side effects. A doctor's visit could include more expenses. Extra tests may be required, which could take a lot of time and cause a lot of discomfort. Health insurance may not cover these trials, adding even more expenses to the patient (NCI, 2013b). The success of these treatments varies from patient to patient and also depends on the severity of cancer as well as the potential combination of treatments (NCI, 2012; NIH, 2008).

Clinical trials have various phases, which are closely monitored. According to the NIH (2008), each phase measures a particular research question:

- Phase I: Researchers test a new drug or treatment in a small group of people for the first time to evaluate its safety, determine a safe dosage range, and identify side effects.
- Phase II: The drug or treatment is given to a larger group of people to see if it is effective and to further evaluate its safety.
- Phase III: The drug or treatment is given to large groups of people to confirm its effectiveness, monitor side effects, compare it to commonly used

treatments, and collect information that will allow the drug or treatment to be used safely.

- Phase IV: Studies are done after the drug or treatment has been marketed to gather information on the drug's effect in various populations and any side effects associated with long-term use (NIH, 2008, p.1).

Nonmedical Options

There are certain nonmedical treatments available as well. Some of these treatments fall under the category of Complementary and Alternative Medicine (CAM). Many include spirituality and religion as part of CAM treatment (Crammer et al., 2011). Other studies have looked at various other factors related to breast cancer survival as well.

One Canadian study looked at different landscapes for breast cancer survival. The study compared how environments could not only lead to cancer, but also possibly play a positive role in cancer survival and recovery. These types of landscapes fall under two categories, every day and extraordinary landscapes for healing for breast cancer survivors. These therapeutic landscapes are physical places where social conditions are combined with human perceptions in a manner conducive to healing (English, Wilson, & Keller-Olaman, 2008).

Extraordinary landscapes refer to places outside of people's day-to-day lives like hospitals and travel. Other studies have looked at therapeutic landscapes. These include landscapes existing outside the realm of everyday life that are associated with extraordinary events. These landscapes may include ancient sites like Epidaurus, Greece

as well as locations of mineral springs and other spots associated with healing powers. People have migrated to these places for hundreds of years in search of a healing touch. Nature found in parks and campgrounds are also representative of extraordinary landscapes for healing (English et al., 2008). Other sites such as hospitals and asylums for formal health care delivery are considered extraordinary landscapes as well. Certain health care providers outside of everyday life such as midwives and nurses also represent landscapes of healing (English et al., 2008).

Extraordinary sites are places we encounter for short periods of time. Every day sites focus within a few home and community-based environments. Occasionally, formal and informal care could make the everyday site extraordinary. Research has shown the home can be an important place for healing because these environments often represent safe spaces and therapeutic landscapes for women diagnosed with environmental illnesses such as cancer (English et al., 2008). Besides landscapes, there are more traditional methods associated with treating cancer such as surgery, radiation, and chemotherapy.

Complementary and Alternative Medicine (CAM)

CAM, which includes prayer, might seem like the only hope for patients without financial resources for the previously mentioned treatments. According to the 2007 National Health Interview Survey (NHIS), the most recent data showed approximately 38% of adults in the United States use CAM. The field of CAM is broad and changing. Therefore, it is difficult to define. The National Center for Complementary and Alternative Medicine (2012) defines CAM as:

group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine. Conventional medicine (also called Western or allopathic medicine) is medicine as practiced by holders of M.D. (medical doctor) and D.O. degrees and by allied health professionals, such as physical therapists, psychologists, and registered nurses. The boundaries between CAM and conventional medicine are not absolute, and specific CAM practices may, over time, become widely accepted (p.1).

CAM is divided into separate categories. Complimentary medicine uses CAM together with conventional medicine (CDC, 2011; NCCAM, 2012). An example might be using acupuncture in addition to drugs to help alleviate pain. Alternative medicine refers to using CAM in place of conventional medicine. Another category is known as Integrative medicine. This method combines conventional medicine and CAM treatments. Some evidence seems to point to the safety and effectiveness of integrated medicine (NCCAM, 2012). The focus of this study is the use of the alternative part of CAM for survival of breast cancer because prayer and faith in God may be used in place of conventional medicine when conventional medicine has failed.

Cancer Survival Rates

Stage IV breast cancer, also known as advanced breast cancer, has metastasized to other organs and tissues (Jones, 2007). At this stage, especially when the cancer is first diagnosed, survival rates in the United States for 5 years dropped to 16%–20% largely because cancer had overwhelmed the body's natural defenses and spread to other parts of the body (Jones, 2007). It is believed that one method cancer cells use to overcome the

body's natural defenses and evade detection is by undergoing genetic changes that cause these natural defenses to lose cancer-associated antigens (Rivoltini et al., 2005). Immune responses may also be suppressed because cancer cells use different mechanisms of suppression or avoid being destroyed by cytotoxic T cells (Rivoltini et al., 2005).

Median survival rates for women with advanced breast cancer at the time of diagnosis are about 18 months (Jones, 2007). Because Stage IV is the deadliest category of breast cancer, early detection, preferably at Stage I when the cancer is still localized to the breast, survival rates can increase to 98%–100%. Unfortunately, because of poverty and the lack of health insurance, about 5% of White women and up to 9% of Black women in the United States have advanced breast cancer at the time of the first diagnosis. One study indicated European countries have lower 5-year breast cancer survival rates than the United States. The 5-year survival rate for all stages of cancer combined was 88% in the United States. England showed a 77.8% 5-year survival rate and Ireland had a 76.2% 5-year survival rate (Jones, 2007). Even when recovery has taken place, faith in God might help the patient recover quicker.

The goals of treatment and recovery are to remove as much of cancer as possible and to prevent cancer from returning by seriously inhibiting and killing the remaining tumor cells. Surgery is used to remove as much of cancer as possible, and is quite often the first option doctors will use. However, some cancers, like certain types of breast cancer, try to shrink the tumor with other types of treatment before surgery. Like gardening, where weeds are removed but roots are left behind, it may be difficult to

remove the roots of cancer with surgery. At this point, radiation or chemotherapy might be considered (Lobo, 2012).

Radiation therapy uses high-energy waves to kill or prevent cell division of cancer cells. These can be given in two forms: one form allows radiation to be aimed at the tumor to destroy it or radioactivity can be implanted with surgery within the tumor (Lobo, 2012). Depending upon the type of cancer and the patient's health, the amount and duration of treatments may vary. Unfortunately, radiation treatment, because it causes DNA damage, could lead to cancer (Lobo, 2012). Hopefully, the radiation will cause DNA damage to the tumor preventing it from dividing and metastasizing or spreading to other parts of the body. Radiation may also damage normal cells, so targeting of the tumor is critical in hopes of preventing as much of the collateral damage as possible. Radiation therapy has also been used to reduce pain by shrinking tumors (Lobo, 2012). Chemotherapy may be another alternative to radiation therapy and surgery (Lobo, 2012).

Chemotherapy is a broad term used to describe a wide range of drugs and drug combinations to treat cancer (Lobo, 2012). These are often tailored to individual patients. Many of these combinations of drugs are newer therapies that target individual mutated pathways in cancer cells, which will hopefully lead to fewer side effects (Lobo, 2012). Traditionally, chemotherapy drugs target cells that are rapidly dividing; however, some of these rapidly dividing cells are healthy. An example is cells lining the digestive tract or hair follicles, which can lead to nausea and the loss of hair. Modern chemotherapy uses drugs to counteract some the side effects, making it more tolerable to the patient. Some

drugs can be taken at home because they're given orally. Others require intravenous infusion and must be taken at a hospital or outpatient treatment facility. More treatments are being developed (Lobo, 2012), but with modern medicine and the newer, more promising treatments, some patients do not see the results or experience recovery from conventional medicine. These may be the patients that rely on faith in God for recovery.

History and General Statistics and Information About Faith and Health

A Relationship Between Religion and Health

In the last decade, dozens of scientists claimed to have found proof of a relationship between religion and health. Studies have reported this evidence and science seems to be confirming, "That spiritual faith helps people stay healthy and live longer" (Duenwald, 2002, p.1). Intercessory prayer, or prayer on behalf of another person, has been researched in science since the 19th century. The English scientist that studied this assumed that king's games were prayed for more often than others and wondered if the prayers were answered. His conclusion was they were not, but the prayers might bring comfort to people praying anyway (Brandeis, 2009).

The first year studies comparing faith and health were published in English-language medical literature was 1965. These early studies were based on Protestant prayers only; however, recent studies have focused on the social awareness of other religions. Cadge, a sociologist at Brandeis University, found mixed results in some studies. Cadge reviewed and evaluated 18 published studies on intercessory prayer that occurred between 1965 and 2006 (Brandeis, 2009). Cadge undertook these studies after

talking to physicians who wondered if prayer had the power to heal patients. These studies provided a snapshot of the changing religious demographics and America and the evolution of ideas pertaining to the relationship between religion and medical science. Cadge stated, “I do not know why physicians and scientists conducted the studies, but personal religious beliefs appear to have played a role, along with curiosity” (Brandeis, 2009, p.1). Cadge realized these studies had problems that led to mixed results. Some of these issues included other people besides the patient praying for them and researchers wondered what the proper ‘dosage’ of prayer would be. Ultimately, Cadge concluded some people thought prayer worked while others did not (Brandeis, 2009). Other research has not shown the mixed results Cadge found.

Powell, an epidemiologist at Rush University Medical Center in Chicago, did a study commissioned by the NIH to review about 150 papers to assess a faith and health connection. After omitting dozens of papers for various reasons, Powell felt faith provides comfort in times of illness, but did not feel it significantly slowed cancer growth or improved recovery from acute illness. Powell was surprised to find that people who attend church regularly had a 25% reduction in mortality (Kalb, 2003). Powell also said that people who attend church regularly lived longer than those who do not attend church regularly as “really powerful” (Kalb, 2003). Research continues to show this correlation between faith and health.

