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# **The Effectiveness of Religion-Affiliated Nonprofit Organizations in Social Services: A Survey Study of Nursing Homes in Virginia**

**A dissertation submitted in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy at Virginia Commonwealth University.**

**by**

**Bulent Ucar**

**B.A., Marmara University, Turkey, 1996**

**M.P.A., Fatih University, Turkey, 2000**

**Director: Dr. Blue E. Wooldridge**

**L. Douglas Wilder School of Government and Public Affairs**

**Virginia Commonwealth University**

**Richmond, Virginia**

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## **ABSTRACT**

### **THE EFFECTIVENESS OF RELIGION-AFFILIATED NONPROFIT ORGANIZATIONS IN SOCIAL SERVICES: A SURVEY STUDY OF NURSING HOMES IN VIRGINIA**

By Bulent Ucar, Ph.D.

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Committee Chair:

Dr. Blue E. Wooldridge, L. Douglas Wilder School of Government and Public Affairs

The primary purpose of this study is to determine whether being a church affiliated nursing home influences performance. Performance is measured based on criterion put in place by the Center for Medicare and Medicaid Services (CMS). The secondary purpose is, regardless of ownership type - religiously affiliated or secular- to investigate if more religiously involved nursing homes perform better than their less religiously involved counterparts. These two purposes are hypothesized with six different hypotheses each of which are tested by utilizing OLS regression analysis.

This study extensively discusses the arguments surrounding the Charitable Choice Initiative, which allowed faith-based organizations (FBOs) to compete for federal and state grants and funds without altering their religious beliefs or practices while setting up a partnership with government in delivering social services. The subject has been part of serious debates among policy makers, practitioners and scholars after President George W. Bush's creation of the White House Office of Faith-Based and Community Initiatives in 2001.

This study applied self regulation theory, which is originally an individual level theory, to organizations by using metaphors, as many newly developing fields of studies have done. The self regulation theory is tested through analyzing secondary data sets that are

provided by CMS and through a religiosity survey data set that this researcher collected from 218 out of 287 CMS certified nursing homes in Virginia. The relationship between religious involvements of nursing homes and their patient outcomes and health inspection outcomes are tested. The statistical analyses supported only one hypothesis out of six. Since most of the hypotheses are not supported by the findings, the theory used to explain the role of religious motivation in performance of organizations requires further testing through additional rigorous studies.

## CHAPTER I

### INTRODUCTION

President Clinton signed into law the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996, revolutionizing the welfare system in the United States. One part of the bill, known as “the Charitable Choice Initiative”, encouraged public welfare service providers to work more closely with faith-based organizations in order to provide for the needs of their community (Printz, 1998; Graddy and Ye, 2006; Gilman, 2002; Modesto, 2006; Ragen, 2004). Due to President George W. Bush’s avowed religious orientation, “Charitable Choice” has come to the fore during the previous administration, raising many questions concerning its legality and constitutionality. As faith-based organizations (FBOs) continue to establish themselves as actors in the public arena, the importance of studying their impact on public policy grows (Kramer, et al., 2002; Kennedy and Bielefeld, 2002; Fischer, 2004).

Advocates of “the Charitable Choice Initiative” contend that religious organizations provide important services to people in need, and that these groups should be allowed to work alongside secular organizations that carry out similar services (Carol and Wilson, 2001). Critics of the initiative argue that “Charitable Choice,” in combination with Bush’s faith-based agenda, has created a “slippery slope” that will lead to the use of government funds to endorse and promote religious activities and services. They claim, moreover, that the government funding of faith-based organizations violates the constitutional separation of church and state (Boris and Steuerle, 1999; Gilman, 2002; Ebaugh, Chafetz and Pipes, 2005; Farris, Nathan and Wright, 2004).

Even though the debate on the faith-based provision of social services has a number of aspects, an important dimension of the controversy lies in the effectiveness of these organizations when compared to those with a secular orientation (Bana, Coffin and Thiemann,

2000; Byron, 2002; Kevin, Park and Yankoski, 2005; Hula et al., 2007). Unfortunately, measuring the effectiveness of FBOs and the importance of the role of faith in their ability to provide services proves quite difficult. For instance, it is difficult to measure the aesthetic edification provided by arts organizations; spiritual comfort provided by religious organizations, or love and companionship provided in nursing homes, as these factors all reside in the realm of intangibility. Similarly, an FBO is driven by the intention to serve God and others through their faith, and, is thus less concerned with evaluating the outcomes of their services and works (Salamon, 2002). Another of the numerous difficulties in evaluating the performance of FBOs relates to the nature of the people they serve. Since FBOs most frequently serve those in poverty, the recipients of their services are notoriously difficult to track. People in poverty move frequently, often do not have telephones, and are unresponsive to or intimidated by survey forms and other formal inquiries (Edin and Lein, 1997). Therefore, it is difficult to gather data about service outcomes. The lack of credible data is one of the most significant reasons for strong disagreements among scholars and policymakers concerning government funding for FBOs (Kennedy and Bielefeld, 2004). Besides these, faith-based organizations' volunteer-driven structure can make it hard to track how many hours they spend serving clients. Small budgets are among the other confining factors that make it difficult for FBOs to spend time on accounting and paperwork (Carney, 2003; Bartowski, Call Heaton and Forste, 2007; Wuthnow, Hackett and Hsu, 2004; Hagley and McClanahan, 2002).

To overcome above mentioned problems, the quality and effectiveness of the services provided by nonprofit religious organizations must be compared to the same services from secular, private and government organizations. When measuring the effectiveness of an organization, one must take into account the full portfolio of organizations from which recipients obtain assistance (Wuthnow, Hackett and Hsu, 2004; Cnaan and Bodie, 2001). With this criterion in mind, this study will measure the effectiveness of FBOs by taking into account the

multitudinous aspects that influence the performance of these organizations.

### **Problem Statement and Purpose of the Study**

The government alone cannot solve the social problems of our time. Implementing public policy decisions requires the government to form more partnerships with and get commitments from outside organizations. Having realized this, the administration of President George W. Bush hoped to give a larger role to faith-based organizations in delivering social services. In the future, we will most likely see more government-funded church and faith-affiliated organizations providing social services that have traditionally been delivered by the government and other non-religious organizations (Bartkowski and Regis, 2003; Wineburg, 2001; Chaves and Tsitsos, 2001; Vanderwoerd, 2004).

Determining the effectiveness of FBOs is vital to assessing the future role of religious organizations in delivering government-funded services. As the federal government focuses more energy and resources on FBOs, policymakers must ensure that these organizations are meeting certain standards (Chaves, 1999; Monsma and Soper, 2006). Government program directors work to consider which service provider organizations will receive federal funds and grants. To perform this task, they must track the record of the service providers, based on performance and effectiveness (Monsma, 1996; Gibelman and Gelman, 2002). This study uses comparative data in an effort to bring to light the effectiveness of faith-based organizations. By using these data sets, based on the criteria established by the Center for Medicare and Medicaid Services, researchers will be in a better position to determine the effectiveness of services and service providers. Naturally, each organization possesses its own character, so we must be careful not to make sweeping generalizations or inferences (Farnsley, 2001; Goldsmith, Eimicke and Pineda, 2006).

This research is governed by the following questions: **1-** Are nonprofit, faith-based nursing homes more effective in providing Medicare and Medicaid services compared to their

secular nonprofit and for-profit counterparts? 2- Are more religious nursing homes, regardless of ownership type affiliation, more effective in providing Medicare and Medicaid services compared to their less religious counterparts?

Furthermore, this study will examine the possible role of religion on social service providers' business conduct through an extensive literature review and data analyses. Also, through this research and interpretation of data sets, the effectiveness of nonprofit faith-based organizations will be compared to secular, private organizations, other nonprofit organizations and government agencies in the same sector that is in the provision of Medicare and Medicaid services.

### **Theoretical Perspective**

The fundamental question in this study revolves around whether religious involvement or being religiously affiliated can possibly influence an organization's performance. If religion has an impact on a program's outcome, how does this occur? What features of a given belief system might cause the individuals or organizations to influence the outcome positively? Does religion, similar to ideologies, really motivate individuals and organizations to reach the preset goals by spurring their limits?

There is no already created perfect theory that can thoroughly answer all of these questions. During the long theory research period for this work, the researcher of this study has not encountered a complete theory that can address the aforementioned questions. In search of a theory, there have been conversations with scholars who have done well respected studies in the field; the literature and many Ph.D. dissertations that were relevant to this subject were thoroughly reviewed. A substantial portion of the studies employed human capital theory and social capital theory as well as public service motivation theory to explain theoretical base of religious affiliation or influence of being religiously affiliated on the performance of different type of organizations. Some other scholars, such as Smith (2003), Regnerus (2003), Iannaccone

(1990) indicated the need to develop a good theory that explains role of religion on individuals' behaviors and organizations' performance. In our case, comparing relative effectiveness of faith-based organizations to traditional-secular service providers, above mentioned theories do not help us to explain the differences among the organizations. There is a need for a theory that can help us to differentiate the organizations based on some distinctive traits. What does a particular organization have that makes it possibly different than the others? In our case, religion is thought to be making the possible difference in terms of outcomes. The hypotheses will be tested to see whether being religiously affiliated affects the performance positively. For the purpose here, in this study, the Theory of Self Regulation is found to be helpful in explaining the case. Self Regulation Theory was originally created by Carver and Scheier (1998) and it is intelligently adapted by McCullough and Willoughby (2009) to explain role of religion in self regulation. McCullough and Willoughby did a meta-analysis of hundreds of empirical studies that in one way or another measure religion's possible influence on human behavior. They concluded that religion has a power to self regulate its followers' behaviors.

What is self regulation theory and how is that applied to a subject like role of religion in helping individuals to exert self control? How does religion promote motivation, self regulation and ultimately change in behaviors? Can religion possibly be a primary factor of effective and intended outcomes? The self regulation theory, as adapted, is expected to answer these questions clearly with the help of extensive empirical studies. Although self regulation theory has been grounded on extensive empirical studies since its conception, it is an individual level theory. To the knowledge of this researcher, this theory has not been applied so far to organizations. With the help of McCullough and Willoughby's well constructed study (2009), this study will apply self regulation theory to organizational effectiveness measurements. The self regulation theory will not only help to explain potential role of religion in organizational outcomes, but it will also be tested if it is provable in different settings.

At this point, it will be helpful and appropriate to define religion before describing self regulation process. McCullough and Willoughby (2009) followed James (1958) and Pratt (1934) in defining religion as cognition, affect, and attitudes that take reference from consciousness of supernatural power(s), or perception of interacting with higher power(s) that are perceived to play a substantial role not only in individual's way of thinking and acting but also in human interactions. Studies have been attempted to measure psychological and behavioral components of religious beliefs in a variety of ways, such as strength of commitment to a particular faith and its behavioral outcomes, belief in the existence of a god or higher power and its influence on a human's psychological state; i.e., coping, motivational outcomes of engagement with supernatural entities etc. (Powell et al., 2003; Koenig and Cohen, 2002; Smith, 2003; Stark and Bainbridge, 1998; Ellison et al., 1989; Regnerus, 2003c). However, it should be indicated that role and influence of religion on psychological states and behavioral outcomes might vary from individual to individual, even though they adhere to the same religious system. Sometimes, understanding of complexity of a given belief system, expectations from that belief system, and conditions of external influences are not same for every follower of a particular belief system. Therefore, outcomes of following a particular religion might differ from individual to individual. Thus, the role of religiosity in self control and self regulation might vary as well (Hill and Hood, 1999; Gorsuch, 1984; Allport, 1950; Ryan, Rigby and King, 1993; Smith, 2003).

Self regulation is defined by McCullough and Boker (2007) "as the process by which a system uses information about its present state to change that state". Carver and Scheier (1998) state that when individuals self regulate they are, in fact, readjusting their behaviors in order to reach some desired goals or ends that they think is better than their current state. In order to live up to standards that people think are better, individuals regulate their behaviors deliberately or sometimes effortlessly (McCullough and Willoughby, 2009). The process does not have to be very effortful as Shariff and Norenzayan (2007) stated. Self regulation often happens

unconsciously. People usually modify or change their behaviors, self regulate, as a means of deferring short-term satisfaction to long-term goals. Self regulation or self control is a process of modifying behaviors that overrides habits, desires, ambitions, and sometimes customs-traditions that impose some certain set of attitudes (Schmeichel and Baumeister, 2004).

As Baumeister and Vohs (2007) have argued, four factors, standards, monitoring, willpower and motivation are paramount in the process of self regulation. In order for someone to self regulate a behavior, the individual needs to have certain standards. Self regulation means change. In order for change to take place systematically and meaningfully, there needs to be well defined standards. Uncertain and conflicting standards make self regulation random and difficult to sustain. There must be strong norms and regulations that compel and convince an individual or group to live up to determined standards (Higgins, 1987; McCullough and Willoughby, 2009).

To live up to the standards, the individual(s) ought to have willpower that is also called self regulatory strength. Changing one's way of living, acting and life habits that have become part of one's personality is almost never easy. The individual(s) need(s) to be convinced willingly that the new standards are better than current behaviors. Let us consider the habit of smoking as an example. Consider how hard it is for an individual to quit smoking usually. Before addiction to smoking, people usually willingly start smoking. Once they are addicted, it is difficult to give up that habit. The individual needs new standards that force him or her to quit. This might be a doctor's assessment about the individual's health conditions or a new group of friends that does not like smokers. To override a habit with the guidance of new standards, the individual needs to be willing to follow the standards. Without the individual's strong willpower, behavioral change will not take place (Vohs and Heatherton, 2000; Ayotte et al., 2010; Niemiec et al., 2010).

An individual must monitor his or her attitudes vigilantly in order to change them. Monitoring is a feed-back process in which an individual or group observes discrepancies in

their attitudes in order to correct them and undertake self improvement. Carver and Scheier's (1998) feedback-loop theory has a major contribution to self regulation theory. Feedbacks play a significant role in bringing a person to the line with his/her standards. Setting the standards and being willing are not enough for self regulation to take place. Monitoring is required to adjust the self to new way of behavior (Michie et al., 2009; Webber, Tate, Ward, Bowling, 2010).

To self regulate, the individual has to be motivated. Why would someone think of changing the way of life or at least some of his or her behaviors? There must be a strong motivator that convinces the person to re-regulate. If there were no motivation, there would not be much need for self regulation. Motivation for self regulation may fluctuate based on individuals' expectations, level of satisfaction and reality of outside world. Motivation might be a substitute for willpower or self regulatory strength in the process (Baumeister and Vohs, 2007). Needs and wants can restrain or strengthen motivation. Judgment towards short term gains and long term gains influences an individual's level of motivation. As a consequence, self regulation occurs to some extent. In the absence of an internal conflict, there is no need for self regulation for an individual. When interests and desires conflict, then the need for self regulation emerges to help resolve motivational conflicts (Webber, Tate, Ward, Bowling, 2010).

Self regulation is important for success in many aspects of life. A study showed that self control is even a better predictor of academic performance than IQ level (Duckworth and Seligman, 2006). In a longitudinal study of 140 eighth grade students, self discipline is measured by self reporting, teacher's reports, parental reports and monetary choice questionnaires in the fall predicted final grades, school attendance, standardized achievement test scores and selection into a competitive high school program the following spring. The study was replicated with 164 eighth graders with some additional questionnaires, such as a behavioral delay of gratification task, a questionnaire on study patterns and a group administered IQ test. Self regulation measured in the fall accounted for more than twice as much variance as IQ in final grades, high

school selection, school attendance, hours spent doing homework, hours spent watching TV and the time of day students began their homework. The effect of self control on final grades held even when controlling for first marking period grades, achievement test scores and measured IQ.

Another study conducted by Tangney, Baumeister and Boone (2004) on college students clearly shows that high self control creates better relationships, better psychological state, higher self esteem, less alcohol abuse and better performance on achievement related tasks. The study concluded that low self control mechanism has a significant risk factor for a broad range of personal and social problems. In a similar way, research has also revealed that children who did well on delaying gratification years later had better results on academic achievements and social adjustment measures (Mischel, Shoda and Rodriguez, 1989). It showed that, future oriented behaviors make differences in person's performance and social interactions.

There has been considerable empirical evidence that religion is a motivational force in self regulation process. Intrinsic religious motivation has recently been a popular subject of study among scholars. Religious rituals and prayers in a variety of ways are considered to be a powerful reinforcement for followers. Research has shown that involvement in religious activities influences individuals' behaviors and the outcome of the tasks that they perform (McCullough and Willoughby, 2009; Ellison, 1991; Kim, 2003; French and Joseph, 1999; Myers, 1992; Poloma and Pendleton, 1990; Maehr and Karabenick, 2005; Regnerus, 2008). Studies have repeatedly indicated that religiosity exerts an impact on its adherents' positive view of life while enhancing their sense of purpose and self efficacy (Byrd, Hageman and Isle, 2007). Positive association between religiosity and self control was studied among a sample of 100 post graduate students by Aziz and Rehman (1996). One hundred Muslim students were grouped into high and low religiosity groups based on scores on the Index of Religiosity. Personality traits were measured according to self control and tolerance scales of the California Personality

Inventory. The study revealed that the high religiosity group scored significantly higher on both self control and tolerance scales than those who were in low religiosity group.

Similarly, the work of Smith and Faris (2002) makes important contributions to our understanding of the role of religion in young people's lives. Their work demonstrates that religion among U.S. adolescents has a positive effect on participation in constructive youth activities. In addition, the research indicates that young people who participate in religious activities are less likely to participate in many delinquent and risk behaviors. The study found a clear relationship between religion and avoiding negative behaviors, such as smoking and drinking. Smith and Faris also found that the degree of religiosity directly correlates with people's obedience to rules and regulations.

History witnesses power of religion to rationalize and justify terror, (think of suicide bombers), to create awe (think of September 11 Attacks on US targets) (Cinoglu, 2010), and to provide the justification for wars (think of crusaders war on Muslims in middle ages), to promote peace, (think of peace based on notion of brotherhood between two Muslim groups who opposed and fought one another at the time of Khalifa Ali – Cousin of Prophet Mohammed) (Sarıcık, 2010), to unify social groups, (think of Afghani Mujahedeen fighting against Russian invasion all together), and to galvanize groups against one another, (think of Iraqi Shias and Sunnis fighting each other after US invasion of Iraq). There might be some other forces behind the scene in all these mentioned events, but the common motivational drive is religion or religious belief that people interpret as a base for their actions (Pape, 2003; Monsma, 2006b).

Besides religion's mentioned social force, it has a measurable impact on individual's health and over all well-being. In well documented studies, degree of religiosity is found to be very closely related to personal longevity. A meta-analysis of data from 42 independent studies measuring the relationship between religious practice and all-cause mortality found that increased degree of religious practice or involvement was significantly related to lower mortality

rates. Those people, who had high degree of religiosity were, on average, 29 percent more likely to be alive at any given time than those who were less religious (McCullough, Hoyt, Larson, Koenig and Thoresen, 2000). Similarly, a study conducted by Powell, Shahabi and Thoresen (2003) found that frequency of religious service attendance was closely related to reduction in mortality; with a rate of 25 percent.

Degree of religiosity makes difference in the attitudes and world-view of individuals. People who scored high among Jews, Muslims and Christians in practicing religious rituals are less likely to use alcohol and smoke and are more likely to see their dentists, wear their seatbelts while driving and take their needed vitamins than those who are less religious (McCullough and Willoughby, 2009; Shmueli and Tamir, 2007; Hill, Burdette, Ellison, and Musick, 2006; Wallace and Forman, 1998; Islam and Johnson, 2003). These sorts of behavioral patterns may help us to explain why religious people live longer. Obviously, avoiding risky behaviors and taking protective steps prevents from early mortality.

A study of 147 meta-analytic reviews indicates that religiousness is significantly related to the psychological well-being of individuals (Smith, McCullough and Poll, 2003). Religiousness, which was measured in different aspects, was strongly related to lower rates of depressive symptoms. Measures like intrinsic religious motivation, the God concept and positive religious coping were negatively associated with depressive symptoms. Another relatively recently conducted meta-analysis of 49 studies (Ano and Vasconcelles, 2005) similarly found that religiousness was positively related to the subjective well being of individuals. While coping mechanisms, such as collaborative religious coping, active religious surrender and benevolent religious reappraisals of stressors were measured as positively associated with life and happiness, they were negatively associated with measures of anxiety and depression (Ozorak, 1989; Ozorak 2003; Koenig, 2009).

Religion induces behavioral changes of its followers. It promotes self control of behaviors. Research has shown that religiousness reduces crime rate, delinquency behaviors, and helps to control youth sexual behaviors. A meta-analysis of 60 research studies showed that degree of religiousness plays an important role in reducing crime rates, delinquency behaviors, gambling and drug use (Baier and Wright, 2001). Some other studies conducted among representative groups of white, African American, Hispanic and Asian American adolescents who are religious also revealed that measure of frequency of church attendance, self rated importance of religion in individual's life are closely related to longer wait before the first sexual intercourse (Rotosky, Regnerus and Wright, 2003; Regnerus, 2007).

Religion also has an impact on the performance of individuals. Empirical studies have shown that religious students seem to have higher grades than their less religious peers. A meta-analysis of 15 studies revealed that religiousness and school achievement in Hispanic Americans and Black students is positively associated with achievement test scores and grade points on average (Jeynes, 2002b; Regnerus and Elder, 2003).

A prevalent secular-oriented thought today is that religion is strictly a personal matter. In fact religion has both personal, as indicated above with results of different studies, and social implications such as marriage, conferring social support (Joiner, Perez and Walker, 2002) and children's socialization to adjust to society's norms (Baier and Wright, 2001). A meta-analytic analysis of dozens of studies measured association of religious service attendance with divorce rate revealed that couples who attend religious services are more likely to stay married over time than those who attend less regularly or non attendees. Studies also revealed that, religious couples have higher degree of marital satisfaction and commitment than less religious couples (Mahoney, Pargament, Tarakeshwar and Swank, 2001).

According to several studies, the children of religious parents tend to have more self control than children from those of less religious parents (Lindner-Gunnoe, Hetherington and

Reiss, 1999; Brody, Stoneman and Flor, 1996; Bartkowski, Xu and Levin, 2008). For instance, Bartkowski et al. (2008) examined the relationship between parents' religiousness and their children's self control among 17,000 children from the Early Childhood Longitudinal Study, which is a survey of American first graders. Fifty seven percent of the first graders were white, 14 percent black, 17 percent Hispanic, 6 percent Asian and 5 percent other races. After even with control for gender, ethnicity, grade in school, parents' employment status, age, socio-economic status, and a host of other family structural variables, the children of religious parents who attended church frequently and who discussed religion in the house frequently were rated by their parents having high self control and low impulsiveness. In the same pattern, those children who have religious parents were rated by their teachers as higher in self control, and lower in impulsiveness than children's of less religious parents.

Religion has a power to influence the behaviors of its followers. For instance, observant Muslims fast a month every year. During the fasting month- Ramadan- they do not eat or drink, do not have sexual intercourse or inject anything in their body from sun rise to sun set. When Ramadan is in summer time, (The Islamic year follows the lunar calendar, therefore starting date changes every year by 10 days.) fasting days are longer and hotter. A fasting Muslim may work in his farm in over 100-degree unbearable sunshine, without eating or drinking during the day light. How would one explain this motivation that keeps that person fasting? (Budak, 2005; Fazel, 1998). Scholars consider delays of joy and gratification by individuals who believe an afterlife in which their attitudes and actions will be judged and rewarded or punished as a substantial dynamic that underlies behavioral preferences. In such a way of thinking, long term gains which are believed to be rewarded afterlife, outweighs short term gains that are in this life which are considered relatively short by monolithic religions (Iannaccone, 1998; Azzi and Ehrenberg, 1975). In the same context, a study done among Turkish college students who are Muslims showed that those students who were more religious tended to consider the future in

their present decision making much more than less religious Muslim students (Oner-Ozkan, 2007). Scholars conclude that religion and its promises promote motivation for its followers.

Self reported religiousness, such as self rated importance of religiousness for the person, frequency of church attendance and prayers, was found to be positively and significantly related to multiple measures of self control after controlling for individuals' gender, sex, socio-economic status, family's socio-economical status and religious affiliation (McCullough and Willoughby, 2009). These and similar studies reveal that religion has a strong association, in many ways, with self control and self regulation.

Religion also has a role in goal selection. Each religion has specific principles and programs by which believers and followers are supposed to obey and, in turn, adjust their behaviors. The unique goals and regulations that prescribed by a particular religion come from its written scriptures, historical traditions, physical and social environment in which that particular religion arose, cultural surroundings and evolving cultural and social conditions, which require continuous adaptation (Darnell and Sherkat, 1997; Smith, 2003).

There are some studies out there that identified possible role of religion in goal selection. In one study conducted among 225 self-identified Christian and Buddhist college students in North American universities. 120 of the students were Christian and 105 were Buddhist. The study indicated that while Christian students valued high arousal positive emotional states such as being excited, euphoric and enthusiastic, the Buddhist students valued low-arousal positive emotional states such as calm, relaxed and peaceful. We know that Christianity and Buddhism weigh desirability of different emotional states differently in their religious texts (Tsai, Miao and Seppala, 2007; McCullough and Willoughby, 2009).