Faith Leading to Quicker Recovery

Walker (2002) showed growing amounts of research indicate when people engage in spiritual activities they recover from illness and surgeries faster. They are also

healthier in general and have a brighter outlook on life than those who do not have a spiritual life. Scientific evidence suggests that the positive effect spirituality has on physical and mental health is as essential to disease prevention and recovery as regular fitness and healthy eating (Walker, 2002). Personal prayer and meditation are tools many use pertaining to spirituality.

Prayer and Meditation

Forty-one percent of Americans credited personal prayer and meditation to having cured them of illness or improved their condition significantly (Advocate Health Care, 2005). People attending religious services at least once a week have demonstrated a stronger immune system function compared to those with less frequent attendees. Hospital stays are shorter for patients with religious affiliations. Older patients with no affiliation tend to spend about 2½ times longer in the hospital compared to older patients with a religious affiliation (Advocate Health Care, 2005). Another study of 2,679 baby boomers found the rates of psychopathology, including depression and other mental illnesses, were half as much in people of faith that frequented church services than those who had infrequent church attendance. High blood pressure was lowered more in men with a strong religious commitment in another study comprised of 400 participants (Advocate Health Care, 2005). Miller (2006) stated, “A personal connection to the Creator, often termed personal devotion, is the most robust protective factor identified to date in the research field of adolescent health and mental health” (p. 1164). The most common forms of mental illness and physical risk taking behavior, substance use and abuse, depression, conduct disorder, drunk-driving, exposure to sexually transmitted

disease, weapon-carrying, poor nutrition and lack of exercise, are often lower in adolescents who turn to God for guidance and direction (Miller, 2006). They make daily choices that lead to lower rates of morbidity. This personal devotion is more protective than the more recognized secular protective factors of social support, parental bonding style, and school attendance. Adhering to a particular creed and regularly attending services is intertwined with personal devotion (Miller, 2006). These concepts are not only associated with health and well-being, but they demonstrate protection against depression in adolescents (Miller, 2006).

The Importance Spirituality in Health

“There’s a big interest in spirituality in our culture,” said Puchalski, M.D., assistant professor of Medicine at George Washington University School of Medicine and Health Sciences and Director of Education at the National Institute for Healthcare Research [NIHR] (Gabriel, 2000, p.1). NIHR is a nonprofit organization that supports the study of relationships between spirituality and health (Gabriel, 2000).

Spiritual needs are different throughout a person’s lifespan and these needs may change depending on age. Religious involvement is common throughout the United States. Koenig and Cohen (2006) discovered:

Belief in God ranges from 85% in teens aged 13 to 17 to 95% of adults over age 75; weekly religious attendance is reported by 41% of teens to 60% of those over age 75; and religion/faith is pretty or very important in 51% of teens to 75% of older adults (p. 1157).

This value of faith for individuals is currently showing up in medical schools throughout the United States (Brooks & Koenig, 2002).

A growing number of American medical schools are offering studies in spirituality and faith (Gabriel, 2000). Many feel this is a return to the roots of medical practice. Issues addressed include both the spiritual and physical well-being of the patient. Western medicine created the divide between mind and body, but some see the recent trends as a reunion of the two in modern medicine (Gabriel, 2000). More than seventy medical schools offer instruction on ways to address a patient's spiritual belief. A Denver health maintenance organization offers spiritual counseling to its members, and doctors are starting to cross the traditional divide that exists between religion and medicine (Duenwald, 2002). This is largely because patients are demanding more spiritual care from their physicians. Kalb (2003) cited a *Newsweek* poll stating that 72% of Americans said they would like a conversation about faith with their physician and the same number said they believed praying to God could cure a person, even if science claims the person will not (Kalb, 2003).

Prayers of Loved Ones

A popular interfaith website, Beliefnet, shows that three-quarters or more than 35,000 online prayer circles are health related. They are for patients' loved ones and total strangers. People can logon and send prayers to the site. Their hopes are that these prayers can heal cancers, disabilities, chronic illness and addiction. Kalb (2003) said:

Popular practices like these, as well as the growing belief in the medical community that what happens in a person's mind can be as important to health as

what happens on the cellular level, are leading many doctors to embrace the God they banished from the clinic long ago (p. 1).

According to Stein (2006), Parker, a professor of theology and religion at Elmhurst College outside Chicago added, “Judaism, Christianity, Islam, Buddhism—every religion believes in prayer for healing. Some call it prayer; some call it cleansing the mind. The words or posture may vary. But in times of illness, all religions look towards their source of authority” (p. 1). This general concept is why faith is so valuable to many.

Lifetime Faith

As mentioned earlier, faith plays an important role to many throughout their lives. For many, this impact begins in childhood. It is related to the environment and support groups they had growing up. Both mental and physical health is affected by faith. Adolescents' spiritual and social supports are often measured through youth group participation or involvement in a faith-based community. These teens often have less health crisis (Miller, 2006). Membership in a faith-based community has been shown to protect against a range of morbidity in adolescents, particularly in those adolescents at health risk due to poverty, psychopathology, or parental psychopathology (Miller, 2006).

Some researchers inferred from these findings that social support might have had an indirect effect on adolescent health by surrounding them with values, role models, and daily opportunities for prosocial interactions. These interactions include positive health choices with better health opportunities such as a decrease in community-wide access to

drugs and alcohol (Miller, 2006). These are not the only studies showing the value of faith in society.

Personal devotion and social support have been shown to be mild to moderately correlated with distinct protective effects against morbidity in adolescents (Smith, 2003). Studies also show that youth who attend church services with their family on a regular basis have a greater overall satisfaction with their lives; they're more involved with their families; and they have better skills in solving health-related problems than adolescents whose families attend church less often (Smith, 2003). Environmental factors have been shown to strengthen personal devotion in adolescents (Miller, 2006). These factors include a certain degree of parental faith, parent-child interactions around faith, participation in a faith community or youth group for youth facing parental support, and spiritual input from adults outside of the family. From a developmental perspective, adolescents develop their own personal beliefs based on influences from family and community (Miller, 2006). It is critical for adults influencing these teens to have respect and be receptive to adolescents in times of questioning, moral struggle, and deepening of their faith (Miller, 2006). Younger children as well as adolescents have demonstrated similar outcomes.

A strong spiritual orientation is not limited to adolescents; younger children have also demonstrated these beliefs of a connection to a Creator. In their developmental stages younger children have shown interest and understanding of issues like life and death (Miller, 2006). These understandings have been shown to have clinical strengths, as well as treatment imperatives, in coping with severe illness and suffering (Miller, 2006).

Psychotherapy has also started integrating spirituality in treatment, further demonstrating its validity throughout our lives (Miller, 2006).

Spiritual Beliefs Used in Psychotherapy

Because of the strong evidence supporting protective qualities of personal devotion in morbidity of adolescents, psychotherapy has started integrating personal spirituality into treatment for young people and families (Miller, 2006). The American Psychiatric Association has discussed the avoidance of personal spirituality as potentially causing iatrogenic harm. The child-centered approach focuses on the lived spiritual experiences of the child to avoid a suspected coercion by the psychotherapist treating the child. This allows the child to use spiritual beliefs when coping with the event leading to treatment (Miller, 2006). Spiritual perspectives are also showing up in family therapy.

Family therapy from a spiritual perspective may also be beneficial particularly if a crisis is viewed, not as an obstacle, but as an opportunity for spiritual growth and understanding within the family (Miller, 2006). Families with gravely ill children prefer their treating physician to inquire about their spiritual beliefs. This may suggest how central spirituality is to the treatment experience and should be helpful to the healthcare team. Family treatment that is spiritually oriented may improve family functioning and lead to prevention against distortion in the personal spirituality of the child (Miller, 2006).

Personal Testimonial of Faith Leading to Recovery

Testimonials exist pertaining to how faith and prayer can influence a person's health. One of the most dramatic testimonies I am personally familiar with pertains to my

father. It does not involve breast cancer, but it does involve faith leading to medical recovery. In November 2005, my dad was found on the side of the road behind his van. He had an aortic aneurism that burst that should have killed him, according to the medical staff at the hospital that called him The Miracle Man.

Our family had to rush to the hospital Friday November 11. His surgeon, who also prayed with his staff before he started treatment, said he might die and that it was a miracle he even made it to the hospital. After the initial surgery, everybody knew why. The surgeon said it was like a bomb blew up in his stomach. My dad was airlifted about twenty-five miles to another hospital because the first hospital was smaller and did not have what was required for such a situation. The off-duty emergency medical technician that found him said he had no blood pressure and only a faint pulse. Some staff at the hospital was even overheard stating that nobody had made it to the hospital that badly damaged and survived, so they did not know exactly what to do about my dad.

The aneurism burst, and according to the doctor, it caused him to bleed to death internally. The surgeon held his heart in his hand to repair it as his staff pumped blood into my father. A stent, the normal tool used in these cases, would not work because the damage to the aorta was so bad. My father had all of his blood replaced because he lost it all. They gave him at least 24 units of blood.

He survived the first surgery, which was a miracle by itself, but early Saturday morning (November 12) he was bleeding again and they didn't know where from and had to do emergency surgery to stop it. More prayers happened and the bleeding apparently stopped because the doctor said he could not find anything significantly wrong, besides

what was already there, during the surgery. Nearly everyone present felt God stopped the bleeding.

My dad was heavily sedated and in the intensive care unit (ICU) for several days after that. While unconscious, he worked the breathing tube out of his throat and nurses could not safely reinsert it without potentially causing more damage. He had to start breathing on his own before the medical staff felt he was ready to. They wanted his body to focus on healing before using more energy to breathe. The doctor was finally able to sew him up after several days. His stomach had to be open for four or five days to allow the blood that filled it to finish draining out.

Monday or Tuesday after the initial surgery, he did not seem to have any response or brain activity according to the medical staff leading to a cat scan. We prayed about this and it turned out okay as well. The medical staff was also concerned about damage to internal organs like the kidneys, the bowels, the stomach, and the intestines because they said this is common with these injuries. He was taken out of ICU the following Friday or Saturday, another miracle, and put into his own room. Then he started having liquid foods on Sunday November 20 and solid foods on Monday November 21. Prior to this, the medical professionals said he would need to use intravenous therapy for several weeks after he was released from the hospital. They said it would not be possible for him to eat solid food for several weeks because of how severe the damage was. This did not turn out to be the case.

He went home the day before Thanksgiving that year, after spending less than two weeks in the hospital for a ruptured aneurism, which usually kills patients, especially if

not taken care of immediately. Our best estimate is that it took at least 3 hours after the rupture for him to be found and treated. However, he was able to have Thanksgiving dinner with his seven adult children, their six spouses, and his seventeen grandkids and eat solid food. This was not possible from a medical perspective, indicating, at least from the perspective of my dad and my family and his surgeon, that faith played an integral role in his survival. He has even survived past the prognosis of the rare person that does survive.

Faith Related to Breast Cancer

Much of the information available about a woman's faith contributing to her survival of breast cancer is found in personal testimonies from the survivors. One particular article about their religious faith showed that this faith was one of the most cited forms of comfort from cancer patients. Nobody has blamed a higher power for giving them cancer and many people found the deeper relationship with God as a result of the cancer (Murphy, 2012). One patient, Barb Zuspann, said:

...I prayed and gave control of my life to God. As Isaiah 41:10 proclaims, 'do not be afraid, for I am your God; I will strengthen you, I will help you'... Whether I have one day or 10 years with family and friends, God's love will sustain me and bless me (Murphy, 2012).

Janet Cooper, who has survived cancer twice, relied on her faith. She stated:

I learned that God takes care of us, and that without him, I'd never had made it through. My cousin told me when I called to tell her I was battling it again that

God has carried me this far, he won't drop me now. Those words stayed with me all through my treatments (Murphy, 2012).

Other survivors had similar stories about how their faith in God got them through their cancer diagnosis and treatments (Murphy, 2012). Even though information is from testimonials from survivors, studies have been done that demonstrate how important faith is during cancer diagnoses and treatments (Murphy, 2012).

The Ferrell and Baird (2012) study reviewed the importance of the spiritual needs of family caregivers and nurses in addressing patients. This has been shown to be vital for patients at all stages of the disease. Much of this support can be found on websites, from peers, through counseling services, and in other written materials. Ferrell and Baird (2012) focused on the healthcare providers, including the nurses and physicians, and the family members that will take care of their loved ones. A definition of spirituality was developed from a conference pertaining to these issues cited in the study. The definition was,

Spirituality is the aspect of humanity that refers to the way individuals seek and express meaning and purpose, and the way they experience their connectedness to the moment, to self, to others, to nature and to the significant or sacred (Ferrell & Baird, 2012, p. 257).

This study pointed out that this definition could not only be applied to the oncology patients but also their caregivers. It also suggested that the experiences of the illness provide opportunities for growth and meaning. The study also stated, "That

spirituality extends beyond religion and encompasses a broad range of existential concerns” (Ferrell et al., 2012, p 257).

The Farrell and Baird (2012) study mentioned that chaplains are important for spiritual care. They are seen as the experts; however, many cancer settings only provided one chaplain who might only be part-time, for the entire oncology service (Farrell et al., 2012). This puts oncology nurses in the position of spiritual providers for some patients and family members. It is suggested that nurses should have a basic understanding of spiritual care because of how valuable it is. They stated, “Spiritual care addresses the thoughts, feelings, and experiences of being human” (Ferrell et al., 2012, p. 258). The study concluded that spiritual intervention seems to have a positive effect on everyone involved (Ferrell et al., 2012).

Other studies have been done showing a relationship between faith and health outcomes. A Brazilian study investigated whether or not religious practice modified quality of life in breast cancer patients during chemotherapy (Paiva et al., 2013). It demonstrated that prayer might improve certain aspects of quality of life in breast cancer patients during chemotherapy (Paiva et al., 2013). A different study showed mental health had a positive relationship to a concept of a loving God, even when the prognosis was not good and pain was present, while it had a negative relationship to the concept of a stern God (Meisenhelder, Schaeffer, Younger, & Lauris, 2013). However, mental health was not related to the goal of treatment (cure vs. chemotherapy). It was also unrelated to the frequency of prayer, intrinsic faith motivation, or physical pain. This study concluded

that clinicians might want to use a positive concept of God in the comprehensive care of their patients who rely on faith (Meisenhelder et al., 2013).

Critique of Methods

In other similar studies, a relationship has been shown between a person's faith and issues relating to that person's health. Most of these studies have been done in the United States, which is largely Christian (Pew, 2013); however, one study looked at Danish breast cancer survivors because Denmark is a secular society (Pederson, Christensen, Jensen, & Zachariae, 2013). This study showed similar results in numbers of people of faith. The main difference was that the majority of Americans have “unambiguous faith” whereas the majority of Danish people had “ambiguous faith” (Pederson et al., 2013). In this nationwide study, a sample of 3,128 recurrence-free Danish women who received surgery for early stage breast cancer were asked about their faith in God. Women with a high degree of faith (unambiguous believers) said their faith had a high positive impact on their disease and their disease-related quality of life and were more inclined to believe that their use of CAM was more beneficial for their cancer. Increased scientific studies have demonstrated that faith in God, or a higher spiritual power, are common ways of coping with cancer (Koenig, Larson, & Larson, 2001).

This particular study utilized data from the nationwide Psychosocial Factors and Breast cancer inception cohort of 4,917 Danish women who were treated for early-stage breast cancer between October 2001 and March 2004. The treatment protocols used were one of the five prescribed by the Danish Breast Cancer Cooperative Group (DBCG). Each patient was informed about the study at the surgical departments and completed the

Charlson Comorbidity Index (Charlson, Pompei, Ales, & Mackenzie 1987). An e-mail service and special hotline telephone were used to answer questions about the study or for filling out the questionnaire. A reminder was sent about the questionnaires if written consent was not returned within three weeks. Of the participants, 3,343 returned a valid questionnaire. The Regional Science Ethical Committees and the Danish Data Protection Agency approved the study (Pederson et al., 2013).

Data for this study was collected directly from the surgical departments responsible for treating breast cancer in Denmark during the inclusion period during the time between October 2001 and March 2004 (Pederson et al., 2013). Much of the data was collected from the DBCG registry using the 10-digit personal identification numbers, also known as Civil Personal Registration (CPR) numbers, that have been assigned to all Danish residents since 1968 (Pederson et al., 2013). Other information such as demographics, psychiatric history, and socioeconomic variables were collected from six of the nationwide Danish longitudinal registries provided by Statistics Denmark (Pederson, et al., 2013).

A different study looked at Arab women in Israel (Goldblatt, Cohen, Azaiza, & Manassa, 2013). The study consisted of twenty participants of Muslims (83.8%), Christians of various denominations (7.9%), and Druze, a heretical sect of Islamic beliefs [8.2%] (Goldblatt, et al., 2013). The participants from a breast cancer clinic in a northern city of Israel were in post-treatment and free of disease. They had been diagnosed with primary (Stages I-III) breast cancer in the 5 years before the study and had completed chemotherapy and/or radiotherapy (Goldblatt, et al., 2013). Fifteen of the women were

also being treated with preventative hormone therapy (Goldblatt, et al., 2013). The Hospital Ethics Committee had approved the study. The participants gave informed consent and underwent an in-depth semi-structured interview in their homes. Several topics were covered in this interview. Interviews were also tape-recorded and transcribed at a later date with the names of participants being changed (Goldblatt, et al., 2013).

Examples of questions included:

‘What were your reactions (thoughts, feelings, behaviors) when you received the news about your illness?’; ‘How did you feel about your family’s/ neighbors’/ friends’ reactions to your illness?’; ‘Have there been any changes in your body perception following being ill?’; and ‘Did religion have an impact on you when you were ill and in what ways?’ (Goldblatt et al., 2013, p 870).

Participants were told to narrate their experiences in their own words. Researchers read the notes in their entirety and formulated the data. By separating the narrative and the analytical notes, the researchers could distinguish between interpretations and descriptions in the data analysis. This enhanced the study’s credibility by giving them immediate conception of the phenomenon under examination (Goldblatt, et al., 2013).

One of the four main themes revealed in the findings was “Faith in God as the Source of Coping” (Goldblatt et al., 2013, p 871). It showed that most women, both Muslim and Christian, believed in God’s impact on their destiny. While some women became more religious after their diagnosis, others were religious before their diagnosis. None of them reported a weakened faith (Goldblatt et al., 2013). The narratives of the women illustrated their faith was a vital source of strength and hope. It also gave them

meaning to the illness and compensated for their loneliness. It also helped the women who did not want to be a burden on their relatives. This finding supports other studies of cancer patients from various religious groups that felt God was a source of strength in their lives. This study also demonstrated that these women felt like God was highly engaged and supportive throughout the illness. Religious coping seems to be the most common type of coping in this study (Goldblatt et al., 2013).

The Hsiao et al. study (2008) compared the use of religious/spiritual forms of CAM (R/S CAM) and nonreligious/nonspiritual forms of CAM (non-R/S CAM) with cancer survivors in California. They used multivariate logistic regression to identify predictors of R/S CAM and non-R/S CAM. The study stated that many of these patients, because they are religious and have spiritual beliefs, were more likely to use religious or spiritual forms of CAM. Examples of RS CAM were self-prayer, group prayer, and healing rituals (Hsiao et al., 2008).