In another study, researchers compared moderately and highly religious Catholics to non-religious or low religious Catholics in terms of controlling thoughts. The study found that those who were moderately and highly religious put more stress on the control of thoughts (Sica,

Novara and Sanavio, 2002). Another study on the same subject conducted by Abramowitz et al. (2004) found that highly religious Protestants place more significance on thoughts than moderately religious Protestants and nonreligious people.

Thoughts are important in many aspects as they have consequences that sometimes influence an individual's physiological state and consequently behaviors and sometimes move groups and masses toward drastic actions. Religious thoughts and teachings promote control of thoughts as indicated by some sample studies above. In both Christianity and Islam not thinking or imagining 'bad' things are 'good' things that a religious person should do. Many empirical studies showed that organizing thoughts and prioritizing goals are related to degree of religiosity. Religion has a role in influencing goal selection, initializing the goals and reducing conflict among goals (McCullough and Willoughby, 2009).

Self monitoring is important in the self regulation process. The literature on self regulation reveals that self awareness is increased by presence of a judging audience because this leads to compare one's behaviors to the accepted standards (Carver and Scheier, 1998; Haley and Fessler, 2005; Bateson, Nettle and Roberts, 2006). The notion that you are being watched (specifically in monolithic- Abrahamic- religions - Christianity, Judaism and Islam) can possibly increase self monitoring. Religions promote self judgement. For instance, in Islam, a muslim is encouraged to judge whether his or her actions during the day were right and acceptable according to the religious standards at the end of the day (Schwartz, 2008).

Nonetheless, there are still very few empirical studies on the role of religion in self monitoring. In their meta-analysis study, McCullough and Willoughby (2009), located only four studies. Three of them could not find any association between being religious and self monitoring or self consciousness. Only one study, which was conducted at University of North Carolina at Chapel Hill in 1986 among 94 undergraduate students, found that religiousness was positively related to public self consciousness and social anxiety. There is an obvious need for

further study on association between religiousness and self monitoring in order to be able to reach clear conclusions on the matter.

For the follower of a given religion, perception of the sacred has a motivational power. Individuals who hold their religion's teachings and values sacred are motivated to sacrifice their time and valuables to preserve and protect them (Mahoney, Pargament, Cole, Jewell, Magyar, Tarakeshwar, Burray-Swank and Phillips, 2005). Results of the previously mentioned all empirical studies in one way or another indicate that religion has motivational power on its followers. Studies on association of religiosity with sexual intercourse before marriage, success in marriage, success in school, obeying rules and regulations, such as reducing criminal acts and wearing seatbelt while driving, etc. all have one thing in common that is motivational power of religious teachings on the followers' behaviors.

In another study on the role of religion on individuals, researchers studied 857 randomly selected prisoners to determine if religiosity affects two key negative behaviors in prison; arguing and fighting. The samples were selected from a large prison in Mississippi. They were given questionnaire that contained broad range of questions such as, inmate's family and religious background, criminal history, participation of morality, level of self esteem, experience with negative emotions, use of coping mechanisms, religiosity, involvement in faith-based prison ministry programs and incidents of fighting and arguing with other inmates. The study found that those inmates who agreed with the statement that 'right and wrong should be based on God's laws' are 58.2 percent less likely to fight one or more times per month. On another measurement account the study found that, inmates who believed in a higher power and attended faith-based prison ministry programs are less likely to engage in one or more fights per month, because they participate in fewer arguments with others. The researchers concluded that religion can reduce anti-social behaviors, even in an extreme environment like prison (Kerley, Matthews and Blanchard, 2005).

Studies have found that participation in church activities is closely related to educational expectations and higher grade scores in school. The data in the research came from National Educational Longitudinal Study that started 1988, from the Common Core of Data and U.S. Census Bureau. There are 166 public high schools in the sample and 4,434 10<sup>th</sup> grade students participated in the survey from American metropolitan area public high schools. Data was collected on the neighborhood socio-economic level (low, middle and high), demographic information, educational expectations, religious affiliation, frequency of church attendance, frequency of religious activities, grades in school and related subjects. With the available data, the researcher tried to determine if there is any correlation between religious activities and educational outcomes (Regnerus, 2000). The research indicated that more intensely religious students scored higher on standardized math and reading tests. The study emphasizes the role of religion as a motivator.

In a similar way, the role of religious involvement in enabling students stay on track in school in high and low risk neighborhood settings was tested. The research was conducted at 134 middle and high schools in eighty communities with sample of about 12,000 adolescents. The data came from two waves of the national Longitudinal Study of Adolescent Health. The researchers found that there is no difference between the patterns of church attendance of adolescents in low income neighborhoods and high income neighborhoods. They, however, found that low income neighborhood adolescents' religious involvement is more likely to contribute their academic progress, even after controlling for key risk and protective factors. The researchers concluded that "adolescents' participation in religious communities reinforces messages about working hard and staying out of trouble, orients them toward a positive future, and builds a transferable skill set of commitments and routines" (Regnerus and Elder, 2003).

Commitment to pre-determined goals and the impulse to serve the good cause without any expectations of external reward differentiate nonprofit organizations - especially faith based

nonprofit organizations- from other types of organizations. Trust in giving and faith in success may not just help these organizations to achieve their goals, but these values also may create a social capital for the society at large. (Putnam, 2000; Anheier, 2005; Cnaan, 2002; Coleman, 2003; Coleman, 1988).

Moral or religious motivation might have an important stimulating role in self regulation of individuals and subsequently communities and organizations. Caring for people that are in need of help is a moral obligation for people of faith all over the world. Help and good deeds are not necessarily caddied oft with the expectations of some sort of benefit. The deed by itself is a prayer in three monolithic religions; Christianity, Islam and Judaism (Wineburg, 2001). In Islam, for instance, expecting any return or gain, even expecting to be in heaven afterlife for your prayers and good deeds is considered insincere and utilitarian by some scholars. A true Muslim should not expect any reward for the good actions that he or she has done. This notion, which is a valuable capital, when taken as a reference value for an organization, is expected to create better results (Ali, 2001).

### **Theory Borrowing Concept**

Several studies have applied individual level theories to groups and organizations. Cornelissen and Kafouros (2008) discuss that metaphors provide one of fundamental components of framing and understanding organizations. They argue how some organizational theories have emerged and evolved out of some small primary metaphors, which over the time created complex metaphors. They further argue that since organizations are created in social constructs, which involve as dynamic as human element, framing and theorizing about organizations may necessitate the metaphorical use of concepts. Parallel to the notion in Cornelissen and Kafouros' study, Whetten, Felin and King (2009) discussed that interdisciplinary theory borrowing has been fruitful and productive for understanding

organizational constructs. In their study, the authors explain how identity theory has contributed to the study of organizations. Identity theory has originally been used as an individual level theory by psychologists to explain individual behaviors. The theory is described as ‘an individual’s self-view’; the subjective sense of “Who I am”. Compared to its long history of individual level analysis, identity theory has been used in organizational settings in more recent times. The theory has been modified to organizational level use by scholars to explain operational aspects of organizational identity. The articles also explain that the theory further helps scholars to understand how organizations choose and change their identities as well as how they perform in a way that reflects their known identity.

Arnetz (2005) applied cognitive activation theory of stress, which is an individual level theory, to an organization. Arnetz’s study hypothesized that collective uncertainty about the future as well as unclear organizational goals contribute to chronic stress in organizations exposed to change. The study found support for the hypothesis after its analyses of data that was collected from a regional hospital in Sweden.

Huy (1999) linked theory of emotion and change, which is originally an individual level theory, to organizations. The theory was created to explain how emotional intelligence facilitates individual adaptation and change. Huy argued that similarity between the individual-level emotional intelligence and the organizational-level emotional capability constructs should affect dramatic change at the organizational level in a way that it affects personal adaptation and change. Similar to Huy’s study, Oosten (2006) applied intentional change theory, which was originally created to explain the intentional change process in individual behaviors, at the organizational level. She explains the purpose of her study and the role of intentional change theory in explaining that particular construct: “This paper is a case study of Roadway Express, a leading transportation provider of industrial and commercial goods throughout North America, which embarked on a journey of cultural transformation in 1999, using a popular change process

known as appreciative inquiry (AI). The Roadway case study illustrates both the theory of intentional change and the method of AI in use and provides a platform upon which to observe change at the organizational level.”

Whetten, Felin and King (2009) discuss theory borrowing methods in depth. They talk about two types of theory borrowing - vertical and horizontal - in organizational studies. They describe vertical theory borrowing concept as formulating constructs and abstracts at different levels of analysis; such as using an individual level theory at the organizational level or vice versa. Horizontal borrowing, in contrast, is described as using concepts that were originally formulated to explain different social contexts, but the level of analysis is same when applied to a new concept. Since the theory of this study falls into vertical theory borrowing, it will be useful to talk about method and pitfalls of this kind of theory borrowing briefly as Whetten, Felin and King discuss in their study. They criticize current theory borrowing practice in two ways: The first criticism is insufficient modification of a borrowed theory that focuses originally on a different level of analysis or construct. Maintaining that original concept consequently leads researchers to overlook the applied organizational context and perceive organization as an individual. This level blind application of theory borrowing type cannot be considered a theoretical contribution to the field of organizational studies. The second criticism pertains to the lack of context and level sensitivity that is widespread in theory borrowing; these sorts of studies are explicitly theoretical. These kinds of studies tend to downplay the importance of construct validity. A well- organized and methods-driven treatment to the subject in combination with the appropriate theory using will eliminate the potential threat to validity. Organizational studies that disregard this fact will have inherent shortfalls and credibility problems.

To avoid the mentioned pitfalls, this study, besides methodological treatments and guidance of similar studies, will gradually relate the self-regulation theory to the subject. As it is originally an individual level theory, self regulation theory is defined in a broad sense in this

chapter as a first step. Secondly, the importance of self regulation on behaviors and behavioral outcomes will be explained. Thirdly, the possible role of religion and religiosity in self regulation will be discussed. Fourth, a wide range of examples of studies that argue for the possible role of religion on individuals' behavioral and psychological outcomes will be provided. Fifth, examples of studies that discuss and compare religious groups, communities and programs with secular or less religious ones will be provided. Sixth, examples of studies that measure relative effectiveness of religious social service provider verses secular organizations in different social service provisions will be provided and discussed thoroughly. Seventh, the potential role of religion and religious involvement on followers' motivation and behavioral change are going to be discussed. Further, there will be discussions about religious people who establish organizations, which are guided and motivated by religious values, and may perform differently than their secular counterparts. Furthermore, the possible role of religious motivation in self regulation of organizations will be tested with help of a questionnaire that will be conducted among all nursing homes in the state of Virginia.

### **Importance of the Study**

Long before government funding of faith based organizations came into question, religious organizations in the United States were an integral part of community welfare activities. Even though social service provision in the US has its roots in the Social Gospel Movement back in late nineteenth century, the increasing number of European immigrants in the early twentieth century created a need for Catholic churches to become a center of charitable social services that provided both financial and social help for the needy and fought disasters and pandemics (Cnaan, 1999; Ebaugh et al., 2005). Churches and congregations have a substantial role in social services provided to the needy today. The National Congregation Study at Duke University indicates that 57 percent of US congregations are involved in a variety of social

services. Church related or Congregation related service organizations provide food, housing, clothing for needy and poor; education for prevention of domestic violence and substance abuse (DeHaven, Hunter, Wilder, Walton, Berry, 2004; The National Congregation Study web site, 2009; Chaves, 1998; Cnaan, 1997; Printz, 1998; Wineburg, 1991). Even though 57 percent of the congregations offered social services, only three percent were receiving government funds, Chaves (1999) found in his study.

Nonprofit organizations, FBOs in particular, have a long history of health promotion programs in various areas of healthcare. They have been involved in health education of regular people, providing services for diabetes, weight control, mental health, and cancer prevention programs, etc (Wilson, 2000; DeHaven, Hunter, Wilder, Walton, Berry, 2004).

Today, the US healthcare system, in many aspects, is very complicated. In terms of ownership, there are government healthcare services, private for profit services, secular nonprofit services, and church related or religion affiliated nonprofit organizations that offer short term and long term care to citizens. There are hospitals, physician and clinical services, assisted living facilities, home healthcare agencies and nursing homes in the US health care system.

To indicate the scale of healthcare spending in 2007, we see that the number is great. According to CMS (CMS web site, 2009), total healthcare expenditures reached 2.2 trillion dollars in 2007. That means healthcare spending per person is 7.421 dollars, which equals 16.2 percent of the nation's Gross Domestic Product (GDP).

Long term care providers are substantial elements of the US healthcare system. Nursing homes and home health care agencies' annual expenditure accounted for 8.5 percent of national health expenditure in 2005 (CMS web site, 2009). Services are provided to about 4 million patients in nursing home agencies (Jones, 2002; Centers for Disease Control and Prevention web site, 2009). Solely these given numbers above make our subject worthy of study in various

aspects.

When we think of patients staying in nursing homes as mostly comprised of elderly citizens, the importance of these service providers will be better understood by looking at the data revealed by the Administration on Aging. Based on aging statistics, the number of elderly people who are 65 years or older is 37.3 million in 2006. This number represents 12.4 percent of the US population, which equals about one in every eight American citizens. The same statistical study indicates that by 2030, there will be about 71.5 million elderly people, which is more than twice of their number in 2000. By 2030, the ratio of elderly who are 65 or more is expected to be one in five, that is 20 percent of the whole population (Administration on Aging web site, 2009). As the elderly population is projected to grow rapidly, the need for better long term care facilities that can take care of this population will grow as well.

Through examination of the secondary data and collected data sets from nursing homes in Virginia, USA, this study intends to demonstrate if any meaningful relationship exists between being ‘religiously-affiliated’ and performance as a social service provider. Clearly, the government needs assistance in coping with social problems and to better implement social welfare policies (Canda, 1998; Wienen, 1999). Despite the controversy surrounding ‘church–state’ relations in the United States, a clear demonstration of success by faith-affiliated social service providers may force opponents and government authorities to reconsider a broader “government-church” interaction, especially in delivering social welfare services. Moreover, the outcome of CMS’ data sets and the data sets that will be collected from all nursing homes that are registered with federal government in Virginia may force secular service providers to learn from their faith-affiliated counterparts how to provide better and more effective service. In this case, the interaction may help to increase the overall quality of service, which would benefit service recipients and society at large.

## **Data and Methods**

**Selection and collection of the Data Set:** Compared to the long history of the nonprofit sector in the United States, little scholarly study has been done on the work of nonprofit organizations. The study of FBOs, in particular, has not yet moved out of its nascent stage compared to nonprofit studies in general (Ott, 2001). Scholarly interest in FBOs started growing after the Clinton Administration's welfare reform in 1996, and its implementation of section 104; the 'Charitable Choice Initiative'. Following the signing of that bill, FBOs, their work and their relationship with government began to be discussed and analyzed in the public sphere and academic circles. Thus, since researchers have recently begun to address this area of study, few choices are available in terms of data sets to compare the effectiveness of FBOs with other types of social service providers.

It was thought whether established data might be useful in addressing the policy question mentioned in this study. In the researcher's approach to the data sets the following questions were asked: Can the data currently being collected be used to compare the performance of FBOs with other service providers? If such data sets are available, do they include a sufficient number and variety of service providers to permit a methodologically sound analysis? What can be learned about the relative performance of FBOs and other service providers from the available data sets? These questions led to the data sets that will be interpreted to measure the relative performance of organizations in review in this research.

The secondary data sets that will be analyzed in this study were originally collected by the Centers for Medicare and Medicaid Services (CMS) of the federal Department of Health and Human Services. According to the State Operations Manual, "the Social Security Act mandates the establishment of minimum health and safety and Clinical Laboratory Improvement Amendments (CLIA) standards must be met by providers and suppliers participating in the Medicare and Medicaid programs." CMS is designated to administer the standards compliance

aspects of programs (CMS web site, 2009).

This data represents a by-product of efforts to monitor and promote the quality of Medicare and Medicaid-certified nursing homes. Nursing homes that are affiliated with the Medicare and Medicaid programs are evaluated in order to assist consumers in comparing the performance of service providers throughout the country. Those providers that do not affiliate themselves with the federal Department of Health and Human Services system are exempt from state inspection (CMS web site, 2009). The data sets were collected from 50 states and the District of Columbia. The data sets gathered from over 16,000 nursing homes. The CMS collects the data by giving a form to those service providers' administrations to fill out quarterly. Thus, the big bulk of data is self-reported by the administrators of service providers, while some parts of the information are collected and checked by trained inspectors. The evaluation occurs at least once in 15 months. Since it is a requirement for the operation of these organizations to fill out the inspection forms the response rate is a hundred percent. However, as indicated by CMS some of the data is missing because "it was too small to report." The information provided by the CMS represents this study's main data set for measuring the effectiveness of social service providers and the differences in the performance in the nursing home sector.

In this study, since the intention is to measure if being religiously related makes any difference in service outcomes, it was decided to find out how much of religion is involved in the work of service providers by looking at their service delivery from different angles. Although CMS classifies service providers by organizational affiliation, it does not provide us with any perspective of how religion or religiosity might relate to the delivery of service. For instance, from CMS's data sets, it is not known how much a church affiliated nursing home spreads religion or religious element in its service delivery or how much a secular nursing home isolates itself from all religious rituals and traditions. A self-described secular government affiliated nursing home might have a chaplain visiting the residents on a regular basis or there

might be Sunday sermons that take place periodically. To find out or make predictions of whether or not any element of religious involvement in the service delivery makes a difference in terms of performance parameters that the CMS sets, data will be collected from nursing homes that are registered with federal government in state of Virginia, United States.

### **The Secondary Data**

Nursing home quality measurements are calculated based on Minimum Data Set (MDS) resident assessment data that nursing homes regularly collect from residents. The MDS is a standardized resident assessment instrument that collects detailed demographic, clinical and treatment information. The quality measures for each facility are reported as the percentage of nursing home residents in that facility with the clinical condition measured (e.g., percentage of residents with pain, pressure sores, etc.- that got worse or better since the acceptance to the facility). (Medicare Quality Improvement Community website, 2007).

The information comes from three sources: Health inspections, staffing and quality measures. Based on the 'State Operations Manual' that is prepared by CMS, the health inspection rating contains information from the last three years of onsite inspections. These inspections include both standard surveys and any filed complaint survey. The information is gathered by inspectors who do site visits and make sure that Medicare's minimum quality standards are met. About 180 different items are included in the health inspection process, but not all of these items are presented in the data set that is for public use. Health inspections take place once a year on average, but inspections may be conducted more often if a nursing home is performing poorly. This is the only source of information that comes from trained inspectors who visit each nursing home to review the quality of care, inspect medical records, interview caregivers - administrators and talk to residents, and their families about their care. Federal surveyors monitor the state surveyors' work to enforce compliance with national standards in their work.

The staffing rating contains information about the average time committed to each resident on any single day by nursing staff. Needs of residents in different nursing homes are taken into consideration in the rating. If a nursing home has residents with extensive needs, it is expected to have more nursing staff than a nursing home in which residents' needs are less extensive. This category of measurement also compares the number of staff with the number of residents, including the number of trained nurses on the site. The major limitation to this information is the fact that it comes from nursing home administrations only once a year.

The quality measure rating contains information on nineteen different physical and clinical measures for nursing home residents. For instance, the information is gathered about the prevalence of pressure sores or changes to resident's mobility. This information tells us how well a nursing home does in caring for its residents' clinical and physical needs. This category of information is provided by nursing home administrations for all residents at the time. We should indicate that these inspections try to measure whether the nursing homes meet some certain minimum standards. Therefore, the results of inspections do not indicate ideal nursing home settings.

While collecting nursing home data, CMS requires nursing home administrations to indicate their organization's type of ownership. Twelve different categories exist; in the category of for-profit: Individual, partnership and corporation; in the category of non-profit: Church-related, non-profit corporation and other non-profit; in the category of government: Federal, state, county, city, city/county and hospital district. This ownership classification in and of itself poses a risk of being answered inaccurately. In fact, Ragan (2004) indicated in his research that after checking the accuracy of the 'Church-Related' ownership type from 5 states the numbers increased by 74 percent compared to CMS's data. That is why in the survey of nursing homes in Virginia, the service provider nursing home's affiliation will be asked with different questions, such as the source of funding, to make sure that the affiliation is determined correctly.

The survey questionnaire to the nursing homes in Virginia is not intended to measure performance; rather, it aims to find out the religious element in the service provision of all nursing homes. The questionnaire seeks answers to subjects, such as, affiliation of organization, source of finance, administration's service philosophy, hiring philosophy, any religious element involved in service delivery, if there is a chaplain on the staff payroll, any statue or symbol of any religion or sect demonstrated explicitly in the nursing homes and any religious activity that involves nursing home staff and residents. The questionnaire is intended to be as short as possible in order to increase the response rate by making the responder to spend little time on answering vital questions for our purpose only.

While the CMS' data sets help to compare the performance of service providers in the same sector, the survey data that this researcher will collect provide with the missing part of CMS's data, which is the role of religion element, if there is any, in the service provision.

## **Research Design**

### **The Research Questions and Hypotheses**

**This research is guided by the following questions:** 1- Are nonprofit, faith-based nursing homes more effective in providing Medicare and Medicaid services compared to their secular nonprofit and for-profit counterparts?

2- Are more religious nursing homes, regardless of their ownership type affiliation, more effective in providing Medicare and Medicaid services compared to their less religious counterparts?

Through this research and interpretation of data sets, the following hypotheses will be examined:

**H1a:** Religion related (church-affiliated) nursing homes are more effective than their secular counterparts in improving their long-stay patients' physical and mental health.

**H1aa:** Regardless of ownership type affiliation, more religious nursing homes are more effective

than their less religious counterparts in improving their long-stay patients' physical and mental health.

**H1b:** Religion related (church-affiliated) nursing homes are more effective than their secular counterparts in improving their short term patients' physical and mental health.

**H1bb:** Regardless of ownership type affiliation, more religious nursing homes are more effective than their less religious counterparts in improving their short-stay patients' physical and mental health.

**H2a:** Religion related (church-affiliated) nursing homes are more effective than their secular counterparts in CMS health inspection deficiency results.

**H2b:** Regardless of ownership type affiliation, more religious nursing homes are more effective than their less religious counterparts in CMS health inspection deficiency results.

**Variables:** Measuring the effectiveness of FBOs in providing social services is the primary purpose of this study. Effectiveness of FBOs is measured by comparing CMS patient outcomes and inspection outcomes for church affiliated nursing homes with their secular counterparts, including government agencies as well as the questionnaire that will help to collect data about the religion or faith element in the program or organization in nursing homes in Virginia (VA), USA. Effectiveness criteria are determined by CMS as it sets some basic standards for nursing homes. Therefore, the dependent variables are 'chronic care quality measure'; 'post-acute quality measure' and 'health inspection deficiency'. The independent variables are organizational religiosity of all types of nursing homes, church related nursing homes, for profit nursing homes, secular nonprofit nursing homes and staffing. Control variables are the number of residents for each nursing group, occupancy rate for each nursing group, hospital affiliation, chain affiliation, market concentration (herfindahl) index, poverty (county level), presence of organizational resident group, percent of private payment, percent of Medicare paid and percent of Medicaid paid patients.

This study will attempt to ascertain whether any significant differences exist between the performance of FBOs and secular organizations by using the CMS measurement criteria combined with the survey data set from nursing homes in VA. For instance, one of the many measurement tools of CMS is ‘inspection deficiencies’ in nursing homes. Thus, this research will analyze whether FBOs perform better or worse than their secular counterparts as service providers or if religion possibly has an influence in the service provision of those organizations that are more involved in religion than others. Moreover, this research will also analyze possible impact of religious involvement on performance of nursing homes regardless of their ownership types.

**Unit of Analysis** for this research is each individual nursing home that is certified with Federal Department of Health and Human Services in Virginia, USA.

As indicated above, secondary data sets and the data set that is going to be collected for this study will be used to examine the stated hypotheses. This study will, also, compare the findings with the earlier studies in the same field by using the latest data sets available. In this way, the study provides us with the opportunity to see if there is any consistency in effectiveness of the examined organizations in the same business sector over time.

### **Definition of Terms**

The following are the definitions of keywords and concepts used throughout this study:

**Faith Based Organizaiton (FBO):** An organization that board membership, staff and volunteers come from a particular religious group and activities and core mission that stems from a particular religious belief.

**Religion:** Religion is defined as cognition, affect, and attitudes that take reference from consciousness of supernatural power(s), or perception of interacting with higher power(s) that are perceived to play a substantial role not only in individual’s way of thinking and acting but also in human interactions.

**The Charitable Choice Initiative:** The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) that was signed into law in 1996 by President Clinton. Section 104 of PRWORA has been known as the Charitable Choice Initiative. This initiative brought a new approach to social service policy implementation in the United States. Section 104 establishes a statute that gives the religious organizations the right to preserve their religious character while contracting with the government. The law required states to treat faith based organizations as any other secular social service provider when contracting with the government for the delivery of social services. This law created a lawful base for President George W. Bush to create the White House Office of Faith Based and Community Initiatives in 2001, and later during his presidency he established satellite offices in eleven different federal agencies to provide funds and assistance for religiously affiliated organizations.