The Hsiao (2008) researchers used 2001 California Health Interview Survey (CHIS-2001) and the California Health Interview Survey of Complementary and Alternative Medicine (CHIS-CAM). An assisted-telephone interview instrument was used to collect CHIS- 2001 and the CHIS-CAM surveys (Hsiao et al., 2008). The CHIS-2001 sample consisted of 55,428 adults, and the CHIS-CAM survey yielded 9,187 participants. Based on California's 2000 census, the obtained samples were a good representation of the general population (Hsiao et al., 2008). Chi-square was used to test the bivariate relationship between R/S CAM use and non-RS CAM use. The results indicated that

increased religiosity and spirituality were both associated with higher R/S CAM use (Hsiao et al., 2008).

Conclusion

Although many studies are being conducted on this topic and many more people are accepting a connection between faith and health, it is still controversial. Critics are concerned because they still have many questions about the apparent connection. Can religion slow cancer? Can religion reduce depression? Can religion speed recovery from surgery? Can belief in God delay death? (Kalb, 2003).

While the research results have been mixed, the studies inevitably run up against the difficulty of using scientific methods to answer what are, essentially, existential questions (Kalb, 2003).

How do you measure the power of prayer? Can you separate the health benefits of going to church or synagogue from the fact that people who attend religious services tend to smoke less and be less depressed than those who don't? (Kalb, 2003, p. 45).

Columbia University professor Sloan wrote a paper in 1999 attacking faith and healing studies. Sloan (1999) did not feel religion has a place in medicine and that directing patients toward spiritual practice can do more harm than good. Still others, like Duke University's pioneering faith-and-medicine researcher Dr. Koenig, believes that keeping spirituality out of the clinic is irresponsible because a growing body of evidence shows the positive effects of religion (Kalb, 2003). More medical professionals seem to view faith as something legitimate to consider in matters of health.

Dr. Stangl, a family medicine doctor at UCLA, felt that not asking these questions could have devastating consequences because religion can affect the most pragmatic details of a person's life (Kalb, 2003). Stangl remembered a Muslim patient who needed medication but was observing Ramadan and could not drink or eat during the day. Stangl took the patient's spiritual history, which is routine for all hospitalized patients at UCLA, and chose a once-a-day medication that could be taken after sundown (Kalb, 2003).

If we hadn't talked about it, I would have written him a prescription for four times a day and he would not have taken it. He might not have wanted to tell me. People don't want to contradict their doctors. (Kalb, 2003, p. 48)

Dr. Koenig is one of the leaders wanting a better understanding of patients' religious and spiritual beliefs in the medical setting. "It just makes too much sense," he says, when patient after patient tells him, "Doctor, religion is the most important thing; it keeps me going" (Kalb, 2003, p. 48). Koenig believes doctors should take spiritual histories of any patient with whom they are likely to have an ongoing relationship. He says they should ask questions like, "Is religion a source of comfort or stress? Do you have any religious beliefs that would influence decision-making? Do you have any spiritual needs that someone should address?" (Kalb, 2003, p. 48).

In Chapter 3, I will further demonstrate why a quantitative phenomenological study was performed. I will discuss the tools used as well as explain why they were appropriate for this study and why they are reliable and valid. The hypothesis and variables will also be discussed in this chapter. In the chapter, I will also show how and why subjects were chosen for the research. I will explain the statistical methods and how

the data was measured along with how the data will be disseminated, as well as provide a general summary of the study.

Chapter 3: Research Method

Introduction of Key Areas

This study was a quantitative, phenomenological study trying to determine if a woman felt her faith in God correlated with her survival of breast cancer. The Walden Institutional Review Board approval number for this study was 04-14-15-0102127. The hypothesis for the study was that a woman's faith in God would positively influence her perceived causes of survival. This could include being a contributing factor to the survival of breast cancer. The dependent variable for the study was surviving breast cancer. The independent variable was the woman's faith in God or the medical care she received contributing to the survival of breast cancer.

A phenomenological study, as discussed in Chapter 1, seemed an appropriate design to me because the study was based on a person's faith being critical to recovery or not, based on the participant's perspective. Lester (1999) further explained reasons for such a study by stating, "Epistemologically, phenomenological approaches are based in a paradigm of personal knowledge and subjectivity, and emphasize the importance of personal perspective and interpretation" (p. 1). Another reason I chose this approach was because arguments might be made that a firm conclusion cannot be drawn. A phenomenological approach allows for the implications of the study to have more flexibility than drawing a firm conclusion (Lester, 1999) and may be better accepted by others, especially those that do not like to use spirituality in health issues. A quantitative approach was used because the measurement tools being used employ nominal measurements to determine the results.

I chose subjects for the study based on several factors. The first factor that was considered was the breast cancer survivor was female. The second factor was that a medical professional had given the woman a diagnosis of breast cancer. The third factor was that the pool of subjects was limited to women living in the area of Kentucky, Ohio, and Indiana. This geographical area was chosen because of its convenience for me and with the idea of gaining more knowledge about my area of residence at the time of the study. The study should be beneficial for this location as well, but other parts of the country could potentially duplicate the study for their regions. Factor four was that each participant was a survivor of any stage of breast cancer. Some of these women claimed to be Christians with a belief in God, while others did not make that claim. The study was limited to this faith because of my familiarity with it and because including other religions would have been too broad of a focus for the study. I recommend that there be future studies concentrating on the other faiths. All subjects agreed to participate in a study about their faith, or lack thereof, and survival.

The tools used in this study included versions of the 10-item Hoge Intrinsic Religiosity Scale, and the DUREL. A few questions specific to this study were added with permission from the copyright holders of the scales. These scales have been used in other similar studies and seemed to be effective tools for faith-based studies with proven results.

Research Design and Approach

This study took a quantitative approach because of the tools used. In this study, I measured subjective responses; however, even though an argument for a qualitative study

could be made, the responses were put into numerical values to better group the categories for results. The subjective nature of this study was whether or not the woman's faith was believed by her to affect her survival of breast cancer. Even though numbers cannot measure faith, which would be qualitative, the quantitative nature of the study came from how the groups were portrayed. Measuring tools have been used for similar studies and are available to determine if a person is a person of faith as defined for the study, overcoming the qualitative nature. Pertinent questions for the study were added to these tools and are discussed later in this chapter.

When subjects were chosen and agreed to be part of the study, the previously discussed tools were supplied to the women and they were instructed about how to answer the questions accordingly. I also explained to the participants that there were no incorrect responses to the questions. These data were compiled and the results were recorded for the study.

I considered using Pearson's chi-square, but because of the limited size of the study group, Fisher's Exact Test seemed a more appropriate alternative. The Fisher's exact Test is also good for a two-by-two table, which is what I used. The groups were broken down into Christians and non-Christians as defined in Chapter 1. These groups were compared to each other based on those participants in each category who primarily credited God for their survival and those who primarily credited medical treatment, or anything else, for their survival. This explanation will be further discussed with the formula later in the chapter.

Sample Size and Setting for Participants

I chose participants for this study from different breast cancer survival groups in western Kentucky and survivors through the Tri-State Susan G. Komen Foundation in Evansville, IN. Different hospitals and medical centers in western Kentucky were chosen to find the survival groups with permission from the group leaders and the participants. Hospital chaplains were also used to help find subjects for the study. I interviewed various women from these groups until the desired number of 30–45 participants that fit the criteria was achieved. Finding more subjects in this area proved to be difficult because of the size of the population in this area, which is largely rural.

I personally met with patients from survivor groups. After contact and permission was granted in the various locations, survival groups were addressed as a whole. Then I gave anybody willing to discuss their survival of cancer the questionnaires and asked them to return the questionnaires in self-addressed, postage paid envelopes until the desired number of 30–45 people was reached. The surveys for the study were also attached to electronic newsletters for the Tri-State Susan G. Komen Foundation. An informed consent form was included with the surveys.

Factors such as age and race were not the focus of this study; however, if they began to show any particular unexpected patterns they were considered. Participants were given 2 weeks to fill out the materials and were asked to return everything to a secure post office box for retrieval or via an e-mail address. This information was then kept in another secure location to be processed and evaluated. The hope was that by allowing the women to fill out the material privately, any researcher bias would be removed and they would feel more comfortable in being honest and not just turning in material hoping to

please me or skew the results in one direction or another. This seemed useful for both Christian and non-Christian participants. A 2-week time period seemed reasonable and hopefully did not make the participants feel too rushed.

The participant criteria were based on a number of different factors. The first requirement was whether or not the woman considered herself a Christian. For this study, a Christian was defined as a woman that has proclaimed her soul has been saved by Jesus Christ, the Son of the God, as defined in the Holy Bible. The first category were the believers who felt God was the main source for guidance and the most important aspect of life, which was supported by her answers in the DUREL. The second category was the women who did not claim to be Christian. They may regularly rely on other things besides God for daily decisions and everyday life. These groups were also demonstrated by the subjects' responses to the questionnaires.

Participants also had to have received a diagnosis of breast cancer from an oncologist before the study. The participant acknowledged that she felt prayer, either individual or group prayer, helped her survive, or that other factors were the main determining reasons for her survival. Each participant was willing to discuss her survival of breast cancer and whether or not she felt her faith in God was the main contributing factor for her survival. For historical purposes, the women were also given the opportunity to discuss whether or not faith helped them with other health issues.

This geographical area for the study was chosen as the area for study because this is where I lived at the time of the study. Not only was this location chosen for

convenience, but also it made the study more localized. This area also had a high concentration of people of the Christian faith, which was one focus of the study.