**Center for Medicare and Medicaid (CMS):** The Centers for Medicare and Medicaid Services (CMS) is a branch of the U.S. Department of Health and Human Services. CMS is the federal agency that administers the Medicare program and monitors the Medicaid programs offered by each state. CMS' responsibilities include the administrative simplification standards from the Health Insurance Portability and Accountability Act of 1996 (HIPAA), quality standards in long term care facilities (nursing homes) through its survey and certification process, and clinical laboratory quality standards under the Clinical Laboratory Improvement Amendments

**Nursing Home:** CMS defines nursing home as, “primarily engaged in providing residents with skilled nursing care and related services for residents who require medical or nursing care; rehabilitation services for the rehabilitation of injured, disabled, or sick persons; or on a regular basis, health-related care and services to individuals who because of their mental or physical condition require care and services (above the level of room and board) which is available to them only through these facilities, and is not primarily for the care and treatment of mental diseases”.

**Nurse:** A nurse is a trained and skilled professional who cares for the sick and infirm. A nurse helps to educate patients in issues of healthy living and wellness as well as any current or chronic disease process and treatment. A nurse performs treatments and procedures as prescribed by physicians, physician assistants and nurse practitioners. There are three types of nurses that CMS collects data on staff hours per resident per hour and per day. These nursing types are: Registered nurse (RN), licensed practical or vocational nurse (LPN/LVN) and certified nursing assistant (CAN).

**Medicare:** Medicare is a Federal insurance program providing a wide range of benefits for specific periods of time through providers and suppliers participating in the program. In Medicare terminology, providers include patient care institutions such as hospitals, critical access hospitals (CAHs), hospices, nursing homes, and home health agencies (HHAs). The Act designates those providers and suppliers that are subject to federal health care quality standards. Benefits are payable for most people over age 65, Social Security beneficiaries under age 65 entitled to disability benefits, and individuals needing renal dialysis or renal transplantation.

**Medicaid:** Medicaid is a state program that provides medical services to clients of the state public assistance program and, at the state's option, other needy individuals, as well as augments hospital and nursing facility (NF) services that are mandated under Medicaid. States may decide on the amount, duration, and scope of additional services, except that care in institutions primarily for the care and treatment of mental disease may not be included for persons over age 21 and under age 65.

**Effectiveness:** A program's or organization's capability to have service recipients demonstrate in achieving the intended outcomes or to show change in participants' behaviors, level of knowledge and status that can lead in a better direction in personal and social life.

**Self Regulation:** A process by which a system uses information about its present state to change that state. When individuals self regulate they are in fact readjusting their behaviors to be able to reach some desired goals or ends that they think is better than their current state.

**Patient Outcomes:** The term patient outcomes refers to the data sets regarding residents'

physical and clinical conditions and abilities that are collected at specified intervals by nursing homes and reported to state and CMS via Online Survey, Certification and Reporting (OSCAR). This data provides us with the tool to measure patient outcomes. There are 19 variables in the category of patient outcomes in nursing homes.

**Inspection Outcomes:** The term refers to the information that is gathered by inspectors who do site visits and make sure that Medicare's minimum quality standards are met at nursing homes that are registered with CMS. There are basically two types of inspections: Annual Health Inspection and Annual Fire Safety Inspection. Also complaint inspections are conducted based on complaints that are included in either type of inspection that mentioned above based on their categories. This data set helps to estimate how well a nursing home is managed.

### **Outline of the Study**

This research is comprised of six chapters. The remaining chapters will discuss the following points that are considered necessary for the completion of this study.

Chapter II provides a historical overview of the Charitable Choice Initiative – how it was signed into law and how it is implemented as a new policy at the federal and local levels. It also, examines the views of proponents and opponents of the Charitable Choice Initiative. Furthermore, constitutional challenges to the Charitable Choice Initiative and Supreme Court decisions on the related cases will be discussed thoroughly.

Chapter III reviews the literature regarding case studies in the related areas, role of faith in individuals and institutions' behaviors, role of nonprofit, specifically faith-based organizations in societies as partners of government in delivering needed social services. The chapter examines if there is any tangible difference between service delivery of faith-based organizations and all other service providers by reviewing related studies. Our guiding theory will be explained with the help of extensive studies in the field.

Chapter IV explains the methodology used in this study and data collection process that

CMS applied. The data collection process and procedure from nursing homes in Virginia are also explained in detail. The chapter goes into details of each revealed characteristic that CMS collects data about and posted for public use. The chapter also reiterates the research design by mentioning the research question, hypotheses, variables, unit of analysis, data measurement technique and tools.

Findings are presented and comparisons are made with similar studies in Chapter V. SPSS outputs, tables and figures are presented in this chapter.

In Chapter VI, findings of the study are interpreted. The chapter discusses the possible impact of FBOs' performance on policy making. It summarizes the study with limitations and makes recommendations for further study in the field.

## **CHAPTER II**

### **THE CHARITABLE CHOICE INITIATIVE**

The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) was signed into law by President Clinton in 1996. This act contained then a little known section 104, the Charitable Choice provision, which allowed faith-based organizations (FBOs) to compete for federal and state grants without altering their religious beliefs or practice while setting up a partnership with government in delivering social services (Ammerman, 2001; Bartkowski and Regis, 2003; Wineburg, 2001; Chaves 1999).

In early 2001, after President George W. Bush took office, this little-known provision of a huge act came into discussion extensively because the Bush administration embraced and promoted the Charitable Choice Initiative vigorously as an effective means of delivering social services with an army of compassion. Bush's rhetoric and actions inflamed debates over the interaction between government and religious organizations in many aspects (Modesto, 2006; Davis, 2008).

One of the issues that emerged from the debates among policy makers and scholars is the effectiveness of faith based organizations (Modesto, 2006; Davis, 2008; Cnaan and Boddie, 2002). Opponents of the initiative argue that it is difficult to measure the effectiveness of faith based organizations because it is hard to determine religion's impact on an organization's effectiveness in providing services. Besides, critics claim that faith based organizations are more inclined to focus on appreciating a divinity than measuring their service outcomes (Boris and Steuerle, 1999; Gilman, 2002). Proponents of the Charitable Choice Initiative applauded Bush's bold action in implementing the Charitable Choice Initiative because it provided equal opportunity for religious organizations to compete for the government funds and brought a different approach to solve social problems and heal society's illnesses (Vita and Wilson, 2001;

Kramer, Nightingale, Trutko, Spaulding and Barnow, 2002).

Under the shadow of extensive debates over the previously mentioned provision and its implementation, the outcomes of faith based organizations' efforts worth studying. Prior to the Bush administration, the subject was not in the public sphere as a controversial policy issue. A discussion of the Charitable Choice Initiative in all aspects - its background, constitutionality and implementation - is necessary before discussing the effectiveness of faith based organizations (Cnaan and Boddie, 2002; Gilman, 2002).

### **What Is the Charitable Choice Initiative?**

Section 104 of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 has been known as the Charitable Choice Initiative. This initiative brought a new approach to social service policy implementation in the United States (Gilman, 2007; Bartkowski and Regis, 2007; Chaves, 1999). The provision has changed the face of the delivery of social services and the relationship between religious communities and the public sector tremendously over the time (Cnaan and Boddie, 2002; Modesto, 2006). The spirit and implementation of this law shifted welfare policies from government's support of family and individuals to personal responsibility. The new provision, in fact, brought a new vision to the issue of social welfare by proposing to limit the role of federal government and encouraging personal and community responsibilities to fight poverty. This new provision, moreover, brought a new moralistic - approach to the poverty phenomenon. In this new approach, the perception of public assistance recipients has shifted from 'needy' and 'left behind' to being perceived as irresponsible persons (Modesto, 2006).

With PRWORA, public assistance in the form of cash to the recipients was limited to five years. The law, in this sense, enhanced the hands of social workers to sanction clients if they fail to fulfill the requirements in a given time period. This act, gave states and local jurisdictions more responsibility and flexibility in the delivery of social welfare. While giving state and local

governments more responsibility to address poverty and deal more with social welfare, the federal government had not created a remedy that could fix the ‘moral failures’ of individuals and society that fundamentally occur because of unemployment and family breakdowns until the enactment of the Charitable Choice Initiative (Mitchell, 2000; Pipes and Ebaugh, 2002).

To create a “safety net” that would share the responsibility of social illnesses by community-based organizations alongside secular non-governmental and government agencies to the disadvantaged, the Charitable Choice provision, which is Section 104 of PRWORA, required states to treat faith based organizations as any other secular social service provider when contracting with the government for delivery of social services. Section 104 establishes a statute that gives the religious organizations the right to preserve their religious character while contracting with the government (Davis, 2008). Section 104 of the Reconciliation Act of 1996 outlines the Charitable Choice provision as follows:

*The purpose of this section is to allow States to contract with religious organizations, or to allow religious organizations to accept certificates, vouchers, or other forms of disbursement . . . on the same basis as any other nongovernmental provider without impairing the religious character of such organizations, and without diminishing the religious freedom of beneficiaries of assistance funded under such program. (Section 104 (b))*

Religious organizations, in fact, have been contracting with the government for a very long time in America. For instance, in the early times of America, settlement houses that administered to immigrant groups were run mostly by church affiliated charities with support of government grants (Cormode, 1998; Monsma, 1996; Bartkowski and Regis, 2002). Similarly, faith based organizations provided social welfare services in hospitals and soup kitchens with the help of government funds in the 1930s (Lupu and Tuttle, 2002). Faith affiliated organizations, such as Catholic Charities, Lutheran Services, Goodwill Industries, and Jewish Vocational Services, Salvation Army, are very important elements of the social service delivery system and

accept major government funds today (Kennedy and Bielefeld, 2003; Carlson-Thies, 2004).

To put the subject in perspective it is necessary to talk about the background of the initiative. The road to the Charitable Choice Initiative paved by a group of academics, religious leaders and politicians, started in the 1970s with a notion that the role of government and civil society in collaborating fight against moral and social crisis in the nation should be enhanced. The very same proponent groups of the government and FBO partnership collaboration contend that government alone cannot address social ills such as substance abuse, homelessness and poverty. They propose that these sorts of social problems should be dealt by faith and community based organizations that have an influence in inner-city neighborhoods (Farris, Nathan and Wright, 2004). Marvin Olasky, who was then a professor of journalism at University of Texas at Austin, known as the “godfather of compassionate conservatism”, and one of the most prominent leaders of the neo-conservative movement worked closely with George W. Bush, then governor of Texas (Modesto, 2006).

With the intention of empowering local, private institutions, nonprofit organizations, specifically those who are religiously affiliated to find cure for social problems, the above mentioned movement, produced a number of policy proposals. One of those proposals was the Personal Responsibility and Work Opportunities Reconciliation Act that was signed into law by President Clinton. The bill was proposed by conservative Senator John Ashcroft. According to the section 104 of the act, the government will no longer discriminate against faith based organizations and prevent them from receiving federal government grants solely based on their religious character. The law gave the right to faith based organizations to keep their religious practice and revelation and still compete for federal grants (Farris, Nathan and Wright, 2004; Gilman, 2007; Lewis, 2003).

George W. Bush, then the governor of Texas, became the first governor in the nation to apply new federal regulations at the state level. A few months after the enactment of federal

welfare reform, Bush signed an executive order directing state agencies to encourage faith affiliated organizations to deliver social services in Texas. Governor Bush, in his different public appearances, proclaimed that “Government can hand out money, but it cannot put hope in our hearts or a sense of purpose in our lives. It cannot bring us peace of mind. It cannot fill the spiritual well from which we draw our strength day to day. Only faith can do that” (Davis, 2008; Farris, Nathan and Wright, 2004; Modesto, 2006).

From a personal perspective, President Bush not only believed that religion provides fundamental answers to the social problems that the nation faces, he also believed in the miraculous healing power of faith. Bush, proclaimed in a speech at the National Conference on Faith Based Social Services as follow:

*I will tell you – I will tell you, the cornerstone of any good recovery program is the understanding there is a Higher Being to which – to whom you can turn your life, and therefore save your life. It is the crux of many, many a successful addiction program. It -- and our government ought to understand that (Modesto, 2006).*

Soon after George W. Bush took office in 2001, he announced that he would expand the scope of the Charitable Choice programs that provide funds for religiously affiliated organizations. President Bush, by using his executive power, skipped congressional approval and created the White House Office of Faith-Based and Community Initiatives with sub-offices within five different federal agencies. What he did was essentially extend the Charitable Choice provision of welfare reform that was signed into law by President Bill Clinton (Gilman, 2007; Faris et al. 2004).

Since government funded social services have been delivered by faith based organizations for a long time, what is new about the Charitable Choice Initiative is that the relationship between government and religious organizations are re-regulated in a way that

collaboration is encouraged. Prior to the initiative, religious organizations contracting with the government had to separate their religious character from the social services that they provided. For instance, they had to remove all religious symbols and depictions from the place where the service was delivered; they could not hire staff that shared only the organization's spirit and religious beliefs – they had to hire staff that reflected society at large. In other words, hiring and firing must not be based on religious or spiritual affiliation or opposition. The Charitable Choice Initiative also prevents clients from being forced to practice or participate in religious services. What religious organizations usually did prior to the Charitable Choice Initiative was establish a separate entity with secular appearance in order to be eligible for government assistance. The purpose of government enforcement prior to the Charitable Choice initiative was mainly to protect the wall between church and state strictly (Monsma, 1996; Cnaan and Boddie, 2002; Lewis, 2003; Burke, Fossett and Gais, 2004; Gilman, 2007).

The Charitable Choice Initiative brought a dramatic shift to government funded social services. With this legislation, faith based organizations retain their religious autonomy. The PRWORA states that:

*A religious organization with a contract described in subsection (a)(1)(A), or which accepts certificates, vouchers, or other forms of disbursement under subsection (a)(1)(B), shall retain its independence from Federal, State, and local governments, including such organization's control over the definition, development, practice, and expression of its religious beliefs (subsection (d)(r)).*

Faith based organizations do not have to act like they are secular after the enactment of the bill. Their religious identity is protected by law, but FBOs cannot spend the government funds for religious worship, instruction, or proselytization. They have to spend the funds for their intended social programs. Faith based organizations must have a separate accounting system that keeps government funds for the proposed purposes only. In this sense, the law still

maintains the separation of church and state by not funding the religion or religious activities (Sherman, 2001; Cnaan and Boddie, 2002; Monsma 1996; Monsma 2003; Hula, Elmoore and Reese, 2007). The rights and freedom of faith based communities are safeguarded as well as individual liberties by the Charitable Choice Initiative (Sharman, 2001).

### **Implementation of the Charitable Choice Initiative and Criticism**

With the notion that community based and faith motivated efforts have been out there to provide services to the needy since the founding of the country, the welfare reform act of 1996 and its section 104 were efforts to legally codify the ambiguous relationship between government and faith and community based organizations (Olasky, 2008; Ebaugh, Chaftezan, Pipes, 2005; Small, 2002).

Faith and community based organizations, by their nature emerge from small neighborhoods and are embedded in those neighborhoods with the purpose of providing help to those individuals who are in need (Wanderwoerd, 2004; Chaves, 1999; Monsma, 2003). In the way that they are created, faith based and community organizations (FBCOs) are naturally tailored to deal with micro social issues, such as supporting individuals and families facing substance abuse, domestic violence, HIV, poverty, housing, crime, natural disasters, etc. Even though they are created to heal the diseases to which their communities are exposed, without adequate funding and resources they fall short in fulfilling the intended purposes. At the point that they fall short, they need government's help to reinforce their capacity and provide the services that are needed in their communities. With welfare reform, government officially recognized that it should address some of the social issues that are mentioned above with macro management. To be able to implement such a policy, it needed faith and community based organizations that were already trying to fulfill that mission most of the time, albeit with inadequate resources (Report to U.S Department of Health and Human Services, 2008; Smith, Bartkonwski and Grettenberger, 2005).

The notion that faith based organizations plays a substantial role in serving communities and individuals in need prompted the government to take concrete steps towards establishing an office in the White House to address this issue more effectively. On January 29, 2001, President George W. Bush, days after he took office, signed two executive orders that established the Faith-Based and Community Initiative (FBCI) and created branches in five federal agencies. (Report to U.S Department of Health and Human Services, 2008). The five agencies that first created faith and community based offices were the federal Department of Labor, Department of Justice, Department of Housing and Urban Development, Department of Education and the Department of Health and Human Services. The fundamental goal of these offices in different agencies was to expand the involvement of faith and community based organizations in the delivery of social services (Cnaan and Boddie, 2002). By 2008, President Bush had signed three more executive orders that created faith and community based initiative offices in six more federal agencies bringing the total number of federal agencies to eleven: Department of Agriculture, Department of Commerce, Department of Veterans Affairs, Department of Homeland Security, the Agency for International Development and the Small Business Administration (Report to U.S Department of Health and Human Services, 2008).

The executive order mandates that federal agencies conduct an agency-wide audit on barriers to participation by faith based organizations and eliminate the possible existing barriers. The agencies that have faith based offices are required to incorporate FBOs in programs and initiatives as much as possible. They need to develop outreach efforts to FBOs and community organizations to take a possible role in the social service delivery. Further, they need to identify liaison offices to the faith based community and provide necessary information and technical assistance to the FBOs. These federal agencies are also required to encourage states to create FBCI offices and provide them with guidelines. Some of the federal block grants that go to the states must be made available to the faith based organizations. The executive orders not only

mandate domestic implementation of the initiative, they also encourage the agencies to build partnerships with international volunteer efforts. Public and private partnerships are expanded in all 50 states and internationally, such as applying a large - scale response to the prevention, care and treatment of HIV / AIDS (Cnaan and Boddie, 2002; Deb and Jones, 2003; Gilman, 2007; Hula, Elmoore and Reese, 2007).

The welfare reform and executive orders of the Bush administration drew tremendous attention from critics. The creation of the Compassion Capital Fund, which aimed to help faith-based and community organizations compete for the federal money for capacity building and technical assistance, in the Department of Health and Human Services, sparked especially heated debates over the role of government in collaboration with faith based organizations in social service delivery (Kearns, Park and Yakoski, 2005).

In policy making circles, concerns have stemmed from the simple premise that religious content of faith based organizations will be deliberately integrated into the service provided. Some political and civil rights movements that are opponents of the Charitable Choice Initiative have concerns that the separation of church and state (Establishment Clause) rule of the constitution is violated. Some nongovernmental organizations, such as the American Jewish Committee, the American Civil Liberties Union, the National Association for the Advancement of Colored People, and Americans United for Separation of Church and State argue that the Charitable Choice legislation will entangle the lines between church and state, and FBOs could use taxpayer money to promote their own agenda (Lewis, 2003; Gilman, 2002; Boris and Steuerle, 1999). Opponents, further, argue that government funding of social programs of houses of God or the programs that in some ways integrate strong faith element is advancing religion and sectarian groups. The constitution does not allow government to choose one religion over the other or promote any religion (Sider, 2002).

Opponents of the Charitable Choice, moreover, claim that religious organizations may

use government funds to discriminate in their hiring or firing activities on the basis of the religious belief. Clearly, organizations have policies and have the right to hire and fire individuals that share or do not share the philosophy of the organization. These critics claim that government may be involved in a sort of sectarian hiring and firing process by funding sectarian organizations, and that should not occur (Lewis, 2003; Sider, 2002). Not only is the organizational aspect of discrimination in question, but the individual liberty of clients is also endangered by this initiative, they claim. While clients' religious freedom is protected by the initiative in theory, clients may feel too weak to pursue their rights and privileges and might easily become a subject for proselytization (Brownstein, 1999a).

There has been opposition to the initiative from some clergy who think that the Charitable Choice Initiative endangers the autonomy of religious organizations. Government rightfully demands effectiveness and accountability for the services funded with public money. Some church leaders think that this will lead to an excessive entanglement of church and state. Government involvement in the business of houses of worship may influence their prophetic voices to confront misguided government policies. The very same group of people thinks that competing for government grants and funds may cause hostility and messy polarization among religious communities. Moreover, they say, government funding may, in the long run, induce religious congregations not to seek any private giving if government funds are considered a reliable source. They express their concern that tight government regulations and controls may subtly secularize the faith based institutions and programs and detract from the flexible, compassionate and people-centered approach to the general and bureaucratic type of responses that make those who receive government funds more like a government agency rather than a typical traditional faith based social service provider (Sider, 2002; Lewis, 2003; Brownstein, 1999a; Davis, 1999; Rogers, 1999; Matsui and Chuman, 2001; Hula, Jackson-Elmoore and Reese, 2007; Saperstein, 2003).

With respect to the administration aspect of this initiative, concerns have mostly been related to the issue of effectiveness of faith based social service providers (Lewis, 2003). The effectiveness issue is very vague with respect to faith based organizations. It is very difficult to measure the role of faith in the performance of an organization. It is also difficult to assure effectiveness. One of the aspects that makes evaluation of the performance of faith-based organizations hard is their intention and philosophy of serving God, rather than evaluating the outcomes of their services and works (Salamon, 2002). Within Judaism, Christianity and Islam, it is highly recommended that charity should be confidential. Calling attention to charity will overshadow the good intentions of charitable acts. Another hurdle in measuring the effectiveness of the program or organization, over all, is volunteer-driven structure of faith-based organizations which could make it hard to track how many hours they spend serving clients. Small budgets are among the other confining factors that make it difficult for FBOs to spend time on accounting and hire staff to do paperwork (Carney, 2003; Kennedy and Bielefeld, 2002; Bana, Coffin and Thiemann, 2000). At the end, government program directors are in the position to consider which service provider organizations are eligible for funds and grants. To fulfill their obligation, these programs directors must track the record of the service providers, based on performance and effectiveness. The performance measurement can be set by government officials based on some acceptable criteria or comparable data (Monsma, 1996). In this respect, opponents of the Charitable Choice Initiative claim that faith based organization lack the sufficient evidence or are not capable of providing enough evidence that they are effective in providing social services (Farnsley, 2001; Goldsmith, Eimicke and Pineda, 2006).

Proponents of the Charitable Choice argue that the initiative was necessary in order to “level the playing field” between the faith based community and secular and government organizations. Supporters of the initiative think that the new legislation was needed to remove barriers to government funding faced by religious social service providers. With this legislation,

government gives the right to faith based social service providers to compete for government grants with the same rules that apply to the secular organizations. Discrimination against the faith based organizations is eliminated. The Charitable Choice Initiative not just protects the religious character of the FBOs, it also protects the clients' religious freedom. Religious organizations do not have to pretend to be secular in order to be eligible for government funds. The Charitable Choice legislation forces government agencies to be neutral towards all social service providers. The government can no longer favor secular organizations over religious ones. With the new law, effectiveness is the primary concern of government in the delivery of social services, not the religious or secular tendencies of the organizations (Delulio, 2001; Sider, 2002; Cnaan and Boddie, 2002; Gilman, 2002).

Some prominent scholars in the field, such as Delulio (2002), Sider, (2002) and Johnson (2002), argue that the scale of poverty and economic differences between social classes, even in the heart of great cities of America, is a moral disgrace for the people and a danger for the future of American democracy that is the beacon for emerging democracies all over the world. Among the most functional social institutions that remained in many of the most desperate communities of the society are houses of God and their programs that provide services to the needy. They believe that, in some of the poorest communities of the country, religious social service providers are the only institutions that succeed. To the supporters of the Charitable Choice legislation, what makes FBOs most successful is the faith component in their programs. The key to reducing poverty and eliminating social brokenness is to embrace the faith based approach to these social illnesses, they claim. And that is what the Charitable Choice Initiative mandates government to do.

Contrary to arguments by opponents that the Charitable Choice Initiative will cause laziness among religious fundraisers and will bring the FBOs in line with government, preventing them from spreading their message, proponents argue that the initiative does not

require the organizations in question to contract with government, nor to stop pursuing donations and voluntary support. FBOs that pursue government funding do have boards and management teams. FBOs' body of decision makers should not make a decision that in the end paralyzes the effectiveness of an organization for the long run. The Charitable Choice secured right of religious communities by law; it did not mandate them to work with government (Report to the Feinstein Center for American Jewish History- Available on World Wide Web).

### **Is Charitable Choice Initiative Unconstitutional?**

The fact of the matter is that funding of houses of worship or entities that they create to provide social services by a government agency would not have been imaginable thirty or forty years ago in the United States. As mentioned earlier, FBOs have been receiving government funds for a very long time, but they had to provide their services in secularized settings. Catholic Charities and Lutheran Social Services had delivered government funded social services by establishing separate entities that had a secular form (Monsma, 1996; Cnaan and Boddie, 2002; Deb and Jones, 2003; Lupu and Tuttle, 2008).

The most serious part of the debate over the Charitable Choice Initiative revolves around the constitutionality of the initiative. The First Amendment's Establishment Clause, which states that "Congress shall make no law respecting the establishment of religion," has stood as a sole pillar for both opponents and the Supreme Court justices, in preventing FBOs from collaborating with the government. For over six decades, those justices who sat on the bench had interpreted the Establishment Clause to prohibit government grants from going to pervasively sectarian entities. The interpretive details of the Supreme Court cases have been different over the time, but the fundamental guiding principle has been the same; government may not promote or directly engage in subsidizing a religious activity or worship or instruction in a particular religion or a sect. (Lupu and Tuttle, 2008). In 1973, in a decision (*Hunt v. McNair*), the Supreme Court interpreted the Establishment Clause to prohibit government money to flow in

pervasively sectarian organizations. In the same way, decades before *Hunt v. McNair*, the court made the decision on *Everson v. Board of Ewing Township* (1947) (Lupe and Tuttle, 2002).

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 has five important provisions that not just clarify the pathways for government agencies in funding faith based organizations, but also give rights to faith based organizations to compete for government money on an equal basis with secular organizations. These provisions are; a) a mandate on participating states to treat religious entities on the same basis as secular service providers, b) a promise that participating religious entities can retain their religious identity and structure, c) a requirement that all providers respect the religious freedom of beneficiaries of the service provided, d) a prohibition on direct government funds for promotion of religion or proselytization, and e) a guarantee that participating religious entities retain their right to make religion based employment decisions. Even though the provisions try to assure that faith and community based organizations are treated as secular service providers, the Establishment Clause of the First Amendment still stands as a constraint on public funding of religious activities and many state constitutions, in fact, have similar constraints on funding of these organizations (Kennedy and Bielefeld, 2002; Lupu and Tuttle, 2008; Bartkowski and Regis, 2002; Sherman, 2000; Gilman, 2002).

The principle that government could not make direct grants to sectarian organizations was implemented by the court in relevant cases from the early 1970s to late 1990. The court's decision in related cases dwelled on the notion that houses of worship, religious schools and similar entities could not be funded by government, even though they perform a public service. The reason behind the court's decisions was that public funds to such organizations will inevitably promote the mission of religious indoctrination since it is difficult for government to control where the money is being spent. The trust issue in regard to faith based social services has started shifting in the ruling of the courts from 1981-2002. In its dissents of *Agostini v.*

Felton, 1997 and Mitchell v. Helms, 2002, the court gradually abandoned its overtly broad rule that pervasively sectarian entities may spend public money for religious indoctrination (Gilman, 2002; Gilman 2007; Lupu and Tuttle, 2008; Carlson-Thies, 2004).

In Agostini v. Felton (1997), a federal district court and court of appeals ruled against New York City, declaring that the city could not have public school teachers providing supplemental instruction to disadvantaged students at religious schools during regular school hours. The city took the case to the Supreme Court. In a majority decision of 5 to 4, the court ruled that a federally funded program can give supplemental remedial education to disadvantaged children in sectarian schools without violating the Establishment Clause. Justice Sandra Day O'Connor wrote for the majority, stating that the program in New York City

*"Does not run afoul of any of three primary criteria we currently use to evaluate whether government aid has the effect of advancing religion: it does not result in governmental indoctrination of religion; define its recipients by reference to religion; or create an excessive entanglement. We therefore hold that a federally funded program providing supplemental, remedial instruction to disadvantaged children on a neutral basis is not invalid under the Establishment Clause when such instruction is given on the premises of sectarian schools by government employees pursuant to a program containing safeguards such as those present here.*

The interesting point about this case is that the court overruled its decision in Aguilar v. Felton (1985) indicating that the shifting judicial standards stem from the First Amendment. Similarly, in Mitchell v. Helms (2000), the court ruled that Chapter 2 of the Education and Consolidation and Improvement Act of 1981 do not violate the Establishment Clause when government provides educational equipment to religious schools with taxpayers' money (Lupu and Tuttle, 2002).

The second principle that Justice Sandra Day O'Connor mentioned in writing the decision is a concern about 'beneficiary choice'. It is important that service recipients have choices among secular and religious service providers that protect their free will. If individuals or service recipients like to choose religious service providers because of their program's religious content, government has no business preventing those recipients from receiving the service they prefer. In a landmark decision on this principle the Supreme Court weighed in on the controversial issue of vouchers in *Zelman v. Simmons-Harris, (2002)*. Under consideration was an Ohio program that provided need-based financial assistance (in the form of tuition aid) to parents of private school children in the Cleveland City School District. Even though over 90 percent of the financial aid went to parents with students in religious - as opposed to non-sectarian private - schools, the Court, by a 5 to 4 vote, found the program did not violate the Establishment Clause. Writing for the Court, Chief Justice Rehnquist emphasized that the program was neutral with respect to religion, thus making it "not readily subject to challenge under the Establishment Clause." Whatever "incidental advancement of a religious mission" that might come from the voucher program was "attributable to the individual recipient, not the government." Dissenters stressed that the voucher provisions were "skewed toward benefiting religious schools" and "risked creating a form of religiously based conflict harmful to the Nation's social fabric."

With a new approach to the issue of public funding of faith based organizations, the court started ruling on the basis of free speech right rather than approaching it as funding of "pervasively sectarian" entities by government (Lupu and Tuttle, 2008). In *Widmar v. Vincent, 1981*, the court ruled that the Establishment Clause did not require state universities to limit access to their facilities by religious organizations perceived religious worship or religious teaching in this case as a form of speech. What happened was the University of Missouri at Kansas City ruled that its facilities could not be used by student groups for purposes of religious

worship or religious teaching. The school defended its action under the requirement of the Establishment Clause. A religious student group that had previously been permitted to use the university's facilities sued the school after being informed of the change in policy. They asserted that their First Amendment right to free exercise of religion and free speech right were being violated (Brownstein, 1999b). Similarly, the Supreme Court ruled in the cases of *Lamb's Chapel v. Center Moriches Union Free School district*, 1993, *Rosenberger v. University of Virginia*, 1995 and *Good News Club v. Milford Central School*, 2001 based on nondiscrimination, equal access and free speech rights of individuals. However, in *Locke v. Davey* (2004), the court ruled that states have the right to choose whether or not to provide public money to religious programs and activities. In this sense, the court promotes a policy that "equal access is constitutionally permissible, but not mandatory" (Lupu and Tuttle, 2008; Broyles, 2003).

One of the most important objections to the Charitable Choice Initiative has been assumption that "hiring discrimination" will take place by using government funds. The hiring safeguard was in the forefront of congressional deliberations especially in 2001-2002 (Sider, 2002; Farris, Nathan, & Wright, 2004). Like any other organizations, faith based organizations have the right to enjoy the freedom of selecting staff who share their core commitments and policies. One of the most prominent activists, scholar and proponent of the Charitable Choice legislation, Ronald J. Sider (2002), indicates that 'hiring safeguard' is at the center of the Charitable Choice Initiative's attempt to protect the religious identity of faith based organizations that collaborate with government in providing social services. He says, "If receiving government funds means that an evangelical foster care agency must hire Wiggins and Planned Parenthood must hire pro-life activists, neither organization can retain its identity and mission."

The Civil Rights Act of 1964, Section 702 of Title VII clearly protects the right of FBOs to use religious criteria in hiring employees with religious duties. Later, in 1972 Congress

expanded the right to hire all employees for any position of religious organizations based on religious criteria. The Supreme Court of the US in *Dodge v. Salvation Army* (1989) unanimously held that Civil Rights Act provision that was passed by Congress is constitutional. This means when a religious organization receives a government grant it does not lose its hiring rights. Proponents of the Charitable Choice legislation believe that FBOs decision to hire staff who shares their religious beliefs and practices is not intolerant discrimination but a positive act of freedom. To them, not just religious organizations that contract with government should be given this liberty, but all kinds of private entities that contract with government should also have this right. Protecting the rights of organizations, by law, to hire staff that believes in the core value of the entity that they are going to work for and expectantly perform better is a way to promote an open and free society. If government forces religious organizations to form secular entities as a precondition to contract for public funding, it would be forceful secularization of faith based organizations and a clear discrimination against religious communities. Moreover, forcing faith based organization to maintain a secular facade would be converting independent and autonomous organizations into arms or agents of the government. If private secular organizations and government agencies, which are also secular, are sufficiently addressing the needs of all people, then why do some segments of society create different kinds of faith based organizations to deal with all sorts of social issues at the local level, and sometimes at the national and even international level? Imagine that in the name of secularization and preventing possible discrimination a Catholic government contractor organization hires a significant number of Jewish employees. That Catholic organization will no longer be a Catholic entity (Diamant, 2001; Sider, 2002; Saxon, 2004; Rosen, 2001).

Enforcement of the Faith Based and Community Initiative has generated a significant amount of litigation. Clearly, most of the lawsuits have been filed by public interest groups that are in favor of the constitutional principle of separation of church and state. The most active

groups have been Americans United for Separation of Church and State, Freedom from Religion Foundation, Inc., the American Civil Liberties Union, and the American Jewish Congress (Lupu and Tuttle, 2008).

Since the Supreme Court has not struck down the Charitable Choice Initiative, lawsuits against the implementation of the law have been decided on the basis of individual cases. As indicated earlier, the court has held decisions that government assistance for religious organizations is permissible if it is not used for promotion of a particular religion or sect; if it does not cause an excessive entanglement of religion and government; if it does not constitute government endorsement of a particular religious belief (Saxon, 2004). The lawsuits against the FBCI related cases involve a broad spectrum of social services such as, sexual abstinence for unmarried minors, work training, treatment for substance abuse, education in pastoral care for nurses, prisoner rehabilitation, mentoring the children of prisoners, custodial foster care for troubled teenagers, chaplaincies for public employees, provision of shelter for the homeless, etc. Some of the cases were upheld against the government and some have been in favor of the policy implementation (Saxon, 2004; Lupe and Tuttle, 2008; Gilman, 2002; Farris, Nathan and Wright, 2004).

To put the approach of the judicial branch in perspective on the issue of government assistance to faith based organizations, it will be helpful to mention just few of the most recent cases for and against the FBCI implementation here. One case that was decided in favor of challenger of the government action is *Americans United for Separation of Church & State v. Prison Fellowship Ministries*, 509 F.3d 406, U.S. Court of Appeals for the 8th Circuit, 2007. The court held that InnerChange Freedom Initiative violated the Establishment Clause and its prison program is pervasively religious and must therefore be terminated. The court also decided that the organization has to pay back 1.5 million dollars to the State of Iowa. Another victory for the challengers was the case of *Bush v. Holmes*, 919 S. 2d 392. The Supreme Court of Florida in

2006 invalidated Florida's state voucher program on the basis that it violated and undermined the state constitution's guarantee of a high quality system of free public schools. The voucher was allocated for sending children to private, religious and secular schools.

In the case of *Community House, Inc. v. City of Boise*, 463 F.3d 1118, U.S. Court of Appeals for the 9th Cir. (2006), the court held that the lease violates the Fair Housing Act because it discriminates against women and children. The lease agreement between City of Boise and Boise Rescue Mission violates the Establishment Clause of the U.S. Constitution and the managing organization forces residents of the shelter to participate in daily worships. The court invalidated the below the market lease agreement and ended the operation's service of homeless shelter since the operator was engaged in religious indoctrination and sex discrimination.

In *Hein v. Freedom from Religion Foundation, Inc.* 127 S. Ct. 2553 (2007), the Supreme Court of the United States held that taxpayers do not have the right to challenge the constitutionality of expenditures by the executive branch of the government. The court decided that the taxpayers have no right to challenge the White House Office of Faith-Based and Community Initiatives.

*Freedom from Religion Foundation, Inc. v. Towey*, (2005) U.S. Dist. Lexis 39444 was a lawsuit against religious discrimination that was claimed to take place at Emory University. A health care sub-grant program at Emory University favored religious applicants when making awards its funds. The program funded religious groups' health related projects with federal funds. The Western District of Wisconsin District Court held that the Emory program was legally supportable because the sub-grant criteria were religion-neutral.

In *American Jewish Congress v. Corporation for National and Community Service*, 399 F.3d 351, U.S. Court of Appeals for the District of Columbia Cir., 2005 - a complaint filed with the court claiming that AmeriCorps spends federal funds to sponsor the teaching of religion in

private sectarian schools by AmeriCorps participants. The lawsuit, further, claims that the action of AmeriCorps to permit grantees to place AmeriCorps participants as religious teachers in private sectarian schools is unlawful since the organization is funded by federal government money. The court upheld that AmeriCorps did not violate the Establishment Clause. The court determined that the AmeriCorps awards given to teachers represent indirect government financing of religion. Therefore, it should be analyzed under the Supreme Court ruling in *Zelman v. Simmons-Harris*.

It is not difficult to expect more similar cases will come in front of the courts. In fact, there are still similar cases pending in courts. The Faith Based and Community Initiative law still requires detailed federal and state level regulations and guidelines. To protect granters and grantees, the executive branches and legislation branches at both the state and federal level need to clarify the procedures between states and federal government, especially with respect to capacity building grants. President Obama, in fact, signed an executive order in November of 2010 clarifying some vague aspects of President Bush's executive order that was signed in 2002 (Rogers, 2010). Besides, grantee organizations should be given clear guidelines to avoid direct use of government funds for promotion of religion in order to avoid more possible lawsuits and charges (Saxon, 2004; Lupe and Tuttle, 2002, 2008).

## **CHAPTER III**

### **LITERATURE REVIEW**

One of the most controversial aspects of the Charitable Choice Initiative is the effectiveness issue. It is a concern among scholars, policy makers and practitioners that public funds go to programs that make a positive difference or at least fulfill proposed minimum standards that are required by laws and regulations. Many critics argue that faith based organizations (FBOs) are not professional enough to spend the money for the purpose it is given. To the critics, FBOs' typical smaller size, lack of experience working with government, tendency to focus on religious activities in their work, and volunteer-driven programs are the issues of most concern. These aspects, they claim, make it difficult for government to track their records. Moreover, the critics of the initiative argue that FBOs may spend given funds to promote their religious agenda. Furthermore, critics fault the Charitable Choice policy that it is not clear whether FBOs are equally compatible to their secular counterparts in the delivery of social services since there is no sufficient evidence that they perform well. Critics voice that accountability is crucial for government assistance (Carney, 2003; Chaves, 1999; Printz, 1998; Goodstein, 2001; Bana, Coffin and Thiemann, 2000; De Vita, 2001; Fischer, 2003; Fischer, 2006).

With regard to these concerns, the role of public policy makers is to reach decisions based on relative effectiveness of different types of social service programs. In provision of social services, policy makers measure outcomes based on relativity, which means being better or worse impacts public funding (Monsma and Soper, 2006). Such comparisons have become particularly important since the enactment of the Charitable Choice Initiative. Even though there is a long history of government and FBOs collaborating in providing social services in the United States, very little research had been conducted in regard to effectiveness of FBOs prior to the creation of the White House Office of Faith-Based and Community Initiatives. In the

absence of empirical evidence about the performance of FBOs, many sharply criticized government's grants and assistance to some organizations with unproven track records. Many criticized the Bush administration for making public funds available to religious organizations on the basis of ideology rather than effectiveness (Wuthnow, Hackett and Hsu, 2004; Fischer, 2003, 2008; Jensen, 2001; Hula, Jackson-Elmoore and Reese, 2007). John J. Dilulio, the first Director of the White House Office of Faith-Based and Community Initiatives, indicated this issue in a lecture at Manhattan Institute as well (2002):

*...how do we know what the results are for all the nonprofit organizations that presently receive government funds? You can count on your fingers and toes the number of these organizations that, over the years, even after literally decades in some cases of grant getting, have ever been subjected to even a single government performance audit, let alone any independent research impact study or evaluation. (Manhattan Institute, 2002).*

Some, nonetheless, claim that faith based organizations are more effective than their secular counterparts. President George W. Bush voiced this opinion frequently as quoted in Chapter II of this study. The rationale behind this assumption focuses on the idea that FBOs are usually indigenous organizations and are primarily staffed with people who live in the surrounding communities. Employees or volunteers are usually part of that community and they have invaluable moral connections and credibility with their neighborhoods. Since the staff is part of the local community, FBOs have close contact and broad knowledge about the most needy in the neighborhoods. Their approach to the needy is at the micro level and very personalized. They are not just aware of the needy persons and families in their communities; they also feel their pain and grief. An FBO cannot survive long in a community if it does not fulfill its mission (Fink and Branch, 2005; Fischer, 2008).

It is thought that FBOs might have particular expertise and footing in some areas of social services. Those who are hard to serve are usually in the service spectrum of faith and

community based organizations (FBCOs). For instance, families of prisoners, newly released prisoners, homeless, drug addicts, and at-risk adolescents are the type of service recipients of FBCOs (Fischer, 2008). By looking at the services provided to the most needy by FBOCs, some proponents of the government-FBCOs collaboration argue that faith based service providers are more cost and performance effective than the traditional secular service providers. These arguments appear not to be based on the empirical evidence, but based on individual cases and anecdotal evidence. The primary argument of proponents in determining faith based organizations' relative effectiveness is their belief in religion's perfection, and consequently a premise that religious affiliation makes a difference in service outcomes. Faith based organizations might perform well in serving "hard to serve" segments of communities, but might not perform as well in some other service areas where secular service providers are dominant. Those who believe that FBOs are more effective proclaim that effectiveness cannot be measured by sole economic parameters. They argue that it is hard to measure aesthetic appreciation provided by arts organizations, worship provided by religious entities and love and companionship that are put in service in nursing homes (Weisbrod, 1988; Cnaan and Boddie, 2006; Smith, Bartkowski, and Grettenberger, 2005; Singer and Friel, 2007).

At this point, the question becomes, what is effectiveness and how it is measured, or ought to be measured. As different views about effectiveness were briefly laid out above, the effectiveness issue is far more complicated than it initially appears. The subject becomes more complex when spirituality or religion is involved in the service provision. Social context is important when measuring the effectiveness or performance of service providers as well. Many studies have shown that religious engagement has implications of better health and behavior outcomes. Ignoring the religious character of a service provider in measuring service outcomes would not give a whole picture about the impacts of a particular FBO makes. To better grasp the difference we need to compare the performance of organizations by taking into account the full

portfolio of organizations (Wuthnow, Hackett and Hsu, 2004; Johnson, Tompkins and Webb, 2002; Monsma, 2006 Cnaan and Bodie, 2002; Ragan, 2004).

### **What Is Organizational Effectiveness?**

In terms of the purpose of this study, effectiveness can be defined as a program's or organization's capability to have service recipients achieve the intended outcomes or to show change in participants' behaviors, level of knowledge and status that can lead in a better direction in personal and social life (Wuthnow, Hackett and Hsu, 2004; Bartowski, Call, Heaton, and Forste, 2007; Hanglely and McClanahan, 2002). Measuring an organization's effectiveness, however, poses a challenge. First, it is not easy to define the term "effectiveness". It is anything, but self-defining term. 'Effectiveness based on what?' is a serious question that needs to be addressed. Criterion to measure effectiveness may differ depending on what angle one looks at a program or an organization's performance. Second of all, measuring the performance or effectiveness based on recipients' outcomes is challenging. In measuring the effectiveness of a program, should one deal with client evaluations and client's perceptions towards a program or should effectiveness be dealt with purely in terms of outcomes with well known economic measurement techniques? If effectiveness is measured based on client outcomes, then how is a particular program's impact going to be measured for those individuals who receive services from multiple social service providers? For instance, welfare to work program participants are known to receive services from more than one provider, when possible (Monsma and Soper, 2003, Wuthnow, Hackett and Hsu, 2004).

It is often difficult to find well-organized and accurate records of clients due to incomplete government records and the challenge of collecting a sufficient amount of data from "hard to serve" type of clients. These clients are generally difficult to contact or unwilling to provide viable information that could be used for research purposes. Moreover, researchers must determine what variable(s) might play a role in obtaining better outcomes. This is a vital point

especially when it comes to measuring faith based organizations' effectiveness. Do faith based organizations have a different type of clientele or do they provide better service if they are more effective than their secular counterparts? Does their religious character have an influence on their performance? How does a researcher determine if a particular social service provider did not accept some individuals into the program because of the perception that they will not change or their conditions cannot be improved? These are important issues that should be taken into account and thus it is hard for researchers to study effectiveness of service providers in a methodologically sound way (Monsma and Soper, 2003; Milton and Ludden, 2009; Johnson, 2002; Regan, 2004; Roman, Wolff, Correa, and Buck, 2007; Twombly, 2002).

To explain the methodological difficulties in measuring effectiveness of an organization, a study of InnerChange Freedom Initiative provides us with a great example. InnerChange Freedom Initiative is a program that President George W. Bush often mentioned as a model of faith based organization success. InnerChange Freedom Initiative is an Evangelical in-prison rehabilitation program, which encourages prisoners to change their behaviors and attitudes. The program preaches message of reform through complete surrender to God. Some believe that this particular program has a transformative impact on prisoners. A prominent study on the effectiveness of InnerChange Freedom program in 2003 found that recidivism rates for the program's offenders were substantially lower than those prisoners who did not participate in the program. However, there was a vital methodological mistake in the measurement of outcomes. The study determined the success rate of the program based on the graduates, and did not take into account that half the participants did not graduate for various reasons. When these non-graduating participant inmates are taken into account, the difference between the InnerChange participants and the comparison groups reversed; the recidivism rate for InnerChange participants was slightly worse than other groups (Kennedy and Bielefeld, 2006; Gilman, 2007; Wuthnow, Hackett and Hsu, 2004).

Finally, in measuring faith based organizations' effectiveness, the role of religion or faith is a substantial challenge for researchers. Measuring the degree to which religion is involved in the service provided and its influence, if there is any, on intended outcomes should be taken into consideration. There is obviously difficulty in determining short term and long term effects that religion may have on service recipients. Aspects of religion, such as compassion, determination, consistency-rituality, sense of responsibility, love of a higher power, obedience, prayer and etc., might have an influence on better behavioral and health outcomes that are hard to determine in a scope of research that looks into organizational performance for a limited period of time (Fischer, 2004; Fisher and Stelter, 2006; Monsma and Soper, 2003; Ferguson, Wu, Spruijt-Metz and Dyrness; 2006).

Comparing the performance of different type of providers delivering similar services in the same service sector is one way of making more effective evaluations of services provided. For instance, if effectiveness of faith based organizations is being measured in a particular service area, the researcher(s) need(s) to measure the performance of that organization's counterparts in the same service area under the same conditions with the FBOs' performance. For the purpose of this study, measuring the effectiveness of faith based nursing homes in Virginia requires an examination of all other types of nursing homes, government run, private for profit and nonprofit, in order to draw a clear picture of service provision. Although there are government rules and regulations that require nursing homes to comply with a code of conduct at the minimum level in order to be able to continue to function as service providers, there are no written standards for the "best" nursing home service. With a rigorous research design involving sound comparison of service providers' characteristics and their residents' level of wellness we can explore the relative effectiveness of nursing homes. A measurement of relative performance outcomes is an effective approach to minimize methodological shortcomings and determine performance evaluation (Berk, 1983; Camp, Klein-Saffran, Kwon, Daggett and Joseph, 2006;

Fischer, 2008; Smith and Sosin, 2001; Monsma and Soper, 2003; Ferguson et al., 2006).

### **What Is a Faith Based Organization?**

Despite the fact that researchers have not come up with a single definition of what constitutes a faith based organization, it is methodologically necessary to clearly describe what constitutes an organization as a faith based organization in order to make a sound evaluation of an organization's performance (Chambre, 2001; Kennedy and Bielefeld, 2002; Government Accountability Office, 2006; Carney, 2003; Carlson-Thies, 2004; Sider and Unruh, 2004; Twombly, 2002; Smith and Sosin, 2001; Monsma and Soper, 2003b).

Since faith affiliated organizations provide social services in many different ways, clearly defining what constitute religious affiliation is a complex concept. Faith may influence an organization in a variety of aspects and the degree of influence may change over the time. A church or congregation may set up a social service program that might have an explicit religious character at the beginning, but over time it may establish a partnership with secular organizations that gradually give it a more secular orientation. An organization founded by a religious denomination might be taken over by a non-religious organization that chooses not to change the policies of the organization. In these cases, it is difficult to determine the category of an organization - whether it is secular, religious, or a mix of both (Chambre, 2001; Netting, 1984; Modesto, 2006; Sider and Unruh, 2004; Monsma and Soper, 2003b).

There are several different approaches to overcome the problem of defining faith based organizations. Netting (1984) describes church related social service organizations as organizations that “publicly acknowledge a relationship to a religious group.” Wilson (1974) looks at the more structural side of faith based organizations. He asserts that these agencies are basically entities where board membership, staff, and volunteers come from a particular religious group, and activities and core mission stem from a particular religious belief. Chaves (1994)

follows Wilson's notion in describing faith based organizations. He defines faith related organizations as entities with an organizational connection to a particular religion. Similar to Chaves' description, Garland (1994) defined church related or faith based organizations as "agencies related to churches, denominations, ecumenical organizations, or other religious groups and orders to any extent and in any way."

Some believe that faith based organizations provide services in a different manner compared to their secular counterparts. Ebaugh et al., (2003) conducted a study in Houston, Texas to find out if faith based organizations are any different than conventional service providers. By utilizing data from a mailed survey, their study compares organizational characteristics of faith-based and secular agencies that deliver services to homeless people. The survey was conducted among 170 executive directors of organizations that serve the homeless. Eighty-nine of the executive directors responded to the survey. Fifty-three organizations classified themselves secular while thirty-two identified themselves as religious. Four of the survey respondents did not answer this question. The findings of these studies indicate that secular and religious service providers differ on funding sources, preferences, decision-making tools, organization culture, service practices, leadership, and staffing characteristics. More importantly, survey data and content analysis of mission statements show that eighty percent of faith based organizations use religious imagery in some form of their public face to communicate their faith.