Age, race, and socioeconomic status were not considered for this study because these were not relevant to the aims of this study. The results were meant to show that faith and health outcomes were not limited to any particular group of people. The study also demonstrated that a form of cancer might develop in any person, regardless of age, race, and socioeconomic status. However, as stated earlier, if unexpected patterns related to these factors started to appear, they were considered.

With the exception of sending the surveys with Susan G. Komen Foundation newsletters, participants were given the study tools after an initial meeting with me. Initial meetings were conducted as mentioned earlier at survivor/support group meetings. I explained what the study was about with a brief description of why such a study was being conducted. Notes about this meeting were taken, if appropriate. After participants were selected, they received the measuring tools and were asked to fill them out and return them to me in previously addressed mailers.

Tools Used for Data Collection

The tools used for this study had been proven to be reliable and valid in many other similar studies (Hoge, 1972; Koenig & Büssing, 2010). The hope was that proven tools would help alleviate unintended personal biases of the subjects and me. The DUREL has been used in various studies measuring religiosity in individuals, both nationally and internationally (Koenig & Büssing, 2010). The DUREL has been used in over 100 faith-based studies and is available in 10 languages. It was developed to be used

in both large cross-sectional and longitudinal observational studies (Koenig & Büssing, 2010). Various other similar studies have also used the DUREL (Koenig, Meador, & Parkerson, 1997). The DUREL index focuses on five main areas related to faith. For this study, I modified it slightly to make it more applicable to the goals of the study. The modification added three questions. The additional questions pertained to using faith in health-related issues to make it a specific measurement for this particular study.

The 10-item Hoge Intrinsic Religiosity Scale was also used to measure religious belief or experience (Hoge, 1972). This scale uses a Likert-like format to measure both intrinsic and extrinsic religious motivation (Hoge, 1972). Motivation of behavior is more of a factor than the religious behavior itself with this scale (Hoge, 1972). I added questions pertaining to health and faith to this tool as well to make it more applicable to this study. Three questions on the HOGE scale were removed because they were also in the DUREL. The duplication of these questions was not necessary. The original and the altered tools can be found in Appendices A–D.

Reliability and Validity of Measurements

The DUREL test has been used as a measurement for many different studies related to issues of faith. There is both historical and recent evidence supporting the validity of this tool (Klemmack, Roff, Parker, Koenig, Sawyer, & Allman, 2007). A modified version of the test was used in a 2007 study in which strongly religious, moderately religious, and minimally religious clusters of people and issues pertaining to physical health, and functional status, and mental health variables were compared to nonreligious people (Klemmack et al., 2007). The researchers found that religious people

had better physical health, better functional status, and better mental health (Klemmack et al., 2007).

The DUREL has been used world-wide and measures three major dimensions of religiosity (Koenig & Büssing, 2010). These dimensions include organizational religious activity (ORA), nonorganizational religious activity (NORA), and intrinsic, or subjective, religiosity (IR). A separate subscale is used to measure these different dimensions and it is recommended that the correlation with health outcomes should also be analyzed by subscale and separate models (Koenig & Büssing, 2010). Further evidence of the validity of the DUREL was given by Koenig & Büssing (2010):

The overall scale has high test-retest reliability (intra-class correlation = 0.91), high internal consistency (Cronbach's alpha's = 0.78-0.91) and a high convergent validity with other measures of religiosity (r 's = 0.71-0.86). The factor structure of the DUREL has now been demonstrated and confirmed in separate samples by other independent investigative teams. (p. 78).

The 10-item Hoge Intrinsic Religiosity Scale has also been used successfully in many studies for many decades (Hoge, 1972). It is based on other concepts by individuals like Allport (Hoge, 1972). This scale may be used in other similar studies because it does not necessarily focus on only one religion; only three questions mention God specifically (Hoge, 1972).

Statistical Methods and Data

Even though the results of the study were based on the phenomenon of faith leading to survival of breast cancer, the measurement tools (the DUREL and the 10-item

Hoge Intrinsic Religiosity Scale) are nominal and I used them to determine if the subjects fit the parameters of relying on God as pertaining to this study, making it a quantitative study. The subjects were divided into two nonparametric independent groups. The first group was Christians, as defined earlier, and the second group was those not of the Christian faith, also defined earlier in the chapter. Based on the results, it was determined if either or both of these groups felt God was the main contributing factor for survival or medical care.

Because of the smaller sample size, the Fisher's Exact Test seemed most appropriate for the research to me. This test allows for an exact measurement for smaller groups (McDonald, 2009). The test can measure the two groups, either supporting or rejecting the null hypothesis and is used for ordinal data, which is what this study will use (McDonald, 2009). The null hypothesis for this study was that there was no significant difference between faith leading to surviving breast cancer and other factors leading to survival. Each subject was viewed independently before placed in the proper group based upon their responses to the questionnaires. The expected outcome was that a majority of the subjects would credit faith in God for survival. However, this might not have been the case, and the Fisher's Exact Test seemed useful to help determine the results. For this study, the null hypothesis will be rejected if the probability level is less than .05. The formula for the Fisher's Exact Test is:

$$P = \frac{\binom{a+b}{a} \binom{c+d}{c}}{\binom{n}{a+c}} = \frac{(a+b)! (c+d)! (a+c)! b! d!}{a! b! c! d! n!}$$

Table 1

The contingency table

	<u>God</u>	<u>Medicine</u>	
<u>Christian</u>	a	b	a+b
<u>Non-Christian</u>	c	d	c+d
	a+c	b+d	a+b+c+d

Dissemination of Data

The belief is that material from the study can be used to show others the validity of faith when health is concerned. The scales used to measure religiosity have been proven for decades. Many medical schools and physicians are considering faith and how it impacts our health today (Brooks & Koenig, 2002). This is a growing area of study and breast cancer is a growing area for research. Hopefully, by completing this study, more people will accept the idea that faith does play an important ancillary role in health. The results may also prove beneficial for the area of western Kentucky, and it could be duplicated in other rural areas as well as metropolitan areas, which might be a potential comparison study in the future.

Threats to Validity

Some threats to the validity of this topic have already been discussed in the Limitations section of Chapter 1. These included such issues as the size and limited geographical area of the study group and the idea of measuring faith, which is why a phenomenological study was done. Another factor that might be a potential threat is that only female breast cancer survivors were included in the study. The research did not include a comparison group comprised of people who may have had faith but succumbed to cancer anyhow. It cannot be determined fully from this study if they blamed God or medicine for not surviving. Relatives of the deceased might be potential proxies for the patients; however, surviving family members and friends might have bitterness towards God or medicine and could have their biases. There was no guarantee that the surviving family and friends would know exactly how the women felt about faith or doctors before death. Selection bias could also pose a problem because that the subjects were survivors could sway their answers in one direction or the other. This could lead others to question the results and question whether this was a scientific study or not.

Summary

The results of this study will hopefully demonstrate if a woman's faith in God was considered to be a direct result of survival from breast cancer. Because the study looked at the phenomenon of healing and spirituality, a phenomenological study was completed. The study employed a quantitative approach because of the tools used and because the Fisher's Exact Test was used to verify the data. The study population was located in Kentucky, Ohio, and Indiana and included 30–45 women, some who claimed to be Christians and some who did not but had all survived breast cancer. This area was largely

rural, so finding many more than 30–45 participants that have survived breast cancer was difficult. Different possibilities for recovery were considered. A study like this seemed appropriate because faith was being considered as a contributing factor for health and recovery. Several other studies indicated the value of faith in health-related areas, and I believed that this study would be able to be duplicated for other areas, both large and small. Other religious beliefs could also be the focus of future studies.

In Chapter 1, I explained the background of the problem as well as the hypothesis and main question being studied. I also described the theoretical framework used as well as the significance of the study and defined terms and assumptions for the study. The limitations and the delimitations were also discussed in Chapter 1. In Chapter 2, I provided the review of literature used in this study to explain general cancer information as well as current cancer treatments. Recovery and survival rates of breast cancer were shown as a comparison and to demonstrate the correlation of survival related to faith. A history of faith related to recovery and health in other areas was also presented, and some of this data was specific to various cancers. In Chapter 3, I explained the research method, the research design, and approach. I also provided the setting and the size for the participant pool justifying each. A discussion about the potential threats to the validity of the study can be found in this chapter as well. In the chapter, I demonstrated the reliability and validity of the measurement tools being used, which included the DUREL and the 10-item Hoge Religiosity Scale. I also suggested that further studies related to other faiths and other geographical locations might be beneficial. In Chapter 4, I will

explore the results of the study and in Chapter 5 will demonstrate how the data were interpreted and draw conclusions with further recommendations for future studies.

Chapter 4: Results

Introduction

I conducted this phenomenological study to determine if women credit their faith in God or medicine more for their recovery from breast cancer. Breast cancer is the second leading cause of death in women in the United States (NCI, 2012) and 79.5% of people in the United States claim to be Christians (Pew, 2013), which seems to add credibility to such a study. Several medical schools have started adding curriculum showing a relationship between spirituality and health (Brooks & Koenig, 2002) and some faith-based and government organizations also acknowledge the importance of a person's faith and have started to participate in religiously-affiliated healthcare programs (Brooks and Koenig, 2002). In 2006, George Mason University published a report showing that the NIH spent 3.5 million dollars on questions pertaining to faith and healing (Goldin, 2006).

The research question addressed in this study was: Will a woman credit her faith in God as a primary factor in recovery from breast cancer or will she credit modern medicine for survival? The alternative hypothesis was that a woman's faith in God was more effective than modern medicine for survival of breast cancer. The null hypothesis was that there would be no significant difference between faith leading to survival and other factors like modern medicine. The dependent variable for the study was surviving breast cancer, while the independent variable was whether the woman's faith in God or medical care was viewed as the main factor for survival. My theory behind structuring

the study this way was that a woman's faith in God would positively impact her chances for survival of breast cancer when other options have seemingly failed.