Since scholars have come to a realization that it is not an easy task to describe faith based organizations in the context of social service provision, the description of faith based organization has become more sophisticated in recent times. Categorical approaches have been taken by researchers to explain what faith affiliation really means. Cnaan (1999a), Sider and Unruh (2004), Monsma (2003a) and Ebaugh et al., (2006) have tried to explain the term faith based by creating typologies of organizations. Cnaan (1999a) approached it in a way that

religious affiliation is determined by institutional affiliation of a faith based service. His categories include religiously affiliated international organizations, national projects, and organizations under religious auspices, paradenominational advocacy and relief organizations, local congregations, interfaith agencies and ecumenical coalitions and city-wide and region-wide sectarian agencies. His categorization is based on direct / operational affiliation, not an affiliation that is based on measurement of any religious element of the service provided.

Sider and Unruh (2004), Monsma (2003a) and Ebaugh et al., (2006) recognized that a program might be different than an organization that operates it and has direct management affiliation with it. To these scholars, what defines a faith based organization is its religious character that is expressed tangibly in the service provided. It should not be forgotten that what has brought church related organizations' activities in question is not their organizational affiliation only, but also their religious character that is manifested in the service provided. The key question here is whether religious character makes a positive difference in services provided or not. Assessing the impact of religion in services provided is the main purpose of this study. Since there are funding issues and policy making efforts involved, it is important that the concept of faith based is clearly defined and dealt with. Determining the faith affiliation of an organization in today's complex social service provision obviously requires a multi dimensional approach.

Policy makers and potential service recipients are very interested in both the efficacy and quality of care provided in nursing homes. Since this is a policy matter, which involves consumers, policy makers and practitioners, researchers have been paying close attention to the relationship between ownership type and quality of service provided as one of the aspects that needs to be examined in nursing homes (Luksetich, Edwards and Carroll, 2000; Graddy and Ye, 2006; Ben-Ner and Ren, 2008; White, Begun and Tian, 2006).

Two of the most prominent researchers in the field, Ronald J. Sider (2004) and Stephen V. Monsma (2003) created very useful guidance for future researchers. Sider (2004) stressed that the term "faith-based organization" comes short of expressing what it means for such identified organizations. His article proposes typologies for social service organizations and programs in six categories: Faith-permeated, faith-affiliated, faith-centered, faith-background, faith-secular partnership and secular. Categorization separates programs from organizations with the premise that a program might be different than the organization that finances and supports it; such as programs that are created as a partnership between secular and religious organizations. Case studies of 15 congregations are provided appropriately for each of the typologies. Sider et al., went into details and provided charts that examined the religious or secular affiliation of an organization and program by looking at mission statements, the purposes for which these organizations were founded, affiliation with external entities, the criteria in selecting the controlling board, how selection of senior management and staff takes place, the sources of financial support and non-financial resources provided, the organized religious practices of personnel, the religious environment in which the services provided, and religious content of programs.

In their study, Monsma and Soper (2006) systematically tested how successful different program types are at providing social services by studying five different welfare- to -work programs in Los Angeles County. The programs in the study were categorized as government run, for profit, nonprofit/secular, and two types of faith based programs; faith segmented and faith integrated. The data for the research came from a three-wave survey of clients who received service from 17 programs that represent the five aforementioned program categories. Surveys gathered information about basic demographic characteristics of service recipients, employment history, educational background and level of personal optimism about finding a job. Six and twelve months later, they contacted the same subjects by phone and asked about their

employment situation, welfare dependency, income level, and what they thought about the program that they participated in to find a job.

The research study aimed to measure the effectiveness of different types of programs by analyzing the outcomes. Faith based programs were placed in two categories: faith segmented and faith integrated. Faith segmented programs are those in which religious elements are implicit and in the background. Faith integrated programs are those in which religious elements are explicit and incorporated into the service provided. The researchers created a scale that helps to measure the degree of a program's engagement with religious practices in service provision. Some of those measurement points are "using religious values or motivations to encourage a client to change his/her attitudes and/or values", "hiring only staff who are in agreement with organization's religious orientation", "placing religious symbols and pictures in the facility where the program is implemented", "using religious values as a guiding motivation for staff in delivering services", and etc.

Another very interesting and noteworthy study that measures the faith factor in faith based organizations was conducted by Ebaugh et al., (2006). The research creates a measurement for the role of religion in organizations. Religiosity of organizations is analyzed with data from a national survey of faith based social service coalitions that consist of 656 organizations. They created scales that measure service religiosity, staff religiosity and organizational religiosity. For each of the category they developed a different set of metrics. For instance, distribution of religious materials to the service recipients and helping clients to join congregations are just two measuring points for service religiosity.

To find out what makes faith based organizations different from secular organizations, Ebaugh et al., (2003) conducted a study that analyzed the differences between secular and faith based organizations that serve the homeless in Houston, Texas. The researchers found that secular and faith based organizations differed with respect to funding sources and preferences of

service provisions, decision making tools and practices, organizational culture, staffing, leadership characteristics and mission statements. The researchers collected data on various aspects of religious involvement and interactions that can possibly play a role in the way services are delivered. In this study, the researcher used the method of above mentioned study to prepare questions in order to measure the role of religion in services provided in nursing homes in Virginia.

A doctoral dissertation study that analyzed the role of religion in substance abuse treatment programs was conducted at Brandeis University (2008). The researcher did 23 site visits, in-depth interviews, and 25 telephone interviews with substance abuse programs in three geographic areas in the United States. Primary respondents of surveys and interviews were executives and direct care staff of service providers, as well as government officials. The study tried to measure items related to the role of religion in substance abuse treatment process and the importance of religion in those organizations that describe themselves as faith based organizations. This mentioned study also helped the researcher of this study to formulate survey questions.

A study undertaken by Mark Ragan (2004) measuring the relative effectiveness of faith based organizations in nursing homes and home health care agencies throughout the United States and a study conducted by Kevin F. Modesto (2006) measured effectiveness of faith based organizations by using administrative data sets in welfare-to-work programs indicated that there were serious shortcomings in findings of studies since the faith factor was not known in neither of these two studies. The methodologies of these two studies and their expressed shortcomings helped to address the possible role of faith in factoring the quality of care.

### **Scope and Scale of Faith Based Organizations**

The research on FBOs have a broad appeal to policy makers and professionals in the field. There is a need for more information to better understand the scope and scale of the

services provided by faith based organizations. It is important for policy makers to know what type of services faith based organizations provide, how they do them, and how effective they are in order to make more comprehensive decisions in framing their work within systematic social service delivery policies. FBOs' service capacities, clients, findings and service philosophies have been of great interest to researchers and policy makers with enactment of the Charitable Choice Initiative (Zanis and Cnaan, 2006; Joshi et al., 2008; Fischer, 2008; Clerkin and Gronbjerg, 2007).

Kearns et al., (2005) argued that FBOs, which are incorporated independently as 501(c)3 tax-exempt organizations, are comparable to their secular counterparts in many respects. Kearns et al., conducted the research survey among 237 community service organizations in two counties of Pennsylvania, Pittsburgh and Allegheny County. They found that a significant number of services that are delivered by organizations describing themselves as FBOs are comparable to secular organizations in terms of size, funding, management style and program capacity. Their findings indicated that FBOs in Pennsylvania are notably different from their secular counterparts in regard to their extensive use of volunteers, their relatively low engagement in policy advocacy and their comparably low reliance on public funding. Parallel to Kearns et al., in a broader study, Twombly (2002) used a sample size of more than 2000 human service providers, and examined organizational and financial characteristics of religious and secular institutions. The study found that faith-related and secular human service providers have almost identical expenditure patterns, but early on they have different sources of revenue. This study also indicates that faith based organizations are more likely to depend on donor contributions than their secular counterparts. Government grants and contracts are the most significant source of revenue for secular service providers.

Traditionally, faith based organizations have mostly been active in areas where government agencies and secular organizations have been weakly engaged or not visible

at all in delivery of social services. Religious organizations have historically provided services to those individuals and groups who are hard to serve. Church related institutions have played a substantial role in delivery of welfare services to poor families, implementing substance abuse programs for drug addicts, providing shelter for homeless, clothing for poor, soup kitchens for the hungry, health care programs for the sick, education, tutoring, mentoring programs for low income people, domestic violence programs for women and children, and employment related programs for job seekers (Wineburg, 1992; Hodgkinson and Weitzman, 1993; Chang et al., 1994; Mares, 1994; Wineburg, 1994; Sherman, 1995; Carlson-Thies, 1996; Hula et al., 2007).

The attitude of religious and non-religious organizations towards poor individuals and welfare clients is subject of many studies. Research reveals that FBOs cluster their services around basic needs of the poor and needy, such as food, clothing and shelter (Wineburg, 1992; Printz, 1998; Silverman, 2000; Chaves and Tsitsos, 2001; Monsma, 2004; Reingold et al., 2007). A research that provides empirical evidence on the service provision of FBOs for poor individuals was conducted by Reingold et al., (2007). The study collaborated both the recipient side and agency side of welfare services. The researchers compared the attitudes of FBOs with those of non-religious organizations' attitudes by utilizing data from Indiana's randomized welfare reform experiment. The findings indicate that the most disadvantaged welfare recipients are more likely to receive assistance from FBOs than from non-religious organizations.

Congregations and churches are active in addressing a variety of social issues. In his study, Chaves (1999) found that 57 percent of congregations in the US are active in some type of social service activity, but these activities tend to be small in size and operate without the government assistance. McCarthy and Castelli (1998) estimated there are approximately 350,000 churches across the nation. Within this number, the average congregation provides five human service programs and allocates about twenty percent of its income to these social services. There have also been large denominational social service providers, such as Lutheran Social Services,

Catholic Charities, Salvation Army, and Jewish Family Services in operation for a long time in the United States. These denominations receive substantial government assistance for providing social services to the needy. However, in the last three decades, coalitions of congregations have emerged as service providers as well. In this new form of faith based service providers, coalition members who represent more than one particular faith tradition come together to provide a range of social services that are not manageable by a small size, single-faith based group. The research indicates that these coalitions have arisen with the encouragement of national congregations to build collaborative relationships at the local level with local networks and resources in order to address needs of a particular community. National ecumenical and civil rights movements played a role in this new form of faith based social service providers. These new type of coalitions, frequently referred to as interfaith organizations, are more likely to be involved in long term commitments and are more likely to seek government assistance as compared to local congregations acting alone (Bos, 1993; Pipes, 2001; Wuthnow, 1998; Ebaugh et al., 2005; Farnsley, 2000; Cnaan, 1999).

Research studies in the field also suggest that FBOs more frequently undertake projects that address the immediate, as opposed to long term, needs of individuals, largely because their limited resources prevent them from engaging in long term commitments. They address social issues that can be handled by small volunteer groups who donate money and time for a specific, usually short, time period. To overcome this shortcoming of faith based social service providers FBOs not just form interfaith coalitions, but also seek government assistance that is available to them (Salamon and Teitelbaum, 1984; Cnaan, 1997; Devita et al., 1999; Cnaan and Bodie, 2001; Hula et al., 2007).

According to a recent research conducted by Faith Communities Today (FACT), a collaboration of Cooperative Congregational Studies Partnership (CCSP) (2005), about nine out of ten congregations that participated in the study reported that they provide services that range

from cash assistance to crisis counseling to their neighbors in need. About 88 percent of congregations reported that they provide cash assistance to the needy, 85 percent provide food, 60 percent provide clothing, 38 percent provide shelter, 45 percent serve those in need of medical attention, and 46 percent reported took part in crisis counseling. A substantial portion of congregations reported that they are involved in community achievement projects and personal transformation programs as well. Thirty eight percent of congregations indicated that they provide prison ministries, 33 percent provide drug rehabilitation programs, 26 percent engaged in voter education programs, and 8 percent provide immigrant programs.

Similarly, a study conducted in City of Detroit, Michigan, indicates that approximately seven percent of congregations provide a variety of health care services. Twenty seven percent of congregations are involved in charitable activities, such as homeless shelters and soup kitchens on a regular basis. Approximately 10 percent of faith based organizations cooperate with other religious entities or community organizations in joint projects, such as drug abuse programs, housing projects and safety programs. Nine percent of congregations run schools. In the city, over all, about one third of congregations are engaged in some type of social services (Reese, 2004; Hula et al., 2007).

Faith based organizations in the United States receive funding from several sources. The biggest portion of revenues comes from fees charged for services and goods provided. Government grants, contracts and service reimbursement make about 36 percent, while private giving and philanthropy account for about 10 percent of their total revenue. The organizations who compete for government funding are usually big. Small churches and congregations rely primarily on program fees and private donations from members (Raymond, 2001).

The magnitude of donations to religious organizations is tremendous. Religious organizations with tax status of 501(c) 3 received more than 100 billion dollars in 2009 equalling 33 percent of all charitable giving in that year (Giving USA Reports, 2009). Research indicates

that more than 50 percent of Americans contribute to their synagogue, church, mosque or temple. This amount represents about 65 percent of total household giving in the US (Independent Sector, 1993).

In recent years, government money that goes to FBOs has increased substantially. During the Bush administration, funding allocated to FBOs increased substantially. Faith based charities received 2 billion dollars in federal grant funds in 2004. This amount makes up 10.3 percent of total federal grants awarded in the same year, and it is a 21 percent increase of funds for FBOs compared to the previous fiscal year. The White House also encouraged the Federal Department of Health and Human Services (HHS) to establish Compassion Capital Fund (CCF) within the agency to assist FBOs with capacity building in order to compete for federal grants. In fiscal year 2003, Compassion Capital Fund was allocated 32 million dollars in federal funds. In fiscal year 2004, HHS awarded 903 faith based organizations a total amount of 680 million dollars in grant funds. There is no doubt that the White House Office of Faith and Community Initiative has a remarkable role in FBOs' fund increase (Davis, 2008; Theisen, 2005; Farris, Nathan and Wright, 2004; Kramer, et al., 2005).

It is difficult to determine the full extent of federal funding for FBOs. There are many agencies, state and local governments that fund the work of FBOs. It is hard to identify who received government funds since the records usually do not specify affiliation of grantee organizations. What is definitely known is that federal funding for faith based organizations substantially increased during the Bush administration, while the total federal money allocated towards social service programs decreased (Farris et al., 2004; Theisen, 2005).

Despite the increase of federal funding for FBOs, the majority of funding comes from corporations and individuals' charitable donations. Religious organizations received about 88 billion dollars in annual tax deductible donations from foundations, corporations, and individual donors in 2004. Considering that the overall charitable contribution totaled 240 billion dollars,

which was over 2 percent of country's GDP that year, the contribution to religious organizations is the single largest portion, with 36 percent of total giving in the same year. The actual numbers are thought to be significantly higher than these documented numbers for both general contributions and contributions to religious organizations. Tracking givings-donations through government documents is not sufficient enough to ascertain total amounts since there are different ways of giving, such as allowing nonprofit religious organizations or programs to use facilities with no charge and different vouchers for them. In addition, there is terminological confusion in indicating the type of organization that is supported with charitable giving. Since the term "faith based" is often confusing and not clear enough, individuals, corporations, and government agencies are often confused by this term (Ragan, Monteil and Wright, 2003; Davis, 2008; Theisen, 2005; Scott, 2003).

About 83 percent of Americans contributed to charitable giving in 2004. It is estimated that over 75 percent of total charitable giving made in the United States comes from individual donations and it is thought that a majority of that contribution goes to religious organizations. The average amount of money donated to churches by individual donors was 895 dollars in 2004. Data also shows that all religious groups are not equally generous when it comes to charitable giving. Evangelicals gave more generously than all other religious groups to their churches; with 3,250 dollars per donor in 2004. While religious nonprofit organizations mostly rely on individual donations and program fees, about 35 percent of secular nonprofits' revenue comes from government grants. This difference, in and of itself, makes the subject of religious organizations' effectiveness worthy to study (Ragan et al. 2003; Theisen, 2005; Hula et al., 2007).

To minimize dependence on individual donors and government grants that are not always reliable, faith based organizations have been trying to solve their financial strains with entrepreneurial approaches. Some congregations have become involved in business activities by

setting up separate organizations, such as job and entrepreneurial training centers, consulting support, credit unions, cooperative restaurants, operation of franchise restaurants, construction cooperatives, recycling operations, auto shops, print shops, book stores, day care centers, and etc. Large scale entrepreneurial activities by congregations like Allen AME and Abyssinian Baptist Development Corporation are also very well known (Reese and Shields, 1999; Lincoln and Mamiya, 1990; La Barbera, 1992; Mares, 1994; Heim, 1995; Sherman, 1995; Thomas and Blake, 1996; Cisneros, 1996; Walker, 2001; Reese and Shields, 2000).

Beyond their role in addressing individual and community needs, nonprofit organizations and faith based organizations, in particular, contribute to the society in a great deal of social capital that is above all value measurements. Faith and community based organizations provide unique opportunities for Americans to connect and create a sense of membership to a society by volunteering, donating, participating in decision making process on organizations' boards and advocating for particular public policies. This social interaction across the segments of society carries on the traditions and beliefs from generation to generation (Nonprofit Sector Strategy Group, 2002; Coleman, 2003; Putnam, 2000; Cnaan, 2002; Coleman et al., 1988).

### **Role of Religion in Self Regulation and Social Service Provision**

The most intriguing aspect of the effectiveness issue in faith based organizations is their religious character. For both opponents and proponents of the Charitable Choice Initiative, the effectiveness issue of faith based organizations stems from ideological thinking more than anything else. Opponents believe that more religion in public life is simply not good for the country. They believe that religion is divisive and anti-progressive. For them, religion should be a private matter. Proponents believe that religion is vital for individuals and the very fabric of the society. They often argue that values and the legal system in America originated from a Judeo-Christian context over the centuries. Proponents argue that moral concerns and a sense of civic duty are promoted by religion. To them, religion plays a significant role in lives of

Americans and it should not be separated from the daily life of individuals and communities (Cisneros, 1996; Thomas and Blake, 1996; Hula et al., 2007; Ragan, 2004; Carney, 2003; Fischer, 2003; Chaves, 2004; Carlson-Thies, 2004; Bender, 2003; McConnell et al., 2005).

The search for a theoretical ground that can put the possible role of religion in provision of social services in perspective has gained momentum. Various theories have been employed by researchers to explain the possible role of religion in faith affiliated organizations' work in different areas of social service provision throughout the country. Social Capital Theory, Human Capital Theory, Theory of Spirituality and Public Service Motivation Theory are some of the common theories that have been used to explain the effectiveness of faith based organizations (Modesto, 2006; Iannaccone, 1990; Harden, 2006; Miller, 2002).

After reviewing the current literature on the subject, the Theory of Self Regulation, which was adopted most recently by McCullough and Willoughby (2009), is the most appropriate theory for us to explain the phenomena of faith based organizations' social service delivery. The focus in the following section will be on the religious aspect of self regulation, both for individuals and organizations, by providing extensive examples of empirical studies. The particular goal here is to lay out the role of religion in organizations' performance with different approaches.

As indicated in Chapter I, Theory of Self Regulation was originally conceived by Carver and Scheier (1998) to explain the function of self regulatory feed-back loop that helps the organism maintain control through reference values and standards as it attempts to meet its intended goals. With the help of determined standards the individual is able to compare his or her behaviors to the reference values and then make adjustments in thoughts and actions that will create feed- backs to match the set standards. There are always discrepancies in reducing feedback loops. A well motivated person takes actions to reduce discrepancies between the current status and the reference values. Individuals experience different affects based on the

nature of the feedback that they receive. The nature of the affect might be negative, positive or neutral depending on level of discrepancy or its existence at all. The model of Carver and Scheier provides an explanation of how individuals transform their behavioral approaches towards achieving various goals in life. The major problem in adjusting the behaviors to meet the standards is lack of control that may occur along the way (Carver, 2004; Bland, 2008).

Adjusting behaviors to achieve goals depends on the level of discrepancies between determined goals and the ingredients of self regulation. As discussed in Chapter I, there are four components of self regulation. For the self regulation to occur, there should be clearly defined and reasonably determined standards. Ambiguous and uncertain standards cause lack of behavioral changes that are necessary for self regulation to take place. Doubt about the determined goals weakens motivation for change. Keeping track and monitoring is the second essential element of self regulation. Comparing the current self with the projected future self has a substantial role in adjusting behaviors (Higgins, 1987; Carver and Scheier; 1998; Bland, 2008). Willpower or self regulatory strength is the third ingredient of self regulation. The willingness to change requires both a physical and psychological strength that fuels an individual in the pursuit of higher standards (Vohs and Heatherton, 2000; Muraven and Baumeister, 2000). Motivation is the fourth ingredient of self regulation. Strength of motivation has an influence on the level of self regulation that takes place. A lack of motivation will likely result in a failure to make the behaviors that are necessary to live up to the standards (Baumeister and Vohs, 2007). The stronger the ingredients the more successful the self regulation. Levels of individual's beliefs and determination to selected goals force the person to alter his/her behaviors (Higgins, 1987).

Self regulation is described by McCullough and Boker (2007) "as the process by which a system uses information about its present state to change that state." Barkley (1997) defined self regulation as, "... any response, or chain of responses, by the individual that serves to alter the probability of the individual's subsequent response to an event and, in doing so, functions to

alter the probability of a later consequence related to that event.” Baumeister and Vohs (2004) describe it as “how a person exerts control over his or her own responses so as to pursue goals and live up to standards.” Though stated differently, these three definitions clearly describe self regulation as the change of behaviors for determined better ends or desired goals.

Religious cognition might be automatically activated in the face of temptation as a form of self control, which is also influenced by personal traits. Even though religion has a transformational power on behaviors, to accept religious teachings and follow rituals require willpower. One cannot extract religion from the domain of psychology. While religion forces its guidelines on an individual’s self control mechanism, it in fact dictates behavioral and psychological processing that begins and ends in the brain (Barkley, 1997; McCullough and Willoughby, 2009; Bergin, 1991; Hill, 2005; Bland, 2008).

All religions, particularly Abrahamic religions (Christianity, Judaism and Islam) oblige followers to uphold sacred laws, obey defined standards, and present a social ideal for personal behavior. For its true followers, religion regulates the entire life of individuals and their social environment. For a religious person, it is not only about attending sermons in the temple, church, synagogue or mosque, it is a way of life that defines standards by specifying what believers ought to drink or eat, with whom they can have sex, and how they treat other human and non-human creatures and themselves. Religious standards require believers to sacrifice many pleasurable worldly experiences; therefore nonreligious individuals might think that religious people display poor emotional well-being. However, studies indicate that religious people usually display fewer ruminative thoughts, higher levels of positive emotions, and lower levels of inner conflict compared to nonreligious people. Moreover, empirical evidence shows that religious coping is widespread among members of different religions around the world (Koenig 2009; Neyrinck et al., 2006; Ryan et al., 1993; Smith et al., 2003; Koole et al., 2010; Meahr and Karabenick, 2006).

Religions define standards of right and wrong guiding the behaviors of its believers in daily lives. Deep meanings and values in monotheistic religious philosophy, which usually transcend individual representations and practices, lead to the internal satisfaction of pious individuals. The notion of self-sacrifice, such as putting the self secondary, giving priority to others even when the rewards are given, taking on the burden of others' needs and desires for the sake of doing good and appreciating a higher power are ultimate philosophies that religions, particularly monotheistic religions promote. The expectation of reward to be given in exchange for "good behaviors" by God in different forms both in this life and in the after life induces internal peace. Religion promotes a purpose driven life where an individual knows at the beginning that every event and happening is a test for the individual, and these tests are the means to attain heaven or hell. Failure of self control during the test that begins at teenage years when an individual starts to understand and differentiate right from wrong and ends with the demise of the person resulting in harsh consequences that no believer wishes to face (Geyer and Baumeister, 2005; Weber, 1993; McGuire, 2002; Nursi, 1957). Religion, with its broadly defined teachings, seizes individuals and groups in its determined realm of life with its traditions and fundamental laws. Whether one likes it or not, religion is a phenomena that the majority of the world population is actively engaged in one way or another, in daily life today (Koenig, 2009; Smith, 2007).

The fundamental purpose of religions is to create a type of individual who is mature and well in both soul and body. Religious sermons teach an individual to be at peace with himself / herself while peacefully engaging in social activities. In this sense, religion can help individuals to transform thought patterns, feelings and actions of followers who are created in a way that inherently tend to commit bad rather than good. In particular, monolithic religions define the everyday existence of their adherents. Religion is not a matter of part time engagement of individuals that practice whenever he or she wishes. On the one side religion promises good

things as a result of blessed behaviors, while on the other side it threatens followers for not fulfilling their obligations completely. In the process of fulfilling the traditions and scripts of religion, a person implicitly or explicitly self regulates since personal ambitions and desires are most of the time in conflict with holy rules (Kuhl, 2000; Frankl, 1966; Koole et al., 2010; McCullough and Willoughby, 2009).

People usually think that God or the higher power holds individuals responsible for their actions. In fact, particularly monolithic religions hold followers responsible for not acting on the behaviors that they are supposed to demonstrate at a time when there is a need for good to prevail. For instance, in Islam, advising people to do good and preventing them from committing bad is considered a duty that, without its implementation by some people in a society, the entire society will be held responsible by Allah. In this regard, Islam is not a religion that is solely about individuals, but a religion that addresses social issues and holds individuals responsible for not working for determined good to prevail. Again, in Islam, Friday prayer, which is equivalent of Christian Sunday prayer and Jewish Saturday prayer, should be conducted with at least three people present. Otherwise the prayer can not be observed. Similarly, almsgiving is one of the five pillars of Islam. To give two and half percent of annual savings to poor and needy is an individual prayer as well as a social prayer. In the same way, religious Christians and Jews practice the almsgiving duty with different percentage of their annual savings. These examples and many more tell us that religion is not only a personal matter but also a social phenomena (Weber, 1993; McGuire, 2002; Kamal-ud-Din, 2010; Finn, 2006).

Religious traditions and texts may promote prosocial life styles. Stories like the Good Samaritan and the Golden Rule of Biblical verse of Matthew 7:12, teaching of Judeo-Christian tradition, such as, “Love thy neighbor as thyself” (Leviticus 19:18), and Jesus’ admonition that, “Inasmuch as ye have done it (act of charity and kindness) unto one of the least of these my brethren, ye have done it unto me.” (Matthew 25:40) have emotional and behavioral impact on

followers of Christianity (Ellison, 1992). Similarly, Islam and Judaism promote prosocial activities as well. For instance, the Prophet Mohammad once said that, “He who sleeps contentedly while his neighbors sleep hungry did not believe in my message” (el-Hazimi, unknown date). In another instance, the Prophet Mohammad said that, “The best of people is one from whom good accrues to humanity.”(el-Hazimi, unknown date). A religious life that is guided by these teachings is expected to set exemplary behaviors.

This notion rightfully leads us to the question of whether religious people are nice people. Some observers have suggested that religious people are not always as nice as one would expect them to be. Some social-psychological research links different elements of religiosity with socially undesirable attitudes and many antisocial behaviors, such as prejudice, authoritarianism, violent approaches to interpersonal conflict, retribution toward criminals, and physical punishment of children (Kohn, 1989; Gorsuch and Aleshire, 1974; Webster and Stewart, 1973; Wilcox and Jelen, 1990; Greven, 1990). Some other research that investigated the links between religiosity and prosocial attitudes and conduct directly could not reach a clear conclusion (Batson and Ventis, 1982). A research conducted by Ellison (1992) used data from the 1979-1980 National Survey of Black Americans, which is the latest among the above mentioned studies found that respondents surveyed that indicated engaging in frequent devotional activities, such as prayer and bible studies were reported to be more open and less suspicious, and more enjoyable to interview than their less religious counterparts. The research also revealed that those respondents who indicated that religion serves as an important source of moral guidance were also viewed as more outgoing, more interested and more open than those respondents who indicated that religion does not serve as an important source of moral guidance.

As empirical evidence reveals, religion promotes self regulation that affect behavioral outcomes. Self control is not only an area of interest for psychology and religion; it is also an area of interest for public policy today. There are many benefits to find out ways and means of

self control and its contribution to public goods and services. Imagine the interconnectedness between religion and psychology that results in powerful self control mechanism and that mechanism contributes positively to efficiency, effectiveness and safety in general. If there is a meaningful and constructive relationship between self control and religion, then the subject of faith based social service delivery will contribute greatly to the new approaches of public policy implementations. Betterment of individuals and institutions through religiously enhanced self control might lead for better outcomes (Bland, 2007; McCullough and Willoughby, 2009; Brown et al, 2009).

Religion's role as a self regulatory power in program outcomes is a subject of fairly recent research in public policy. Most of the research has not focused on the religious character of organizations, but their performance as faith affiliated service providers. Without knowing the role of religion in the program and service provided, the approach to find out effectiveness based on a name affiliation is incomplete. To document the possible role of religion in service provided is not an easy task to fulfill. It is time consuming and costly to collect data. It is usually beyond the ability of researchers that study in the area of public policy. Lack of reliable data sources and difficulty collecting data are substantial constraints for researchers to measure role of religion in performance of service providers (Ferguson et al., 2006; Ragan, 2004; Kennedy and Bielefeld, 2003; Fisher, 2003). More importantly, the secular ideology's dominance of science and research has ignored possible role of faith factor in service provision for a long time. Faith has been seen as a personal matter that cannot be the subject of research, particularly in policy matters (Smith, 1996; Iannaccone, 1991; Iannaccone, 1995). The subject, in most part, had been ignored by researchers until enactment of the Charitable Choice Initiative.

Even though history of empirical research on the role of religion on individual's and groups' behaviors does not go far back, the history of research on association of religiosity on performance of programs and organizations are even quite at an infant stage. There are few

studies that compare effectiveness of FBOs to secular organizations. There are even fewer research studies that compare performance of FBOs to conventional service providers in healthcare, particularly in nursing homes. Debate over the issue of religiously affiliated organizations' performance among researchers was prompted by the Charitable Choice Initiative. The initiative was signed into law with a notion that the "army of compassion" does a better job than traditional secular organizations in delivering social services, especially in serving those who are hard to serve. Therefore, to ascertain whether religion or religious affiliation makes any difference in performance of social service providers, studies have focused primarily on the organizations-programs that provide services to hard-to-serve people, such as prisoners, homeless, drug or substance users, unemployed, adolescents, and etc. (Monsma, 2003a; Kennedy, Sheila and Bielefeld, 2002; Johnson, 2002; Cnaan and Boddie, 2006).

Since there are not many exemplary studies in the scope of this study, the review of literature here is expanded to similar studies in other fields. A doctoral dissertation study conducted among 321 prisoners from twelve states in the U.S. concluded that, "Inmates who report high levels of participation in religious programs and report high levels of belief in the supernatural are less likely to be arrested after release regardless of whether they are classified as being religious or nonreligious" (Sumter, 2000). In a similar study, researchers conducted a self reported questionnaire in order to find out if an inmate's religiousness was related to prison adjustment and number of disciplinary actions that a particular person faced. The questionnaire was given to a non-random sample of 769 inmates in 20 prisons from twelve states. The study's findings indicated that there is significant relationship between inmate religiousness and multiple measures of inmate adjustment to the prison rules and regulations. The findings revealed that increasing level of religiosity is positively correlated with high levels of in-prison adjustment and negatively correlated with the number of times that inmates were placed in disciplinary confinement for violation of prison rules (Clear and Sumter, 2002). Religion, in this sense,

increases level of obedience to the rules and regulations.

A nonprofit religious ministry to prisoners, Prison Fellowship, commissioned a study in the 1990s to find out if there is any relationship between religious programming at prisons and recidivism. The study found no discernable difference between Prison Fellowship attendees and others. However, the study determined that those inmates who were placed at high levels in the program's bible studies were less likely to be arrested in the first year of release. Byron Johnson (2004) extended the same study with additional approaches. He increased the follow-up period from 1 to 8 years. He concluded that those who participated in Prison Fellowship program's bible studies and were active (placed at high level- there are also low and medium levels) while in prison were significantly less likely to be rearrested at 2 and 3 years of release.

An extensive research was conducted among 46 substance abuse service providers in Seattle, Washington, and Portland, Oregon to find out whether there is any difference exists in terms of effectiveness between religiously involved or related organizations and secular service providers. Smith, Bartkowski and Grettenberger (2003) focused on five different aspects of organizations' functions. They reviewed service providers' organizational structure, administrative aspects, environmental realities, funding sources, and programmatic tailoring. All of these aspects initially focused on exploring existence of any religious element and its role (if any) in the organization. They did site visits, and extensive interviews with staff, patients, and their families. They found no substantial difference between faith intensive organizations and other service providers in terms of achievement or effectiveness.

Similarly, a doctoral dissertation study found no substantial difference between faith-based substance abuse treatment programs and secular ones (Davis, 2008). The researcher conducted twenty-three site visits and twenty-five telephone interviews in three different geographic areas in the U.S. After using secondary data, making site visits, observations, and conducting interviews, the researcher concluded that substance abuse treatment programs are

imitating each other. There is isomorphism among the programs whether they are secular or faith based.

A study of high school students in Boston, MA found that church related or religion related schools have improved students' outcomes and reduced dropout rates significantly (Coleman, 1988). These and similar studies, speculate that religion and subsequently religiously affiliated organizations increase motivation of students and give them a more powerful sense of purpose in their pursuits. The concept that God created everything with intent allows the followers of the religion to act, both consciously and subconsciously, in a responsible way within the parameters of predetermined purposes.

An important study that compared relative effectiveness of welfare to work programs in Los Angeles, CA. was conducted by Monsma and Soper (2003). The study categorizes service providers as government run, for-profit, nonprofit/secular and faith-based programs (in two categories- segmented and integrated). The data collected from 17 programs that represent 5 categories in three-wave survey of clients. The data gathered about clients' demographic characteristics, employment history, education level, and level of personal optimism. Six and twelve months later interviews repeated with same clients. Along with interviews of clients, the researchers did site visits, observations, and interviews with key staff members. They particularly focused on degree of religiosity in the programs. The programs where religious elements were implicit and not a defining character of the organization were categorized as, "segmented"; the programs where religious elements were explicit and incorporated into the manner of service delivery were categorized as, "integrated" faith based programs. The study found that each category of program has some strengths and weaknesses. Generally, no significant differences existed among program types, faith-based integrated programs, those that explicitly religious, were found to be most effective among the program types at increasing clients' sense of hope and optimism, with 80 percent of clients having more optimistic attitudes

towards future. Optimism and hope, without doubt, are very important psychological drives in finding a job and maintaining employment.

Two other studies on the subject of welfare-to-work programs found no significant difference between faith-based and secular programs. Deb and Jones (2003) examined differences in job market outcomes of individuals who received job training from faith based versus secular providers in two counties of Indiana. They collected data on demographic information, type of job training provider, and labor market outcomes for the service recipients over a two and half year period. Their study found that secular and faith based welfare to work programs have the same rates of placements into jobs, same rate on conditional employment, and similar wages were paid to the individuals who received services from faith based programs and secular ones. Modesto (2006) in his longitudinal study, similarly, found no difference between secular and faith based welfare to work programs. His study and other studies on the subject indicate a free market competition that forces service providers to compete with one another to attract clients. This, subsequently, creates a resemblance of programs in terms of both service provision and outcomes. These last two mentioned studies also indicate that, at least, faith based service providers do not perform worse than their counterparts over all.

There is a gradual evaluation of faith related research that has been taking place for some time. As indicated earlier, social and human science researchers' interest in religion began with religion's role on individuals' health and well-being. This interest has evolved to a level today where the role of faith in groups, programs, institutions and even a country's economic performances are being examined in a variety of aspects. Evidence shows that religious beliefs affect not only the psychological state of individuals, but also influence a variety of behavioral outcomes that range from success in school to economic performance at individual, group, program, institution and national levels. Adam Smith, in "Wealth of Nations", posits participation in religious sects could potentially create economic advantages (Iannaccone, 1998;

Anderson, 1988). Guiso et al., (2003) studied the correlation between religious participation and economic outcomes with a survey study that covered 60 countries. The study revealed that religion promotes the development of positive attitudes toward cooperation, the rule of law, and government that are inclined to economic growth. However, they found that religious persons are less tolerant toward women workers and are also less tolerant of other races. The study, though, notes that negative effects differ across denominations in each nation. With a similar goal to ascertain likely role of religion in economic growth at a national level Barro and McCleary (2003) found that religious beliefs positively influenced economic growth. The evaluation of survey data that was collected from 59 countries also revealed that economic growth is negatively affected by church attendance even after controlling for possible reverse causation. Parallel to Adam Smith's notion, Mehanna (2002) found that countries whose dominant religious sect is Protestant inclined to be more open based on measurement of imports as a percentage of GDP than those countries that dominant belief is Catholicism or Islam.

Role of religion in programs and organizations' effectiveness has also been subject of a variety of social and human science studies in recent years. A meta-analysis of research that specifically focuses on effectiveness of faith based organizations was conducted by Ferguson et al. (2006). The research tried to synthesize how effectiveness has been defined and measured by taking the role of religion into consideration in faith based programs. According to their meta-analysis, the authors found that there were seven studies that had been conducted on prisoners up to the date that the research was undertaken. High risk youth were the focus of four studies, while youth and adults with substance abuse problems were taken as subjects of three studies. Welfare recipients were subjects of five studies. Race and gender issues were also subjects of these kinds of studies. According to their research two studies were conducted on African American adults in urban settings and one was conducted on African Americans in rural settings. Latino, African American, and white adults in general were subjects of one research. Adults,

African American male adolescents, minority female youth, and school – aged children were subjects of one study each. There are also four studies that conducted research on service providers, program directors, participants, and key informants as well as organization staff. The variety of subjects and increasing number of research on the subject matter in recent years indicate that scholarly interest in link between religion and social service provision is growing.

Ferguson et al. (2006) indicated that the research studies they reviewed have focused on outcome based evaluation. For the most part, the research in review revealed that program effectiveness is examined in terms of achieving expected client outcomes, rather than focusing on agency or community outcomes of a particular service provider. In their sample size of 29 studies, 26 researches took client outcomes as the main point to evaluate the program effectiveness. The positive change that the programs are expected to make on their clients were evaluated. The study found that faith based programs are overall effective across diverse populations in evaluation. Participation in faith based programs was beneficial according to twenty three studies of twenty nine total studies in the review. The range of positive outcomes was observed in a broad area of service recipients. The research revealed that faith based social services were effective in reducing the homicide rate among youth, reducing recidivism rate among prisoners, increasing self confidence among high-risk youth, transforming the lifestyles of drug addicts positively, improving welfare recipients' situation in regards to employment status, wage levels and optimism about the future, and facilitating health-related behaviors positively among minorities.

The belief that faith based programs are effective in improving prosocial behaviors of highly at-risk individuals is documented by empirical evidences. Research has shown that persons who score high on measures of spirituality and religiosity are more likely to exhibit prosocial behaviors than their less religious and less spiritual peers (Benda and Corwyn, 1997; Johnson, Jang, Larson and De Li, 2001; Evans, Cullen, Dunaway and Burton, 1995; Richard,

Bell and Carlson, 2000; Tittle and Welch, 1983). Parallel to the studies mentioned here, a study was conducted at Ridge House Residential Program in Reno, Nevada. The program is a faith based prisoner reentry program aiming to rehabilitate criminal offenders and improve prosocial behaviors of those newly released. The purpose of the study was to assess the intermediate outcomes of faith based prisoner reentry program by examining how client spirituality related to client and program level characteristics. The study investigated differences between those clients who completed and those who were terminated or gave up, by examining how religious preference, religiosity/spirituality, religious salience, and incarceration's impact on spirituality influenced program completion, satisfaction and perceived progress. The number of subjects that participated in the study was 92. The study found that religious preference was positively associated with progress and satisfaction (Roman, Wolff, Correa and Buck, 2007).

After the Charitable Choice Initiative came into effect, Florida became the first state in the country to dedicate publicly-run one male and one female correctional facility with a faith-based model. The purpose of these two Faith and Character Based Institutions as indicated by the Florida Department of Corrections is to offer a wide range of faith and character based programming to inmates interested in personal growth and character development. The basic goals are to rehabilitate and reintegrate inmates into the community, reduce recidivism, increase institutional security, and enhance restorative justice programming (LaVigne, Brazzell and Small, 2007). A study (LaVigne et al., 2007) was conducted to find out if the programs at the two facilities of Florida Department of Corrections are achieving the intended goals. The study employed both qualitative and quantitative methods to evaluate the program outcomes. Researchers collected data from facility administrations, correctional officers, program staff and volunteers with one-on-one interviews. They also collected data from focus groups with inmates housed in both facilities and analyzed administrative data on the program and general population inmates. The study matched 189 males and 100 females of focus groups that participated in the

faith and character based program with those who did not participate with a categorization that was based on similar personal, demographic and incarceration traits. The study found that, at six months after their release, male inmates that participated in faith based program have lower reincarceration rates than matched comparison group of inmates. The findings indicated that while none of the 189 faith based program male participants were reincarcerated after release within six months, four members of the comparison group were reincarcerated within six months of release. Twelve months after release from prison, the study revealed that the difference between the two groups was not statistically significant. The difference between female groups after release was not statistically significant either at six months, or at twelve months. The researchers note that larger size of groups might give a clearer picture of whether these kinds of programs differ from their secular counterparts in terms of intended program effects.

Research indicates that religion or spirituality may contribute a greater sense of purpose and meaning to work. Davidson and Caddell (1990) concluded that workers who were intrinsically religious were well rewarded at work in terms of pay, benefits and status were more likely than others to view their work as a calling or ministry as opposed to a career or job. Wuthnow (1994) conducted the most comprehensive study on the relationship between religion and economic behavior by using random samples of representative labor force. His findings indicate that one-third of working Americans thought a great deal about how to link their belief more directly with their work. Sixty percent of weekly religious service attendees thought about it a great or fair amount. Wuthnow discusses the fundamental role of faith with regard to work is to provide work with a sense of purpose, rather than to significantly influence workplace decisions and behaviors. He also found that faith or religion has a role in reducing job fatigue or burnout and ethical decisions at the workplace. Wuthnow concludes the relationship between faith and work as religious commitment has come to play a kind of therapeutic role in relation to

economic behavior in postindustrial society; rather than providing guidance, it contributes meaning that makes work more interesting, since for those individuals it has cosmic significance.

The role of religious faith or spirituality in the jobs of low-income mothers of young children was examined by Sullivan (2006). The research was conducted among forty-four low-income mothers of young children in the Boston area. The researcher conducted in-depth interviews with the women and asked them if they thought faith or spirituality had any connection with their work. Two-thirds of the women in the study connected their faith with their daily work lives, even though just a few attended church regularly. The primary role of religious faith in the workplace for these low-income women was coping with the stresses of their work. Over half of them expressed that prayer and belief in God helped them with work-related stress. The study argues that some women believed their faith increases their job performance. The research, overall, found that the primary role of religion is not to contribute meaning, but rather to aid in surviving the low-wage service sector workplace by creating sense of hope.

Recepients' perception of service providers is very important. Many studies have attempted to ascertain whether FBOs are as effective as nonsectarian service providers in terms of accepted economic performance measurement techniques, but not many studies have been conducted to find out recepients' perception of service provider organizations or programs. An important research that addresses perception of recipients of service providers' trustworthiness and effectiveness was conducted by Wuthnow, Hackett and Yang Hsu (2004). The research was undertaken among 2077 residents of low-income neighborhoods in Pennsylvania. The respondents were asked about kinds of service organizations from which they received assistance and their perceptions of effectiveness and trustworthiness towards those organizations. In the study, researchers compared perceptions of service recipients of faith based organizations, nonsectarian organizations, government agencies, hospitals, and churches by taking into account

respondents' varying portfolios of service providers. The findings of the study reveal that recipients of faith based organizations have common traits with those of public welfare department recipients in terms of financial need and scope of family problems, and they significantly differ from service recipients of religious organizations. The results also suggest that recipients' perceptions of the effectiveness and trustworthiness of their service providers are lower when they have received assistance from public welfare agencies and higher when they seek assistance from congregations. Seeking assistance from faith based organizations or secular organizations has no significant affect on their perceptions of effectiveness and trustworthiness.

Two important studies that evaluate effectiveness of faith based organizations in job training programs are worthy to mention here. Briggs (2007) studied the effect of FBOs and community based organizations on standard labor market outcomes in Los Angeles County. The study finds that FBOs are more effective at ensuring that the service recipients find employment when they complete the program compared to all other program types. The research also reveals that FBOs are the lowest cost per person based on direct Workforce Investment Act allocations in Los Angeles County. The research suggests that public funding of such organizations might also be a worthwhile investment. With a different approach, Bartkowski et al., (2007) studied job readiness and employment outcomes of one religious program and compared the findings with the national average. The researchers examined intake and follow-up survey data collected from a welfare to work or job readiness program that was sponsored by the Church of Jesus Christ of Latter-Day Saints. The study examined sociodemographic structure and human capital of the clientele served by this particular program. The evaluation of economic outcomes of program participation was conducted. The study found that attendees of this particular program differ in terms of intended economic outcomes compared to their national counterparts, especially with regard to higher stocks of human capital that has a very significant role in finding employment and maintaining it.

As proponents of public-FBO collaboration claim, faith based organizations may be able to demonstrate the same results or improved results as their secular counterparts under same conditions. A study that was conducted on a mentoring program for children of prisoners in Philadelphia reveals that faith based services can adopt secular outcomes measurement approaches from the same program settings (Jucovy, 2003). The Amachi program is a partnership program between secular and faith-based organizations. The research study focuses on modal implementation of the program and mentoring relationships fared over time. The study indicates that Amachi adopted an outcome model that has been used by Big Brothers-Big Sisters (BBBS). Positive results for those mentees that participate in Big Brothers-Big Sisters were previously found to begin after 12 months of engagement in the program. Those who were active in BBBS program after 12 months on average were 46 percent. The same benchmark was used for Amachi and these programs matches who were active 12 months or longer and exceeded engagement in the average BBBS programs, by an average of 62 percent.

The most recent meta-analysis was conducted on comparative research studies that examined effectiveness of faith based and community organizations by Fischer (2008). The research used previous meta-analysis, which were mentioned earlier in this study, in the same scope and extended its search up until 2007 by using ten electronic databases that contain publications and reports in the social and behavioral sciences. It used the search terms, “faith-based”, “community”, and “evaluation” key words together and also “faith-based” and “outcome” key words together. Based on its inclusion and exclusion criteria, the search generated 92 independent studies. Among 92 quantitatively measured outcomes studies, 18 used outcome-based comparative research design that the researcher was originally looking for. Among these 18 studies, 13 had been included in at least one prior meta-analysis review. The author indicates that, six different target populations in total were targeted in 18 of the studies that are analyzed. Prisoners and former prisoners were targeted in eight of these studies, while

welfare clients were targeted in four, substance abusers were targeted in two and elderly were targeted in two. The researcher computed standardized mean effects on the key program outcomes identified by each study's authors. In his evaluation Fisher found that faith based and community organizations are overall more effective than their counterparts. He stresses the modest size of effectiveness and discusses that there is a need for more rigorous research to confirm his finding.

Religion might play a role in reducing crime and criminal behaviors. Stark et al., (1980) studied the relationship between church membership and crime rate in 193 metropolitan areas in the U.S. Their study documented that the greater the church membership, the lower the crime rates in communities. A decade later, Olson (1990) extended the study in all counties in the West, Midwest and Northeast states. In Olson's study, there are both rural and urban communities in chosen areas. The study's findings indicated similar findings with Stark's: Church membership is related to lower levels of crime with slight differences across the regions and denominations. The findings in both of the studies are interpreted by researchers that church membership might have a social control mechanism that reduces levels of crime and criminal act (Evans et al., 1995; McGarrell, Brinker and Etindi, 1999).

Assertions about the relationship between religiosity and criminality are examined with a meta-analysis of 56 studies (Ellis, 1985). The study paid particular attention to how two variables were operationalized in each of these studies. The study, based on the meta-analysis of the studies, identified three religiosity and criminality relationships that were established. Based on the reviewed studies, the best documented relationship is between church attendance and rate of criminal acts. The meta-analysis found that the evidence is plausible between frequency of church attendance and lower crime rates. Secondly, the studies indicated that among the main Western religions, membership to Judaism is associated with lower crime rates, compared to Christian religion membership. The study further reveals that Protestants as a whole have lower

crime rates than Catholics. Thirdly, examination of studies indicated that belief in an afterlife with divine punishment possible among individuals who considered themselves members of an organized religion is associated with lower crime rates.

With the premise that faith based organizations might help to reduce crime rate, a study was conducted in Boston, MA, on the relationship between law enforcement and the Ten-Point Coalition, which is a faith based youth organization (Berrien and Winship, 1999). A sharp decline in youth related violence and crime rate attracted attention in MA. Between 1990 and 1996 the homicide rate in Boston dropped 61.2 percent, from 152 homicides to 59. The rate continued to drop in 1997 to 43 homicides and 35 homicides in 1998. There are arguments that the rate had dropped all over the nation, and it is more related to economic flourishing, and primarily with police tactics than anything else (Kennedy, 1996; 1997; Newsweek, 1998). But, Boston crime and homicide rates were the sharpest drop in the entire nation. The research indicates that in no other U.S. city, did ministers serve important a role in collaborating with law enforcement forces as they did in Boston. The study argues that the Ten-Point Coalition in Boston created a type of umbrella of legitimacy for policy to work under. The relationship between the faith community and law enforcement forces allowed the police to effectively deal with youth violence by focusing and targeting dangerous youth. The researchers conclude that the relationship between a faith based organization and policy ultimately contributed to the significant drop in homicide rates in Boston. The study also suggests that a partnership between faith based communities and law enforcement forces will help reducing crime related activities and give police more legitimacy to conduct their work.