The tools I used to measure participants' faith were the DUREL and the 10-Item Hoge Religiosity Index. Both of these tools have been used for similar studies with great effectiveness. The DUREL has been used world-wide and measures three major dimensions of religiosity including ORA, NORA, and IR (Koenig & Büssing, 2010). The 10-Item Hoge scale has also been used for many decades and primarily focuses on IR (Hoge, 1972). Both of these tools have been slightly modified, with permission, for this particular study.

I chose phenomenology as the framework of the study because what was being studied was subjective, based on the human experiences of the participants. Sokolowski (2008) felt phenomenology could clarify human experience and demonstrate how it fits with other forms of evidence. This framework was also chosen because of the smaller size of the study group. The size of the study group was affected by being limited to the tristate area of Kentucky, Indiana, and Ohio with a large rural population, which was another limiting factor.

Setting and Demographics

This study was limited to a largely rural population of Kentucky, Ohio, and Indiana. This choice in study location was largely made because I lived in this area at the time of the study and it would allow the study to be more localized. Many of the survivors were self-proclaimed Christians, which for this study was defined as an individual who has an active relationship with, and a steadfast faith in, the deity known as

God as described in the Holy Bible. A participant who was a self-proclaimed Christian would also acknowledge that she has accepted the personal truth of Jesus Christ as the Son of God, Lord of creation, and the Savior of all humanity. Other survivors were not Christians, as defined by the study.

I chose participants by sending the DUREL and 10-Item Hoge tests to the Tri-state Susan G. Komen Foundation in Evansville, IN to be attached to monthly newsletters asking survivors to fill out the surveys and return them to me via e-mail. A secured post office box number was also given to participants in case they were not comfortable returning surveys via e-mail. Some participants did exercise this option. I also visited local breast cancer survivor groups and explained what the study was about. They were then given the option to voluntarily fill out the surveys and return them in self-addressed stamped envelopes to the previously mentioned post office box within 2 weeks, if possible. These steps helped maintain the anonymity, or at the very least, the confidentiality of the participants.

All participants for this study were female and survivors of breast cancer. The study was originally designed for Stage IV survivors; however, the selected area did not have many Stage IV survivors, and if any were in the area, they did not return the surveys. The coordinator at the Tri-state Susan G. Komen Foundation said many women at this stage are still undergoing treatments and may not have the strength or energy to participate in such a study. This led to the study being available to any breast cancer survivor.

Data Collection

As stated previously, the data were collected via e-mail and a secured post office box. Each participant was also given a “notice of consent” form, so she would know what the study was about and whom it was for. In the case of the survivor groups, I attended meetings personally and discussed the intent of the study. Some survivors had questions that were discussed and several wanted to talk about the issue in the meeting. One survivor voiced her concern feeling the survey was biased toward getting a particular result. I explained that this was not the case and nonbiased questions were pointed out. She seemed more confident after this. I also explained that I understood the results may disprove my theory and that this had to be acceptable for the research. The women were told not to feel they had to lean one direction or another as they were filling out the surveys.

Both the DUREL and Hoge tests were slightly modified from the originals with permission. Questions more specific to this study were included and duplicate questions were eliminated. This did not change the intent or skew any results for the surveys. Copies of the original surveys as well as the modified versions are included as Appendices A–D. The scoring was not changed in any way. When individual results were scored for each survivor, they were applied to the Fisher’s Exact Test. This test allows an exact measurement for small groups (McDonald, 2009). The two nonparametric independent groups applied to the Fisher’s Exact Test included the group of self-declared Christians, as defined earlier, and people who are not of the Christian faith, also defined earlier. Based on these results, I determined if survivors from both groups credited God or medicine more for their survival. This test also allowed for the null hypothesis to be

proven or disproven. The null hypothesis for the study was that there was no perceived significant difference between faith leading to surviving breast cancer and other factors leading to survival. The expected outcome was that a majority of women would credit God for survival more than medicine.

Results

The study was originally going to focus on only Stage IV breast cancer survivors, but because there were not enough survivors at this stage to get any results, it had to be made available to all breast cancer survivors. Working with the Tri-State Susan G. Komen Foundation in Evansville, IN was also necessary to reach the required goal of 30–45 participants. The newsletters sent out by this branch of the foundation totaled 676. However, only 15 patients responded by filling out the surveys. The rest of the participant group was chosen from different breast cancer survivor groups in western Kentucky that I visited personally. At these groups, I explained to the survivors what the study was about and handed the surveys out to the women. They were instructed to fill them out and return them in self-addressed stamped envelopes to a post office box rented by me for the purposes of this study. These groups were smaller, so only 28 people received the envelopes with 17 people returning them. I also explained that the surveys were voluntary in nature and that no one would be able to know who filled out each survey. Between the Susan G. Komen patients and local survivor groups, 704 people were invited to participate, and 32 people returned the surveys within the allotted time for the results to be calculated.

The DUREL test for this study included eight questions. The first question asked about OR, which includes activities like attending a place of worship and the regularity of attendance in a more formal setting. The second question asked about NOR, which includes informal or private religious activities like prayer and meditation. Questions 3–8 asked about IR, which describes how personal faith plays a role in a person’s everyday life and activities. The Hoge scale included eight questions about a person’s religious belief or experience that focused primarily on IR. Copies of each survey are attached as Appendices A–D. The modified scales for this study are Appendices B and D. Both of these scales have been used for many other similar studies with proven accuracy and validity (Koenig & Büssing, 2010).

The Fisher’s Exact Test was used to compile the data for this study. The null hypothesis would be rejected if the probability level was less than .05. The results using the significance level of < .05 indicated the statistical value of .016935, rejecting the null hypothesis. The location used to formulate the results was the website:

<http://www.socscistatistics.com/tests/fisher/Default2.aspx> (Stangroom, 2016). The

formula for the Fisher’s Exact Test is:

$$P = \frac{\binom{a+b}{a} \binom{c+d}{c}}{\binom{n}{a+c}} = \frac{(a+b)! (c+d)! (a+c)! b! d!}{a! b! c! d! n!}$$

The contingency table used for this study was as follows:

	<u>God</u>	<u>Medicine</u>	
<u>Christian</u>	a	b	a+b
<u>Non-Christian</u>	c	d	c+d
	a+c	b+d	a+b+c+d

The results of this study can be shown in the following table.

Table 2

Overall Study Results

Results			
	God	Medicine	<i>Marginal Row Totals</i>
Christian	23	6	29
Non-Christian	0	3	3
Marginal Column Totals	23	9	32 (Total)

These results showed that the self-proclaimed Christian participants did give God more credit; however, when meeting with the survivors, many commented that they also credited medicine. When statements like this were made, many people nodded in agreement. Some of these comments were in the meetings, while others were written on the surveys. One such comment was:

I know that God has put certain people in my path to help me through my struggles with cancer. And I know He is the one who has gotten me through the three years and counting treatments to keep me alive.

She also wrote, “There are a lot of important things in life, but if you don’t have faith in God then those important things in your life aren’t worth much.” Another such comment written on a different survey was, “I rely on prayers and God directing the physicians in my care.” Another patient’s answer for Question 6 on the DUREL Scale was that she relies on both “faith and medicine.” On a survey, another participant stated:

During my quiet time one day in early June 2015, the Lord impressed on my heart that I needed a mammogram and quickly. My primary care doctor made the appointment, and the mammogram discovered two nodules in the right breast. It was caught early, and I'm fine now. I believe with all my heart it was a ‘God thing.’”

Other survivors, who did not claim to be Christian credited medicine without much, if any, reference to God or spirituality. One patient did comment that she takes time for meditation that is not God-based. This same person was concerned that the surveys were biased. and I tried to put her at ease about this. One participant made a comment about Question 2 on the DUREL scale that her meditation was “non-religious.” She also gave an explanation about Question 1 on the Hoge scale, which stated, “I am not a religious person. Religion is not a consideration in my everyday affairs. The first clause is 5 and second clause is 1. Five represented the answer “Definitely true of me” and one represented “Definitely not true.” Her overall response for that question was a three. Other questions were asked on both the DUREL scale and the Hoge scale about religion and faith for the participants.

Question 1 on the DUREL scale referred to ORA, Question 2 related to NORA, and Questions 3–8 were about IR. All of these categories were explained in more detail earlier. Table 3 shows the results for the DUREL Scale.

Table 3

DUREL Results

Participant	Question							
	1	2	3	4	5	6	7	8
A	3	1	4	4	4	2	4	2
B	6	2	5	5	5	5	5	5
C	5	1	5	4	3	3	5	5
D	3	6	5	5	5	NA	5	5
E	4	6	5	5	4	5	5	5
F	5	5	5	5	5	4	5	5
G	6	4	5	5	5	NA	4	5
H	6	5	3	5	4	5	5	5
I	6	6	5	5	5	5	5	5
J	5	4	5	5	5	4	4	4
K	6	5	5	4	4	3	3	4
L	6	5	5	5	5	5	5	4
M	6	5	4	5	4	3	4	4
N	4	1	4	3	3	3	2	2
O	6	5	5	5	4	4	4	5
P	6	5	5	5	5	3	5	5
Q	2	2	2	1	1	2	1	5
R	6	5	5	5	5	4	5	5
S	3	4	2	2	2	3	4	4
T	3	1	3	2	2	2	2	2
U	5	5	5	5	4	5	5	5
V	6	6	5	5	5	5	5	5
W	6	6	5	5	4	4	5	5
X	6	4	4	4	4	5	5	4
Y	6	6	5	5	5	5	5	5
Z	5	5	5	4	4	4	4	5
AA	5	5	4	2	4	4	4	4
BB	4	4	4	4	4	4	4	4
CC	6	4	5	5	5	5	5	5
DD	1	5	5	5	5	3	5	5
EE	6	6	5	5	5	5	5	5
FF	6	6	5	5	5	5	5	5

The Hoge Intrinsic Religiosity Scale focused on IR only. The results for the Hoge Scale can be found in Table 4. The higher total scores indicate a greater IR.