As some examples of studies regarding the role of religion and religious schools on students' performance presented earlier in this study, religious schools' relative performance has been of interest to research for approximately four decades in the United States. There are a number of studies that have examined the performance of children from religious and private

schools compared to those students that attend public schools. Findings indicate that students from religious and / or private schools outperform children who attend public schools in academic achievement criterion (Chubb and Moe, 1990; Coleman, Hoffer and Kilgore, 1982; Lee and Bryk, 1993; Jeynes; 2002a; Gaziel, 1997). Jeynes (2002a) conducted one of the studies of this kind in recent times. By using National Education Longitudinal Survey (NELS) for year 1992, including 18,762 twelfth grade students, the study assesses why students attending religious schools achieve at higher levels academically overall than those students that do not attend religious schools. The study determined reasons that a family typically selects a school for their children to attend. The reasons are usually school atmosphere, racial harmony, level of school discipline, lower rates of school violence, and the amount of homework given to students. Based on school features that scholars often argue that explain big portion of the reason why students from religious schools perform better than public school or students from nonreligious school, the researcher compared religious schools to public schools. The findings confirm previous studies by revealing that religious schools outperform nonreligious schools in each of measured categories.

### **The Effectiveness of Faith Based Programs in Healthcare Related Services**

As referenced earlier, FBOs' activities in healthcare related services has a long history in the United States. FBOs host a variety of health promotion programs in areas such as; screening for and management of high blood pressure, weight loss, general health education, diabetes, smoking cessation, cancer prevention, nutritional guidance, geriatric care, mental health care, substance abuse programs, and long term care (Thomas et al, 1994; Wilson, 2000; Smith et al, 1997; Kumanyika and Charleston, 1992; Schorling, 1997; Earp and Flax, 1999; Duan et al., 2000; Davis et al., 1994; Cowart et al., 1995; Bernhart et al., 1998; DeHaven et al, 2004). Nonetheless, there had not been much interest from academia until the Charitable Choice Initiative came into existence. Researchers and policy makers alike started to pay closer attention

to this area of healthcare. The interest, clearly, is about whether FBOs are effective in their service delivery. Having sufficient knowledge of performance of FBOs that are in healthcare related services may produce beneficial outcomes for both community health and healthcare sector in general (Ferrer, 2001). If religion infused or religiously related service providers perform better, then their secular counterparts may benefit from that particular approach as well.

A study that examined the health promotion and disease prevention activities of FBOs found that faith based programs can improve health outcomes. DeHaven et al. (2004) reviewed published literature on health programs in FBOs to determine effectiveness of religiously affiliated programs. After a systematic review of inclusion and exclusion process, researchers examined 53 related articles that reported program effects. Overall, they found that significant effects reported in the studies in review. They, particularly, identified that FBOs are effective in reducing cholesterol and blood pressure levels, weight, and disease symptoms, and increase in the use of mammography and breast self-examination. Authors concluded that there is a need for more research that evaluates FBOs' program outcomes in healthcare.

Researchers have begun to examine the relationship between performance and ownership - affiliation of organizations in healthcare in recent years. Type of ownership and affiliation might be important in terms of how service is provided (Ben-Ner and Ren, 2007; White et al., 2006; Salling, 2007; Amirkhanyan et al., 2009; DeHaven, et al., 2004; Ragen, 2004; Luksetich et al., 2000). A study conducted in Minnesota among 369 nursing homes compared the structure and performance of for profit, nonprofit, and local government affiliated nursing homes. 105 of 369 nursing homes responded to the survey. The study found that for profit nursing homes serve more residents than nonprofit and local government nursing homes. On a number of quality parameters, however, for profit nursing homes provide lower quality services, especially those services that are less visible to residents and their families. Focusing on resident well-being rather than profit maximization, nonprofit and local government nursing homes provide high-

quality products. The study also indicates that there is an isomorphism among organizations but still differences are statistically significant (Ben-Ner and Ren, 2007).

With a similar premise, White et al., (2006) studied Catholic hospital service offerings to ascertain whether Catholic ownership matters. In their study, the researchers compared services offered by Catholic hospitals to those of public, other nonprofit, and investor-owned hospitals with a sample size of 1,644 from hospitals all over the United States. To compare differences among hospital types, the measurement was conducted on three service categories: Services creating access to care, stigmatized services, and compassionate care services. The study reveals that Catholic hospitals offered more stigmatized and compassionate care services than for profit hospitals, and more stigmatized services than government owned hospitals. The study also notes that, there is an isomorphism among Catholic hospitals and other nonprofit hospitals in terms of number of compassionate, stigmatized and access services provided.

Amirkhanyan et al., (2009) joins the debate that was sparked by the Charitable Choice Initiative with a study, which compares relative performance of church affiliated nursing homes to secular nursing homes that provide services throughout the United States. By using two measures of organizational performance, service quality and access for impoverished clients, the study attempts to compare service outcomes of 11,877 nursing homes based on their institutional affiliation. Unlike Ragen's study (2004), Amirkhanyan et al., found no significant differences between church related nursing homes and secular nursing homes. Ragen (2004) found faith affiliated nursing homes were more effective on some accounts, such as inspection deficiencies and complaint deficiencies. His empirical evaluation indicates that church affiliated nursing homes have six percent fewer inspection deficiencies and 23 percent fewer complaint deficiencies compared to other nonprofit nursing homes throughout the country. It should be noted that both Ragen and Amirkhanyan et al., failed to provide implications of religious elements that might have an influence in service provided. They both utilized CMS' data sets

that provides no information about how much a nursing home is secular or religious other than self-reporting of organizational affiliation that indicates if a nursing home is church affiliated or has any other affiliation that is specified on the provided form.

Parish nursing programs' impact on faith communities was examined in a qualitative research in southwest Idaho (Brudenell, 2003). The research was conducted among twenty-four members of thirteen congregations, representing eight denominations with parish nurse / health ministries, including parish nurses, parish nurse coordinators from two medical centers, pastors, and hospital chaplains. After extensive interviews, review of documents, and on-site observations, the researcher concluded that collaboration between faith communities and health organizations were successful in terms of attaining specific health goals, integrating faith and health practices, promoting health, increasing accessibility to health care and congregational activities, and contributing positively to the quality of life in congregations and the larger community.

An evaluation of economic efficiency of nonprofit nursing homes conducted in Texas found no difference in the quality of care provided among nonprofit nursing homes (Knox, Blankmayer and Stutzman, 2006). The study found private secular nonprofit nursing homes to be the most cost-efficient, followed by religiously affiliated, then government-run nursing homes. In terms of allocation efficiency, the study found that private secular facilities are substantially more efficient than religiously affiliated nursing homes, while government and private secular facilities have similar overall economic efficiency.

Focusing on a narrow segment within the healthcare sector, this study tries to examine if religious elements have any impact on service provided in nursing homes. Reviews of nursing literature indicate that there is a high level of interest in religion and spirituality in various nursing specialities, and the nursing profession has recognized that spirituality plays an important role when people are faced with health problems. Studies have documented that nurses

usually incorporate spirituality in their personal and professional life, participate religious activities and services, and with overwhelming majority pray privately for their patients. Furthermore, studies indicate that nurses make the vast majority of patient referrals to hospital chaplains with 88 percent of referrals, followed by 8 percent from physicians and 4 percent from social workers (Kilpatrick et al, 2005; Taylor, Amenta and Highfield, 1995; Koenig et al., 1991).

From empirical evidence, it is known that nursing profession has close ties to religious and spiritual belief. As a motivational force, religion might have a role to play in how care is administered by nurses and other health care providers. A more compassionate and relentless effort that is stimulated by religious beliefs and practices may have a potential to change the resident outcomes and overall organizational outcomes in nursing homes. The next chapter will present, in details, how the role of religious involvement in nursing homes is measured. While laying out the methodology of the study, two measurement criterion will essentially be examined: Religion or religious involvement in nursing homes, and program outcomes - performance.

## **CHAPTER IV**

### **RESEARCH DESIGN AND METHODOLOGY**

Empirical evidence concerning the role of religion in an individual's well-being is well documented (Johnson, Li, Larson and McCullough, 2000; Johnson, Larson, Jang and Li, 2001; McCullough and Willoughby, 2009). Similarly, studies revealed that religious commitment can enhance levels of well-being, emotional adjustment and academic attainment (Brudenell, 2003; Kim, 2001; Ferguson et al., 2006). Contrary to studies that have revealed religion's potential positive influence on individuals and groups, research on faith based organizations have generally treated the faith element in organizations and programs as a contextual factor rather than a programmatic component. As indicated throughout this study, multiple research studies have concluded that faith based services are effective in their service provisions in different service areas.

Government policy changes in favor of faith based organizations have triggered public discussions regarding effectiveness of faith affiliated organizations. These discussions have led to research stemming from the notion that the faith element might have a quantifiable role in social service provision. However, there are few credible studies correlating the faith component's possible role in organizational performance (Fischer, 2003; Ferguson, 2006). It is important to determine the faith element in faith based services. Demonstrating the role of faith and providing empirical evidence will allow both policy makers and practitioners to evaluate and compare program outcomes between church affiliated organizations and secular organizations (Ragan, 2004). This, in return, might have an impact on consumer choices and policy implementations in the future.

In order to address a more needed evaluation of faith based organizations' performance and the possible role of their faith character contributing to their service provision this chapter will explain a methodological approach to ascertain the possible role of faith in service outcomes

among nursing homes in the state of Virginia (VA). The chapter presents the research questions, hypotheses, independent and dependent variables, unit of analysis, data sets, data measurement, data coding and data analysis plan in details.

### **The Research Questions and Hypotheses**

**This research is guided by the following two questions:** 1- Are nonprofit, faith-based nursing homes more effective in providing Medicare and Medicaid services compared to their secular nonprofit and for-profit counterparts?

2- Are more religious nursing homes, regardless of their ownership type affiliation, more effective in providing Medicare and Medicaid services compared to their less religious counterparts?

Through this research and interpretation of data sets, the following hypotheses will be examined:

**H1a:** Religion related (church-affiliated) nursing homes are more effective than their secular counterparts in improving their long-stay patients' physical and mental health.

**H1aa:** Regardless of ownership type affiliation, more religious nursing homes are more effective than their less religious counterparts in improving their long-stay patients' physical and mental health.

**H1b:** Religion related (church-affiliated) nursing homes are more effective than their secular counterparts in improving their short-stay patients' physical and mental health.

**H1bb:** Regardless of ownership type affiliation, more religious nursing homes are more effective than their less religious counterparts in improving their short-stay patients' physical and mental health.

**H2a:** Religion related (church-affiliated) nursing homes are more effective than their secular counterparts in CMS health inspection deficiency results.

**H2b:** Regardless of ownership type affiliation, more religious nursing homes are more effective than their less religious counterparts in CMS health inspection deficiency results.

**Variables:** Measuring the relative effectiveness of faith based nursing homes in providing social services is the primary purpose of this study. Effectiveness of faith based nursing homes is measured by comparing CMS inspection outcomes and patient outcomes for FBOs with their secular counterparts, which includes government nursing homes, nonprofit secular nursing homes and for profit nursing homes. CMS' data sets will be correlated to the organizational religiosity questionnaire data, which will collect data about the religious or faith element in nursing homes in Virginia (VA), USA. Effectiveness criteria are determined by CMS as it sets some basic standards for nursing homes. Dependent variables (DVs), independent variables (IVs) and control variables (CVs) are described in detail in three separate tables below.

**Table 1: Dependent Variables, Their Definitions and Sources**

| Dependent Variables (DVs)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Definitions and sources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <p><b>Resident Characteristics</b><br/> <b>(Resident characteristics are measured based on two separate categories of measurement.)</b></p> <p><b><u>Chronic Care Quality Measure</u></b></p> <p><i>(This variable includes quality measures of the following; Percent of long-stay residents given influenza vaccination during the flu season, Percent of long-stay residents who were assessed and given pneumococcal vaccination, Percent of residents whose need for help with daily activities has increased, Percent of high-risk residents who have pressure sores, Percent of low-risk residents who have pressure sores, Percent of residents who were physically restrained, Percent of residents who are more depressed or anxious, Percent of low-risk residents who lose control of their bowels or bladder, Percent of residents who have/had a catheter inserted and left in their bladder, Percent of residents who spent most of their time in bed or in a chair, Percent of residents whose ability to move about, in, and around their room got worse, Percent of residents with a urinary tract infection, Percent of residents who lose too much weight.)</i></p> | <p>Data regarding residents' physical and clinical conditions and abilities are collected at specified intervals by nursing homes. This data provides us with the tool to measure patient outcomes. After eliminating two variables, there are 17 variables included in this measure.</p> <p>The data is known as Online Survey, Certification and Reporting (OSCAR) data, which nursing home administrations report via online submission.</p> <p>The National Quality Forum (NQF) recommends and CMS endorses two categories of nursing home quality indicators. These indicators target both the chronic and post-acute care populations served by nursing homes. CMS (2010) describes these two categories separately as; "Chronic care (CC) refers to those types of patients who enter a nursing facility typically because they are no longer able to care for themselves at home. These patients (or residents) tend to remain in the nursing facility anywhere from several months to several years. The chronic quality measures were calculated on residents with a full or quarterly MDS in the target quarter." The original CMS data has 14 characteristics under Chronic Care Quality Measures.</p> <p>OSCAR data only gives percentages up to 90 % and any score above 90 percent (90 +) is coded as 90 %. Since the variance and range of all of these percentages vary greatly, fractional rank percentages, which take each case's percentile rank in the distribution of a variable which is basically very similar to reporting z-scores in the form of percentiles was chosen to compute these 6 out of 13 variables into one variable because only 6 of these variables constituted a reliable scale. That is to say, if a nursing home has the highest score in one of these items it is assigned the value of 100 and if it has the lowest score it is assigned a value of one. At the end, these fractional rank percentiles are added up into a new variable and the total score is divided by the number of items included in the calculation of the new variable. OSCAR provides "Chronic Care Quality Measures" of the last quarter and the average of the last 3 quarters. Since, the data of the 3 quarters provides information about more nursing homes and since CMS also uses data collected in the last 3 quarters data in their nursing home compare web site, the data about the last 3 quarters is used to calculate the "Chronic Care Quality Measure" variable.</p> |

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| <p><b><u>Post –acute Quality Measure</u></b></p> <p><i>(This variable includes quality measures of; Percent of short-stay residents given influenza vaccination during the flu season, Percent of short-stay residents who were assessed and given pneumococcal vaccination, Percent of short-stay residents with delirium, Percent of short-stay residents with pressure sores.)</i></p>                                                                 | <p>This study utilizes the CMS chronic care quality measure data between the dates of 1 / 1 / 2010 through 9 / 30 / 2010</p> <p>The second category of patients is described as “Post-acute care (PAC), which refers to those types of patients who are admitted to a facility and typically stay less than 30 days. They are also referred to as “short-stay residents”. These admissions typically follow an acute care hospitalization and involve high-intensity rehabilitation or clinically complex care. The post acute QMs were calculated on any patients with a 14-day PPS MDS in the last six months.” The original CMS data has five characteristics under Post-acute Quality Measures.</p> <p>Post-acute quality measures are calculated the way the chronic care quality measure variables are calculated in this study. The variable is created by computing 4 items which constituted a reliable scale. This study utilizes the CMS post-acute quality measure data between the dates of 10 / 1 / 2009 through 9 / 30 / 2010.</p>                                                                                                                                                                                                                                                                                                                                                                             |
| <p><b><u>Inspection Outcomes</u></b></p> <p><b><u>Health Inspection Deficiency</u></b></p> <p><i>(Includes eight subcategories that are measured in annual health inspection. The eight categories are: Mistreatment Deficiencies, Quality Care Deficiencies, Resident Assessment Deficiencies, Resident Rights Deficiencies, Pharmacy Service Deficiencies, Environmental Deficiencies, Nutrition Deficiencies and Administration Deficiencies.)</i></p> | <p>The CMS' OSCAR data includes some types of inspection deficiencies and complaint deficiencies. There are basically two types of inspections: Annual Health Inspection and Annual Fire Safety Inspection. Complaint inspections are also conducted based on complaints included in either type of inspection mentioned above based on their categories. This data set helps to estimate how well a nursing home is managed. After eliminating those variables that are not observed enough to analyze statistically, eight variables are employed as part of created dependent variable.</p> <p>The information is gathered by inspectors who do site visits and make sure that Medicare’s minimum quality standards are met. Over 180 different items are included in health inspection process, but not all of these items are presented in the data set that is available for public use. Health inspections take place once a year on average, but inspections may be conducted more often if a nursing home is performing poorly. This is the only source of information that comes from trained inspectors who visit each nursing home to review the quality of care, inspect medical records, interview caregivers - administrators and talk to residents and, their families about their care. Federal surveyors monitor the state surveyors’ work to enforce compliance with national standards in their work.</p> |

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|  | <p>Eight health inspection deficiencies are used in measurement for this study since the other inspection deficiencies (Fire and Safety Deficiencies and Complaint Deficiencies) did not apply or are not observed in sufficient numbers to allow statistically significant analysis at nursing homes in VA. OSCAR's starring system is used to weight the scope and severity of each inspection deficiency. Therefore, each inspection deficiency was assigned a value based on its scope and severity. Since many of the nursing homes have more than one inspection deficiencies, these scores are computed into a new variable to determine the total health inspection deficiency scores. Only the deficiencies found in the last visit of nursing homes are included in the calculation of this variable. The oldest of these visits was in June 2008 and the latest one was in March, 2011. Therefore, health inspection deficiency data in this study covers dates between 2008 and 2011.</p> |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Table 2: Independent Variables, Their Definitions, Sources and Level of Measurements**

| <b>Independent Variables (IVs)</b> | <b>Definitions, sources of data, level of measurement and data coding</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Church related nursing homes       | <p>This independent variable groups nursing homes based on their church or religious entity affiliation. The survey questionnaire for this study has a question inquiring directly into the type of ownership of nursing homes in the state of Virginia. Also, CMS' OSCAR data provides info about each nursing home's affiliation. These two data sets will be compared based on their accuracy. This data will be coded '1' or '0'. The level of analysis is nominal. The church related nonprofit nursing homes variable will be included in the regression modal as a measure of the type of ownership. Since this research particularly compares church related nursing homes to all other types of nursing homes, other dummy coded type of ownership variables will be used for data exploration purposes.</p> |
| For profit nursing homes           | <p>This independent variable groups nursing homes based on their affiliation- ownership type. The survey questionnaire for this study has a question inquiring directly into the type of ownership of nursing homes in the state of Virginia. Also, CMS' OSCAR data provides info about each nursing home's affiliation. These two data sets will be compared based on their accuracy. This data will be coded '1' or '0'. The level of analysis is nominal.</p>                                                                                                                                                                                                                                                                                                                                                      |
| Secular nonprofit nursing homes    | <p>This independent variable groups nursing homes based on their affiliation- ownership type. The survey questionnaire for this study has a question inquiring directly into the type of ownership of nursing homes in the state of Virginia. Also,</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            | CMS' OSCAR data provides info about each nursing home's affiliation. These two data sets will be compared based on their accuracy. This data will be coded '1' or '0'. The level of analysis is nominal.                                                                                                                                                                                                                                                  |
| Government nursing homes   | This independent variable groups nursing homes based on their affiliation- ownership type. The survey questionnaire for this study has a question inquiring directly into the type of ownership of nursing homes in the state of Virginia. Also, CMS' OSCAR data provides info about each nursing home's affiliation. These two data sets will be compared based on their accuracy. This data will be coded '1' or '0'. The level of analysis is nominal. |
| Organizational religiosity | Overall organizational religiosity of nursing homes. Survey data that will be collected for this study will be coded as 1 = yes and 0 = no answers. A scale of religiosity ranging from 0 to 18 is created by combining these 18 variables into one variable and computing it. Higher scores in this scale indicate higher levels of religiosity. The level of analysis is an interval scale.                                                             |

**Table 3: Control Variables, Their Definitions, Sources and Level of Measurements**

| <b>Control Variables (CVs)</b>             | <b>Definitions, sources of data, level of measurement and data coding</b>                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of residents for each nursing group | Total number of residents for each group. CMS' OSCAR data sets. Level of analysis is interval level.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Occupancy rate for each nursing group      | The total number of beds is divided by the total number of residents. CMS' OSCAR data sets. The level of analysis is interval scale-percentage.                                                                                                                                                                                                                                                                                                                                                                        |
| Hospital affiliation                       | This control variable indicates whether the nursing home is hospital affiliated. Coded as 1= Located within a hospital, and 0= Not located within a hospital. CMS' OSCAR data sets. The level of analysis is nominal.                                                                                                                                                                                                                                                                                                  |
| Chain affiliation                          | Organizational network affiliation verses independence is taken into account. Coded as 1=yes and 0=no. CMS's OSCAR data sets. The level of analysis is nominal.                                                                                                                                                                                                                                                                                                                                                        |
| Market concentration (herfindahl) index    | Each nursing home's share of all occupied beds in a county is used to calculate the Herfindahl Index. Squares of the shares of each nursing home in a given county are added and multiplied by 100 to find the Herfindahl index score of each county. For example, if there are two nursing homes in a county and the first nursing home hosts 80 percent (0.8) of all of the nursing home residents in the county and the second one hosts the remaining 20 percent (0.2), Herfindalh index is calculated as follows: |

|                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                            | $[(0.8 * 0.8) + (0.2 * 0.2) = 0.68]$ and $[0.68 * 100 = 68]$<br>Herfindalh index ranges from 0 to 100, in which higher scores indicate higher levels of market concentration and vice versa. CMS' OSCAR nursing homes compare data. The level of analysis is an interval scale.                                                                                                                                                                                                            |
| Poverty (county level)                     | This control variable is the level of poverty (proportional) at the county level. US. Census website ( <a href="http://www.census.gov">www.census.gov</a> ) provides estimated county level poverty data from the American Community Survey. Data for the year 2009 was used for this research. This data gives the percentages of the total population of counties which have income levels below the official poverty thresholds. The level of analysis is an interval scale-percentage. |
| Presence of organizational resident group  | This control variable aims to provide information about the presence of organized resident groups or family-led groups that have a say in a nursing home. Coded as 1=yes and 0=no. CMS' OSCAR data sets. The level of analysis is an interval scale-percentage.                                                                                                                                                                                                                            |
| Percentage of Medicare reimbursed patients | This control variable provides information about type of reimbursement for a nursing home in terms of payment type by patients. CMS data sets. The level of analysis is an interval scale-percentage.                                                                                                                                                                                                                                                                                      |
| Percentage of Medicaid reimbursed patients | This control variable provides information about type of reimbursement for a nursing home in terms of payment type by patients. CMS data sets. The level of analysis is an interval scale - percentage.                                                                                                                                                                                                                                                                                    |
| Percentage of privately paid patients      | This control variable provides information about private payment method for a nursing home in percentage. CMS data sets. The level of analysis is interval scale-percentage.                                                                                                                                                                                                                                                                                                               |
| Staffing hours                             | This control variable provides information about ratio of total nursing staffing hours to resident per day. "Total staff hours" was calculated by adding the numbers of (1) RN, (2) LPNLVN and (3) CNA hours per resident per day. CMS's OSCAR staffing data. The level of analysis is interval scale - numbers.                                                                                                                                                                           |

**The Unit of Analysis** for this research is each individual nursing home certified by federal Department of Health and Human Services in Virginia, USA.

## **DATA SETS**

Two data sets will mainly be utilized in the process of measuring relative effectiveness of religiously affiliated nursing homes in Virginia: Secondary data that is collected by Centers for Medicare and Medicaid Services (CMS) on a regular basis and survey data that is going to be collected from all nursing homes registered with CMS in Virginia. The main data sets for this study come from CMS. As discussed in Chapter I, there are two different measurement categories in CMS' data sets that are collected from all registered nursing homes throughout the country: 1) Resident characteristics - data regarding residents' physical and clinical conditions and abilities are collected at specified intervals by nursing homes. This data provides us with a tool to measure patient outcomes. The data is known as Online Survey, Certification and Reporting (OSCAR) data, which is reported by nursing home administrations via online submission. 2) Inspection deficiencies - the collected data includes some types of inspection deficiencies and complaint deficiencies. This data set helps us to understand how well a nursing home is managed. Inspection deficiencies have potential to affect patient outcomes and overall performance of nursing homes.

### **The Secondary Data**

Nursing home quality measurements are calculated based on Minimum Data Set (MDS), which is resident assessment data that nursing homes regularly collect from residents. The MDS is a standardized resident assessment instrument that collects detailed demographic, clinical and treatment information. The quality measures for each facility are reported as the percentage of nursing home residents in that facility with the clinical condition measured (e.g., percentage of residents with pain, pressure sores, etc., which worsened or healed following acceptance at the facility) (Medicare Quality Improvement Community website, 2010).

The information about nursing homes comes from three sources: Health inspections, staffing and quality measures. Based on the 'State Operations Manual' prepared by CMS, the

health inspection rating contains information from the last three years onsite inspections. These inspections include both standard surveys and any filed complaint survey. The information is gathered by inspectors who make site visits and assure that Medicare's minimum quality standards are met. Over 180 different items are included in the health inspection process, but not all of these items are presented in the data set that is available for public use. Health inspections take place once a year on average, but inspections may be conducted more often if a nursing home is performing poorly. This is the only source of information that comes from trained inspectors who visit each nursing home to review the quality of care, inspect medical records, interview caregivers, administrators and talk to residents and, their families about their care. Federal surveyors monitor the state surveyors' work to enforce compliance with national standards in their work.