Table 4

Hoge Intrinsic Religiosity Results

Participant	Question								Total
	1	2	3	4	5	6	7	8	
A	1	2	1	1	2	2	2	2	13
B	5	4	5	5	5	5	5	5	39
C	3	5	4	4	5	1	3	2	27
D	5	5	1	5	5	3	5	5	34
*E	1	4	5	4	5	2	4	5	30
F	2	4	3	4	4	2	NA	4	23
G	5	5	4	4	4	5	5	4	32
H	1	5	5	5	5	5	5	5	36
I	5	5	5	5	5	5	5	5	40
J	5	4	3	4	5	2	3	5	31
K	3	4	3	4	4	4	4	3	29
L	5	4	4	4	5	5	4	5	32
M	4	2	NA	4	5	5	4	5	29
N	2	3	2	2	4	3	1	2	19
O	5	4	5	5	5	5	5	1	35
P	5	5	4	5	5	5	5	5	39
Q	3	1	1	1	1	3	1	1	12
R	5	2	1	5	5	4	4	4	30
S	2	2	4	2	3	3	2	3	21
T	4	2	2	1	2	4	2	2	19
U	5	5	5	5	5	5	5	5	40
V	5	5	5	5	5	5	5	5	40
W	5	5	1	5	5	5	2	4	32
X	4	4	3	4	4	4	4	4	31
Y	5	5	2	5	5	5	5	5	31
Z	5	5	3	4	2	5	5	4	33
AA	5	4	4	4	4	4	4	4	33
BB	NA	NA	NA	NA	NA	NA	NA	NA	NA
CC	1	5	5	5	5	4	1	5	31
DD	5	5	4	5	5	5	5	3	37
EE	5	5	4	5	5	5	5	5	39

FF 5 5 5 5 5 5 5 40

Note. *E-These scores are based upon the comments left on the survey because the participant did not fill in any numbers; she just left comments for the questions. Questions 2, 3, 4, 5, and 8 have been reverse-scored as instructed).

Conclusion

In Chapter 4, I explained that the study focused on whether women who have survived breast cancer credit God or medicine more for their survival. This phenomenological study was looking at the second leading cause of death for women in the United States, breast cancer (NCI, 2012). In the chapter, I also explained that the study of this nature would be valuable because 79.5% of people in the United States claim to be Christians (Pew, 2013). The study compared self-proclaimed Christian women with non-Christian women to see who credited God and who credited medicine the most for their recovery.

The hypothesis for this study was that a woman's faith in God would be seen as beneficial for survival. The null hypothesis was that there would be no significant difference between faith impacting survival and other factors like medicine impacting survival. Surviving breast cancer was the dependent variable and whether a woman's faith in God or medicine was seen as the major contributing factor for survival was the independent variable. In carrying out this study, I theorized that a woman's faith in God would have a positive impact on her chances of survival of breast cancer.

The DUREL and the Hoge Religiosity Scale were used for this study. Both of these tools have been used for similar studies with great reliability and validity (Koenig & Büssing, 2010). The scales measured ORA, NORA, and IR. The DUREL scale

measured all three of these categories (Koenig & Büssing, 2010) and the Hoge scale measured IR (Hoge, 1972).

This study was conducted primarily in western Kentucky, but also included the tristate area of Kentucky, Indiana, and Ohio. The Tri-State Susan G. Komen Foundation attached the surveys to their newsletters for their patients. I visited local breast cancer survivor groups to distribute more surveys. The study was limited to female breast cancer survivors of any stage. The surveys were either e-mailed to me after completion or mailed to a secure P.O. Box rented by me. In total, 704 breast cancer survivors were invited to participate in the study and 32 survivors returned the surveys.

The study seemed to indicate that women of faith do seem to credit God more than medicine for their survival. However, many of these women also credited medicine. One participant stated that she felt God guided the hands of her physician. The non-Christian women did not seem to credit God or spirituality. Chapter 4 also included statements told to me or written on the surveys in addition to the Likert scale.

The Fishers Exact Test was used to determine the results. This test seemed most appropriate for this particular study. With the probability level of less than .05, the null hypothesis was rejected because the statistical value for the study was .016935. These results were calculated on a website called Social Science Statistics (Stangroom, 2016). Tables showing the results from the DUREL Scale and the Hoge Scale were also included in Chapter 4. In Chapter 5, I will review the results with key findings and my interpretation of the study along with recommendations for future studies. I will also discuss the study's implications for positive social change.

Chapter 5: Conclusion

Introduction

In this chapter, I will discuss the results of this study reviewing the key findings and interpretation of the data. I will also describe some limitations of the study along with explanations about these limitations. In this chapter I will also provide recommendations for future studies along with descriptions of why these further studies would be warranted and valid. The chapter will continue to present the implications for positive change that this study, and possible future studies, could have on society and potentially smaller communities. Finally, the chapter will end with a conclusion.

Key Findings/Interpretation of Data

Based on the scores from the numbers on the DUREL and 10-Item Hoge tests, I concluded that the key findings of this study indicated that Christian women did, in fact, give God more credit for their survival of breast cancer, even though most survivors did give credit for their medical treatments as well. Non-Christian women focused more on the medicine as the main cause for their survival. However, they did not seem to disapprove of the survivors who gave God more credit in their very limited interactions with me. Participants mentioned comments related to trusting God to guide the hands of the physicians in the study. One participant commented that she felt God was the reason she was tested for breast cancer in the beginning. She mentioned that she felt God directed her to ask her physician about getting a mammogram, which showed cancer. She had it managed and is doing fine, but she credits God for directing her to her doctor for treatment.

Limitations/Weaknesses

The potential limitations/weaknesses for this study included the small size of the participant group; however, the design was a phenomenological study, which was developed for the study of smaller groups. The study was also limited to a small geographical area of the country to include Kentucky, Indiana, and Ohio, with a larger emphasis on western Kentucky, where I lived at the time of the study. This limitation led to a smaller population from which to choose. The study was also limited to women, and if faith was involved, it was limited to reviewing the Christian faith. The women were also survivors of breast cancer, which was the only type of cancer considered for this study. Another limitation of the study is the fact that faith was being considered and some feel this is hard to measure or just a placebo and not relevant in actual medical recovery (NCI, 2013). Some recommendations for potential future studies will be given as a result of these limitations.

Recommendations

Further studies could be conducted to consider other faiths besides Christianity and other types of cancer besides breast cancer. Men could also be included for future studies. This study did not consider race or age for the results, but this might be another addition to such studies. Different geographical areas might also be considered for similar studies. Because much of the targeted area was rural, nonrural areas could be the focus of future studies. Cancer rates might even be different for different locations.

Other methods of data collection could also be considered. The methods used for this study were effective, but the data was also hard to obtain. The participation rate

seemed higher with the survivor groups I visited with than with the newsletters from the Susan G. Komen Foundation. This could be the preferred method of data collection for other studies. Doing a similar study in particular industries where there is a high rate of cancer might also be beneficial, especially in an area with a high percentage of self-proclaimed Christians like the Bible Belt where coal mining is a major industry.

Implications for Positive Social Change

Because faith is such an integral part of many people's lives, the results of a study like this could lead to a belief system being better accepted for health-related issues. Many individuals and cultures hold faith-based beliefs that should at least be considered in many areas of life, no matter how controversial they may seem. Many individuals feel that their faith is what has brought them through many hardships in life even when these views are ridiculed or belittled.

Other studies have shown correlations between health and faith, some of which have been reviewed in this study. This topic has been the subject of many recent studies, and with so much of the population believing in a higher power, consideration should be given to this avenue of study as legitimate. Adding legitimacy to a person's beliefs may cause less embarrassment and possible shame for holding these beliefs when confronted by others, especially those in the medical field.

Some medical schools have started adding curriculum showing a relationship between spirituality and health (Brooks & Koenig, 2002). Other faith-based and government organizations acknowledge the importance of a person's faith so much that they have started to participate in religiously-affiliated healthcare programs (Brooks &

Koenig, 2002). George Mason University reported that the NIH spent 3.5 million dollars on questions about faith and healing within the past decade (Goldin, 2006). This all may correspond with the Pew poll showing that 79.5% of people in the United States claim to be Christians (Pew, 2013). This data may be of use for the Healthy People 2020 initiative from the government.

This initiative was set up to help build a healthier country and promotes good health for everyone across all stages of life (Healthy People 2020, 2016a). One goal in this plan is to make sure a good infrastructure is set up for Federal, State, Tribal, territorial, and local health agencies (Healthy People 2020, 2016a). Healthy People 2020 (2016a) believe that this infrastructure is “the foundation for planning, delivering, evaluating, and improving public health” (p.1) and that community is a vital part of this infrastructure. They are trying to find new strategies to achieve these goals and including the value of faith-based initiatives, which are largely community-driven, would seem like an effective strategy, especially based on the findings of my research as well as other research in this area. Studies have shown that faith-based communities can reach more people and have great potential to reduce health disparities because of the power churches have to influence their members (Healthy People 2020, 2016b). Ignoring and disparaging such communities could potentially harm this influence. All of these factors help lead to the conclusion of this study.

Conclusion

The research question addressed in this study was: Will a woman credit her faith in God as a primary factor in recovery from breast cancer or will she credit modern

medicine for survival? I hypothesized that a survivor would credit her faith in God as more effective than modern medicine for survival of breast cancer, especially if she is a self-proclaimed Christian. This led to the null hypothesis being there will be no significant difference between faith leading to survival and other factors like modern medicine. Based on the tools used in this study, the null hypothesis was rejected. Many women did credit medicine as a major part of recovery, but they felt God was an even bigger part of recovery. Comments made by the survivors as well as the measurement tools used reached much of this conclusion.

The dependent variable for this study was survival of breast cancer while the independent variable depended on faith in God or medical care. The theory behind my conduction of the study was that a woman's faith in God did have a positive impact for surviving breast cancer. All stages of breast cancer were used for this study, which was conducted in Kentucky, Indiana, and Ohio. Limitations discussed included this limited geographical area as well as limiting the study to female survivors. Race and age were not a factor for the study, but these factors might be limitations for future studies.

The measurement tools I used in this study have been used for many other studies and have proven to be valid and reliable. The DUREL has been used around the world and measures three dimensions of religiosity (Koenig & Büssing, 2010). These include ORA and NORA as well as IR. Other independent investigations have also proven the validity of the DUREL (Koenig & Büssing, 2010). The Hoge Intrinsic Religiosity Scale has been successfully used for decades in other studies (Hoge, 1972). Only three

questions in this unmodified scale specifically mention God so that it can be used for other religions besides Christianity (Hoge, 1972).

Future studies are recommended focusing on other factors, like different locations that are not part of the Bible Belt or asking men about their breast cancer recovery. Other cancers might also be positive avenues for future studies as well as other faiths. I feel that these other avenues of study might greatly help in this area of research and show how faith impacts issues related to health.

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Appendix A

DUREL: Duke University Religion Index

(available in Spanish, Portuguese, Chinese, Romanian, Japanese, Persian/Arabic, German, Norwegian)

Directions: Please answer the following questions about your religious beliefs and/or involvement. Please indicate your answer with a checkmark.

(1) How often do you attend church or other religious meetings?

1. More than once/wk
2. Once a week
3. A few times a month
4. A few times a year
5. Once a year or less
6. Never

(2) How often do you spend time in private religious activities, such as prayer, meditation or Bible study?

1. More than once a day
2. Daily
3. Two or more times/week
4. Once a week
5. A few times a month
6. Rarely or never

The following section contains three statements about religious belief or experience. Please mark the extent to which each statement is true or not true for you.

(3) In my life, I experience the presence of the Divine (i.e., God).

1. Definitely true of me
2. Tends to be true
3. Unsure
4. Tends *not* to be true
5. Definitely *not* true

(4) My religious beliefs are what really lie behind my whole approach to life.

1. Definitely true of me
2. Tends to be true
3. Unsure
4. Tends *not* to be true
5. Definitely *not* true

- (5). I try hard to carry my religion over into all other dealings in life.
1. Definitely true of me
 2. Tends to be true
 3. Unsure
 4. Tends *not* to be true
 5. Definitely *not* true.

Koenig, H.G., Meador, K., & Parkerson, G. (1997). *Religion Index for Psychiatric Research: A 5-item measure for use in health outcome studies. American Journal of Psychiatry, 154*, 885–886.

SCORING of DUREL

Subscale 1

Reverse score item 1 to obtain frequency of religious attendance subscale score

Subscale 2

Reverse score item 2 to obtain frequency of private religious activity subscale score

Subscale 3

Reverse score items 3-5 and total to obtain intrinsic religiosity subscale score

Overall Score

For overall religiosity, sum up reversed scores for items 1-5 (NOT RECOMMENDED)

Points:

- Be sure to reverse score items before analysis
- Examine each dimension (subscale) in a separate regression model when examining health outcomes
- Don't recommend including all subscales in a single model due to strong multiple co linearity between subscales
- Don't recommend using the total score, since subscale scores may cancel out the effects of each other.

Appendix B: DUREL SCALE (With Study-Specific Questions Added)

(1) How often do you attend church or other religious meetings? (ORA)

1. Never
2. Once a year or less
3. A few times a year
4. A few times a month
5. Once a week
6. More than once/week

(2) How often do you spend time in private religious activities, such as prayer, meditation or Bible study? (NORA)

1. Rarely or never
2. A few times a month
3. Once a week
4. Two or more times/week
5. Daily
6. More than once a day

The following section contains three statements about religious belief or experience. Please mark the extent to which each statement is true or not true for you.

(3) In my life, I experience the presence of the Divine (*i.e.*, God) - (IR)

1. Definitely *not* true
2. Tends *not* to be true
3. Unsure
4. Tends to be true
5. Definitely true of me

(4) My religious beliefs are what really lie behind my whole approach to life - (IR)

1. Definitely *not* true
2. Tends *not* to be true
3. Unsure
4. Tends to be true
5. Definitely true of me

(5) I try hard to carry my religion over into all other dealings in life - (IR)

1. Definitely *not* true

2. Tends *not* to be true
3. Unsure
4. Tends to be true
5. Definitely true of me

(6) I rely on my religion for health-related issues.

1. Definitely *not* true
2. Tends *not* to be true
3. Unsure
4. Tends to be true
5. Definitely true of me

(7) Prayer has helped me recover from other health issues.

1. Definitely *not* true
2. Tends *not* to be true
3. Unsure
4. Tends to be true
5. Definitely true of me

(8) I rely on prayer from others (family, close friends, associates, my church) for spiritual support.

1. Definitely *not* true
2. Tends *not* to be true
3. Unsure
4. Tends to be true
5. Definitely

Appendix C: 10-item Hoge Intrinsic Religiosity Scale

The following section contains 10 statements about religious belief or experience. Please mark the extent to which each statement is true or not true for you.

Definitely true of me	1
Tends to be true	2
Unsure	3
Tends not to be true	4
Definitely not true	5

1. My faith involves all of my life (**reverse scored**)
2. In my life, I experience the presence of the Divine (i.e. God) (**reverse scored**)
3. Although I am a religious person, I refuse to let religious considerations influence my everyday affairs (**do not reverse score**)
4. Nothing is as important to me as serving God as best as I know how (**reverse scored**)
5. My faith sometimes restricts my actions (**reverse scored**)
6. My religious beliefs are what really lie behind my whole approach to life (**reverse scored**)
7. I try hard to carry my religion over into all my other dealings in life (**reverse scored**)
8. One should seek God's guidance when making every important decision (**reverse scored**)
9. Although I believe in religion, I feel there are many more important things in life (**do not reverse score**)
10. It doesn't matter so much what I believe as long as I lead a moral life (**do not reverse score**)

Score range 10–50, higher scores indicate greater intrinsic religiosity.

Information for grants or methods sections:

Intrinsic religiosity (IR) will be measured using a 10-item scale. This scale contains statements about religious belief or experience. Patients are asked to mark on a 1 to 5 scale the extent to which they feel the statement is true for them (score range 10 to 50).

The scale has both high internal reliability (Cronbach's alpha 0.87, same in two separate

populations) and test-retest reliability (91.3% agreement after a 6-week interval). The scale's validity has been examined in two studies. In the original study, Hoge found a high correlation between scale scores and ministers' judgments ($r = .585$). In a second study, the scale was administered to 85 ministers representing 18 Christian denominations and two Jewish groups; again agreement was high with a mean score of 46.5 ($SD 5.1$). The scale is also strongly correlated with Allport's original intrinsic subscale (0.86) and Feagin's intrinsic scale (0.87). We administered the Hoge scale to 458 patients in our Duke Hospital study. The scale demonstrated high internal reliability in this population (Cronbach's alpha 0.83). IR was weakly inversely correlated with depressive disorder at baseline ($F=2.1$, $p=0.12$), but predicted significantly faster times to remission for patients with depressive disorder. For every 10-unit increase in the IR score, there was a 70% increase in the median time to remission. This effect remained robust even after controlling for other significant predictors of remission, including changes in physical functioning.

Appendix D: HOGE SCALE (With Study-Specific Questions Added)

Definitely true of me	1
Tends to be true	2
Unsure	3
Tends not to be true	4
Definitely not true	5

Table 2. 10-Item Hoge intrinsic religiosity scale.

1. Although I am a religious person, I refuse to let religious considerations influence my everyday affairs (**reverse score**)
2. Nothing is as important to me as serving God as best as I know how
3. My faith sometimes restricts my actions
4. My religious beliefs are what really lie behind my whole approach to life
5. One should seek God's guidance when making every important decision
6. Although I believe in religion, I feel there are many more important things in life (**reverse score**)
7. It does not matter so much what I believe as long as I lead a moral life (**reverse score**)
8. My faith guides me in health-related decisions.

Appendix E: Permission to use 10-Item Hoge Scale

Wiley Global Permissions

Mar 9 at 1:00 PM
Hi Frank,

Permission is granted with the alterations as you've indicated below.

Best wishes,

Paulette Goldweber
Associate Manager, Permissions
Wiley

XXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXX

Appendix F: Permission to use DUREL Scale

From: Franklin Lewis XXXXXXXXXX
Sent: Friday, July 26, 2013, 11:05 PM
To: Harold Koenig, M.D.
Subject: Re: Modified DUREL Scale for a Dissertation Study

Dr. Koenig,

Hello again. I hate to bother you, but my committee chairperson wanted me to make sure I had the proper written permission to use the DUREL and the Hoge IR. I wasn't sure if I had to contact you or if another person or organization has to give me permission. I was told I needed this for the Institutional Review Board (IRB) as I get closer to doing my study.

Thank You, Frank Lewis

Harold Koenig, M.D. XXXXXXXXXX
To
Me

Jul 27, 2013
Frank -- sure, you have permission -- see