The quality measure rating contains information on nineteen different physical and clinical measures for nursing home residents. For instance, information is gathered about the prevalence of pressure sores or changes of residents' mobility. This data informs as to how well a nursing home cares for its residents' clinical and physical needs. This category of information is provided by nursing home administrations for all current residents. It should be noted that these inspections try to measure whether the nursing homes meet certain minimum standards. The results of inspections do not indicate the ideal nursing home settings.

While collecting nursing home data, CMS requires nursing home administrations to indicate their organization's type of ownership. Twelve different categories exist. In the category of for-profit are: Individual, partnership and corporation; in the category of non-profit are: Church-related, non-profit corporation and other non-profit; in the category of government: Federal, state, county, city, city/county and hospital district. This ownership classification in and of itself poses a risk of being answered inaccurately. In fact, Ragan (2004) indicated in his research after checking the accuracy of the 'Church-Related' ownership type from five states the

numbers increased by 74 percent compared to CMS's data. That is why, in the survey of nursing homes in Virginia, each nursing home's affiliation will be asked different questions to properly determine the affiliation.

There are 19 sub-groups regarding resident characteristics in original CMS data sets that are collapsed into two DVs in this study as indicated in Table 1. CMS collects data on various characteristics of nursing home residents. In the data sets that are made publicly available, there are initially two quality measures, which provide information about resident characteristics. There are 14 characteristics mentioned in CMS data sets as long stay quality measures or Chronic Care Quality Measures. To make the data sets manageable for analysis, after eliminating one variable, 13 variables are collapsed into Chronic Care Quality Measure. In the original data sets, there are also five resident characteristics mentioned as short stay quality measures or Post-Acute Quality Measure. After eliminating one characteristic from the original data as explained in the following, four of resident characteristics are collapsed into the Post-Acute Quality Measure variable. Table 1 explains sub-categories in parenthesis for each created variable.

These data measures are intended to provide information about patients' physical and mental health and whether their ability to perform basic daily activities improved during their stay in a nursing home. These data sets help consumers, their families and researchers to compare nursing homes' level of service quality. It ought to be reiterated that although these measurement criteria do not give the ideal nursing home setting, they provide the public with minimum standards for service. The level of quality can be determined by comparing nursing homes outcomes providing the same type of services in the same area.

Two quality measures regarding resident characteristics are eliminated in this study's analyses. The two variables are: *Percent of residents who have moderate to severe pain* and the *percent of short-stay residents who had moderate to severe pain*. These eliminations bring the

number of sub-categories that will be collapsed into two resident characteristics down to 17. The reason for the elimination of these two variables is based on CMS' explanation of the variables. As CMS indicates, comparing these two variables' percentages differs from other measures because the percentages may mean different things (2010). CMS indicates that even though the lower percentages in these two measures are better, this might not be the case always. If a nursing home does a better job checking the residents for pain, that nursing home could attract higher percentage of patients since it does better job, or some of the patients for religious, cultural or personal reasons might refuse to take pain medication that increases the percentage of that particular nursing home on these two variables.

The CMS inspection deficiencies data is about complying with rules and regulations at a minimum level determined by federal and a state government. The information provided through various inspection measures gives us a "snap shot" of care particular to a nursing home. It is expected that certified nursing homes meet the minimum standards designed to protect residents at all times. The standards are determined to cover a whole host of subjects that range from proper management of medications, protecting residents from physical or mental abuses and inadequate care, to the safe storage and preparation of food and other nutrition needs (CMS, 2010).

As CMS indicates, health inspectors are trained and there is at least one trained nurse in each inspection team. The health inspections take place once a year on average. However, if a particular nursing home is not performing as it is expected; the inspections may be conducted more often. Using CMS' guidelines for inspection, state agencies' inspection teams look into many aspects of life in the nursing homes, including the care of residents and the process used for the care, how the staff and residents of nursing home interact, the nursing home environment, residents' clinical records. Besides, inspection teams interview caregivers, administrative staff,

and some residents and their families about their life in the nursing home.

Fire safety inspections are among many items that are reviewed by inspectors. Fire safety specialists evaluate whether a nursing home complies with Life Safety Code (LSC) standards that are determined by the National Fire Protection Agency (NFPA). This inspection covers a host of fire protection concerns that are related to construction, protection, and operational features designed to provide safety from fire, smoke, and panic that are likely to happen at a place where elderly and disabled people live.

CMS explains what health and fire safety inspections mean in determining the outcomes of a particular nursing home (CMS, 2010). During the inspection process, if an inspection team finds that a nursing home does not comply with standards, the team issues a deficiency citation in its report. If a nursing home has no deficiency citation, it means that that particular nursing home met the minimum standards. It should be noted that inspection deficiency citations do not identify well-performing nursing homes. Based on the reported deficiency citation's severity and seriousness to cause potential harm, CMS may take a variety of actions including assessing a fine, denying payment to the nursing home, assigning a temporary manager, or installing a state monitor. After all, if the nursing home does not correct the cited deficiency, Medicare has a right by law to terminate its agreement with the nursing home. This is a serious action, since it means the nursing home is no longer certified to provide care for those patients who have expenses paid by Medicare and Medicaid. If this happens, the patients with Medicare and Medicaid are moved to a certified nursing home.

There are three types of inspection deficiencies reported in CMS' data sets: Health inspection(s), annual fire safety inspections and complaint inspections. The CMS' data sets name severities of inspection deficiencies, grade them and make proper recommendations. In the measurements of inspection deficiencies, this study will not just measure the number of

deficiencies, but indicate how severe they are as well. After all, deficiencies have potential to affect the residents' well being or institution's service life. Citation of deficiencies may cause the closing of the institution or loss of funds as mentioned above. In any of these cases, inspection deficiencies are important to measure in this study because they may affect the outcome of service provided by nursing homes.

Staff rating of CMS data measurement is an independent variable that has a great role to play in overall performance of a nursing home. Again, as CMS indicates, staff rating data contains information about the average number of hours of nursing care provided to each resident each day (CMS, 2010). This measurement is sensitive to the level of needs for residents in different nursing homes. For instance, a nursing home serving residents with more severe needs is expected to employ more nursing staff than a nursing home serving residents whose needs are not as severe. The quality ratings on this measure compare the overall number of staff to the number of residents and the number of staff who are trained nurses. CMS indicates that quality is generally better in nursing homes where the ratio of staff to residents is high. The limitation of staffing ratings is that this data comes from nursing home administrations just two weeks before the inspection. Since it is a self reporting data, it may have some deficiencies in its accuracy.

CMS staffing data lists these staff profiles: Registered Nurse (RN), Licensed Practical Nurse (LPN), Licensed Vocational Nurse (LVN), and Certified Nursing Assistant (CNA). It converts the staffing hours reported into a measure that shows the number of staff hours per resident per day. The CMS data reports staffing hours per resident per day by type of staff, and all staff combined as a total. In the data report, then, CMS divides the average amount of time worked per nursing staff each day by the number of residents. Even though there are no set regulations that lay out best staffing levels in nursing homes, there are minimum standards that

are put in place by federal government, which require nursing homes to have at least one registered nurse for at least eight straight hours a day, seven days a week, and either a registered nurse or licensed practical nurse / licensed vocational nurse on duty 24 hours per day. Certified nursing assistants provide care to residents 24 hours per day, seven days a week. It is obvious that some nursing homes might require more nursing staff because of the conditions of their residents. The federal government does not mandate any rule to states requiring them to have additional staffing requirements.

### **Making Conditions Equal**

Since health conditions of residents of nursing homes play a role in nursing home patient outcomes, CMS tries to equalize the conditions for all nursing homes by excluding some residents with certain health conditions from the measure. Including some extreme conditions in the calculation could unfairly alter the score since some nursing homes unavoidably will have these types of residents. CMS explains (2010) that, for instance, “the percent of long-stay residents whose need for help with daily activities has increased’ measures how many residents need more help with daily activities now than they did at the time of their last assessment. This measure does not include residents in a coma since they already need the most help with their care. If residents in a coma were included in this measure, nursing homes that have more residents in a coma could have lower (better) scores. Using exclusions in this case makes it easier to compare a nursing home that has more residents in a coma to other nursing homes that have fewer.”

### **The Survey**

The survey questionnaire conducted in the nursing homes in Virginia does not intend to measure performance; it rather intends to discover impact of the religious element in the service provision of all nursing homes. The questionnaire seeks answers to subjects, such as, the affiliation of the organization, the source of finance, the administration's service philosophy, the hiring philosophy, presence of any religious element in service delivery, if there is a chaplain on the staff payroll, any statue or symbol of any religion or sect displayed explicitly in the nursing home and any religious activity that involves nursing home staff and residents. The questionnaire is intended to be as short as possible so as to increase the chance of response rate by minimizing the amount of time that the responder must spend on answering vital questions for the purpose of this study only.

While the CMS' data sets help to compare the performance of service providers in the same sector, the survey data that this researcher will collect is intended to provide information about the role of the religious element, if there is any, in the service provision. Credible research has tried to measure organizations' religiosity in three aspects: 1- Involvement of religion in service provided, 2- Staff religiosity and 3- organizational religious affiliation (such as board members affiliation, church affiliation of institution, management's religious affiliation, religious wording of the mission statement, etc.). Therefore, the questionnaire for this study is prepared to measure these three aspects of nursing homes in Virginia based on the guidance of studies that were discussed in details under the title "What is a faith based organization" in Chapter III of this study.

### **Conducting the Survey**

The survey for this study will be conducted among all nursing homes that are registered with the federal and the state government in the state of Virginia, USA. There are 287 registered

nursing homes in VA. The survey will be a web-based survey. Studies indicate that this method increases response rate and it is easy and less expensive in comparison to other survey methods (Nardi, 2006). The link to the questionnaire will be sent by e-mail to nursing home administrators, marketing directors or some members of the management team. Most of the e-mail addresses were obtained from nursing home web sites. Those nursing homes that do not have a web site will be contacted by phone to ask for an e-mail address or a fax number. Respondents will be directed to an internet link so as to access the web site hosting the survey. The internet-based survey will not only make it feasible, both economically and time-wise, to conduct the questionnaire, it also will help with instant coding of the data. The survey method will help to eliminate a frequent source of error, the human factor of coding data manually (Nardi, 2006; O'Sullivan et al., 2003).

At this point, it should be indicated that site visits to nursing homes will be conducted before the questionnaire is given its final shape. Site visits will be made to several nursing homes which represent each group included in the data analysis in this study. The site visits allows the researcher to become familiar with the environment in which prospectus survey responders work and spend most of their time. It may also help with grasping terminology used in a particular working environment (Seidman, 2006; Corbin and Morse, 2003). The site visits to nursing homes will provide opportunity to observe different types of nursing homes with different affiliations. Through interaction with administrators, the surveyor seeks to grasp a sense of the questionnaire's relative feasibility and applicability in the nursing field, because the questionnaire is originally based on studies that focus on different aspects of various religious nonprofit service provisions. Seeing the nursing home environment, talking to people who work and live there may help to restructure survey questions (if needed) and better understand the subject as a whole before the initial survey is conducted. Subsequently, visiting nursing homes

as a researcher may possibly utilize over all analysis of "effectiveness issue" in a more sound way.

A pilot study is also going to be conducted before the survey questionnaire is presented to the institutional review board for approval. A pilot study rehearses the research plan and analysis. It helps a researcher to analyze questionnaire's wording and the sensitivity of the responses. The pilot study will also enable procedural practice in order to identify potential problems along the way (O'Sullivan et al., 2003; Nardi, 2006). The outcome of the pilot study may lead to modification in the survey questionnaire and instructions. Based on CMS' categorization of nursing homes, a few nursing homes from each group, a total of twenty, will be contacted for the pilot study. Since there are 287 nursing homes to be contacted for the initial survey in Virginia, the pilot survey will be conducted in a different state in order to maintain the original number of the survey population for the initial survey. The state of North Carolina is chosen to conduct the pilot study.

During the research process and through interaction with nursing home umbrella organizations in Virginia and nationwide organizations in Washington, DC, it was pointed out that nursing homes are very busy with daily activities, keeping records and filling out state and CMS' forms constantly. Therefore, it seems that it will be difficult to get a good response rate. Yet, every effort will be made to increase the response rate. If it is needed, multiple e-mails will be sent to remind the potential responders in nursing homes administrations to respond the questionnaire. Since CMS provides addresses and phone numbers of nursing homes in VA on its web site, phone calls will be made to those nursing homes that have not responded to the survey and e-mails.

Studies indicate that usually 20 to 30 percent of people who receive survey questionnaires return them right away. Mailing and phone calls can bring the percentage up to 50 or more depending on time committed and effort made to increase the response rate. Response

rate under 60 or 70 percent may compromise the integrity of the target population. A response rate over 70 percent for a survey is considered an excellent rate. Response rates between 40 to 50 percent are common for surveys that form the basis of information about public attitudes and behaviors. There are some academic journals that publish articles utilizing survey methods with a minimum of a 50 percent response rate. However, there are also published articles in academic journals with 25-30 percent response rates (Nardi, 2006; The Robert Wood Johnson Foundation, 2010; American Public Opinion Research, 2008). A meta-data sample study that consists of 199 internet base surveys found average survey response rate at 32.52 percent (Hamilton, 2009). In general, there is no consensus among researchers regarding an acceptable response rate. However, there is a consensus that the response rates to surveys have been declined all over the world in recent times.

### **Protection of Human Research Subjects and Ethical Issues**

Due to the involvement of human subjects in this study, approval of the Institutional Review Board (IRB) prior to conducting the initial survey is required. The final version of the questionnaire will be presented to the Institutional Review Board of Virginia Commonwealth University for approval. In the introduction of the survey, at the top of the questionnaire, participant nursing homes will be informed about purpose of the study. The instructions will also indicate that participation is completely voluntary and that the privacy and confidentiality of responders will be protected. However, since the subjects of the survey are organizations, not individuals, the potential harm is minimal in regard to individual privacy. Nevertheless, all means will be utilized to protect confidentiality of information provided. The names of nursing homes will not be mentioned in the findings and discussion parts of this study. The survey data will not be shared with any individual or organization, and it will only be used for the purpose of this study.

## DATA MEASUREMENT

The CMS nursing home data is measured in two different categories: 1) Resident characteristics: Data regarding residents' physical and clinical conditions and abilities are collected and submitted to state and federal government at specified intervals by nursing homes. Characteristics include such items as "residents who were physically restrained" and "residents who were more depressed or anxious." 2) Inspection deficiencies: The collected data includes some types of inspection deficiencies and complaint deficiencies. The CMS data sets originally include 19 resident characteristics. However, as explained above, two study characteristics are eliminated for the purpose of this study. For each characteristic, after eliminating nursing homes for which data is unavailable, the average percentages of residents with the measured characteristics are calculated. Then, the statistical significance of the differences for four basic groupings is tested: a) Church-related nursing homes, b) for profit nursing homes, c) other non-profit nursing homes and d) government nursing homes.

Inspection outcomes and resident characteristics are also correlated with the religious element, that is, they are measured by utilizing the survey data set conducted among nursing homes in VA. While measuring the effectiveness of each nursing group, some other independent variables, as indicated above, will be calculated alongside the religious element measurement. The roles of various independent variables on the dependent variables are measured. The classification of ownership type or affiliation will facilitate the performance comparison of church-related nursing homes with the other three groupings. One important point here is that CMS eliminates extreme cases from the data processing in order to bring measurement conditions of each service provider close to one another, since service recipients' conditions are different at the time of check in. Therefore, the quality measures are risk adjusted by taking into consideration the characteristics of patients while scoring the agencies performance.

To compare data gathered from nursing homes in Virginia, the SPSS program will be

used. Six hypotheses will be tested to measure relative effectiveness of religiously affiliated nursing homes. In order to test the hypotheses H1a, H1aa, H1b and H1bb, two dependent variables will be analyzed: Chronic care quality measure and post-acute quality measure. These two variables measure patient outcomes in two different categories. In order to test hypotheses H2a and H2b, the dependent variable "health inspection deficiency" will be analyzed. This variable measures the number of health inspection deficiencies and their level of severity for each nursing home. Regression analyses (both OLS and logistic regression) can be used to inquire into the effects of all types of independent variables. Nevertheless, logistic regression can only be used if the dependent variable is dichotomous or dummy - coded as "0" and "1" (Haggstorm, 1983). However, all three dependent variables studied in this research are at interval level, which means that Logistic regression cannot be used. As a result, OLS (Ordinary Least Squares) regression is chosen as an efficient model so that it can better answer the research questions of this study.

OLS is considered a model to fit the research design of this study not only because this method allows studying the relationships between the types of independent and dependent variables, but also because OLS has several advantages over other statistical methods that were considered for this research. For example, OLS provides statistical measures about the percentage of variation in the dependent variables explained by the variations in the independent variables. In addition, OLS provides measures of the relative effects of each independent variable compared to other independent variables included in the models. If needed, OLS can also be effectively used to test the effects of interaction variables (Gujarati, 1992; Wonnacott and Wonnacott, 1985).

On the other hand, one has to be cautious when using OLS regression because OLS is a statistical model which provides accurate measures if the assumptions of the model (i.e.; Linearity, Homoscedasticity and Constant variance) are met. That is why diagnostic statistics

regarding the assumptions of the OLS will be discussed in the analysis section of this research. Like many other statistical models, OLS results are sensitive to outliers (outlier residuals) (Moulton, 1986; Rao and Toutenburg, 1999). In order to handle this problem, any observed outliers will be transformed or excluded from the analysis. Before presenting and discussing OLS Regression analysis results, preliminary descriptive statistics such as frequency distributions of dependent and independent variables as well as cross tabulations of these variables will be presented and discussed. Moreover, correlations between and among the independent and the dependent variables will be checked for possible collinearity issues.

### **Data Coding and Analysis**

As described above, this study focuses on three dependent variables including (1) the number of Health Inspection Deficiencies, (2) Chronic Care Quality Measure and (3) Post-acute Quality Measure. There are basically two areas of deficiencies in CMS data sets: Health Inspection Deficiencies and Fire Safety Deficiencies. The CMS data reports only 9 cases of Fire Inspection deficiencies. However, 2 of these 9 reported deficiencies belong to one nursing home and five belong to another nursing home, which indicates that only five nursing homes in the state of Virginia had fire safety deficiencies. That is why fire safety deficiencies will not be taken as an analyzable variable. However, the data reports that 114 Nursing homes in the state of Virginia had Health Inspection Deficiencies. That is why this research will only focus on Health Inspection Deficiencies when it looks at the number of reported inspection deficiencies.

This first dependent variable (Health Inspection Deficiency) will be created by computing all health inspection deficiency items into one variable ranging from 0 (zero) to a maximum number. The value 0 (zero) indicates that the agency did not fail in any areas and the maximum number (will be determined for each nursing home during the analysis) indicates that the agency failed in all [maximum number] areas of inspection.

The second dependent variable Chronic Care Quality Measure and the third dependent variable Post-acute Quality Measure are also variables created by computing a number of variables into one variable. However, these variables are created by taking the averages of initial variables as cut points. The first of these two variables, namely the Chronic Care Quality Measure will be created by taking the mean averages of the 13 variables indicated in Table 1.

If the “*percent of residents whose need for help with daily activities has increased*” at a nursing home and it is higher than the average of all of the nursing homes included in this research, - it will be coded as 1, otherwise it will be coded as 0. All 13 variables listed will be recorded in the same manner and these 13 variables will eventually be computed into a new variable (Chronic Care Quality Measure) ranging from 0 to 13. In this new variable, 0 (zero) indicate that the nursing home’s averages of all 13 original variables which are computed into the new variable are lower than the average of all of the nursing homes included in this research. Since higher percentages in the original variables indicate poor conditions, obtaining a score of 0 (lower than the average in all 13 variables) indicates that the nursing home is doing better than the average in all 13 areas. If a nursing home gets a score of 13 from this variable, it indicates that this nursing home did worse than the average of all other nursing homes in all 13 areas. In a more complicated scenario, if a nursing home obtains a score of seven in this new scale, it indicates that this agency did worse than the average in seven areas whereas it did better than the average in the remaining six areas.

Similarly, the third dependent variable Post-acute Quality Measure was created by computing the four variables into a new variable, which ranges from 0 to 4 in which 0 indicates that the agency is doing better than the average in all four areas and 4 indicates that the agency is doing worse than the average in all four areas. Sub-categories of this variable are indicated in Table 1.

Before creating the second and third dependent variables, the reliability of the new

variables will be checked by running reliability and internal consistency tests such as Cronbach's Alpha. With the help of diagnostic tests, the statistical significance of newly created variables will be measured.

The coding of all independent variables including the control variables is described below. The major independent variables (Types of Nursing Homes) will be divided into four dummy variables as described below.

**Table 4: Independent Variables and Their Coding**

| Independent Variables (IVs)            | Coding                                                                       |
|----------------------------------------|------------------------------------------------------------------------------|
| Church related nursing homes (CRNH)    | Will be coded '1' or '0'.                                                    |
| For profit nursing homes (FPNH)        | Will be coded '1' or '0'.                                                    |
| Secular nonprofit nursing homes (SNNH) | Will be coded '1' or '0'.                                                    |
| Government nursing homes (GNH)         | Will be coded '1' or '0'.                                                    |
| Organizational religiosity (OR)        | Overall organizational religiosity of nursing homes ranges from '0' to '18'. |

Church Related Nursing Homes (CRNH) will be taken as a reference group and therefore this variable will be excluded while all other three groups (FPNH, SNNH and GNH) are included in the model. In addition, *Number of Staffing* which is described as ratio of total nursing staff to resident per day will be included as an interval level independent variable (ranges from 0 to 100 %) to the model.

Another major independent variable of this research, *Organizational Religiosity Level*, will also be added to the model as an interval level independent variable. The survey will be carried out at nursing homes in the State of Virginia primarily measuring religiosity levels of the nursing homes. There are 19 different questions included in the questionnaire (see Appendix 1), which directly inquire into the religiosity of the nursing homes. Most of these 19 questions are coded as "Yes" or "No" questions in which "Yes" indicates religiosity. "Yes" will be coded as

“1” and “No” will be coded as “0”. At the end, these 18 variables, without the church affiliated nursing homes variable, will be computed into a single variable ranging from 0 to 18, in which “0” indicates no religiosity and “18” indicates highest level of religiosity.

Moreover, this research will inquire into the effects of the eleven control variables listed below.

**Table 5: Control Variables and Their Coding**

| Control Variables (CVs)                              | Coding                                                                                    |
|------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Number of residents for each nursing group (NOR)     | Total number of residents for each group.                                                 |
| Occupancy rate for each nursing group (OCRATE)       | Total number of beds for each group is divided by total number of residents.              |
| Hospital affiliation (HA)                            | Will be coded as 1=yes and 0=no.                                                          |
| Chain affiliation (CA)                               | Will be coded as as 1=yes and 0=no.                                                       |
| Market concentration (herfindahl) index (HI)         | It is calculated between ‘0’ and ‘1’.                                                     |
| Poverty (county level) (PO)                          | Level of poverty (proportional) at the county level – ranges from ‘0’ to ‘100’ (percent). |
| Presence of organizational resident group (PORG)     | Will be coded as 1=yes and 0=no.                                                          |
| Percentage of Medicare reimbursed patients (PMRP)    | Will range from '0' to '100'.                                                             |
| Percentage of Medicaid reimbursed patients (PMCAIDP) | Will range from ‘0’ to ‘100’.                                                             |
| Percentage of privately paid patients (PPPP)         | Will range from ‘0’ to ‘100’.                                                             |
| Staffing hours (STAFF)                               | Ratio of total nursing staff hours to resident per day.                                   |

The regression modal for each of dependent variables (DVs) can be formulized as;

**Equation 1:**

$$\text{Number of Deficiencies} = \text{Constant} + (FPNH * X_1) + (SNNH * X_2) + (GNH * X_3) + (STAFF * X_4) + (OR * X_5) + (NOB * X_6) + (OCRATE * X_7) + (HA * X_8) + (CA * X_9) + (HI * X_{10}) + (PO * X_{11}) + (MCARE * X_{12}) + (MCAID * X_{13}) + (PORG * X_{14}).$$

**Equation 2:**

$$\text{Chronic Care Quality} = \text{Constant} + (FPNH * Y_1) + (SNNH * Y_2) + (GNH * Y_3) + (STAFF * Y_4) + (OR * Y_5) + (NOB * Y_6) + (OCRATE * Y_7) + (HA * Y_8) + (CA * Y_9) + (HI * Y_{10}) + (PO * Y_{11}) + (MCARE * Y_{12}) + (MCAID * Y_{13}) + (PORG * Y_{14}).$$

**Equation 3:**

$$\text{Post-acute Quality} = \text{Constant} + (FPNH * Z_1) + (SNNH * Z_2) + (GNH * Z_3) + (STAFF * Z_4) + (OR * Z_5) + (NOB * Z_6) + (OCRATE * Z_7) + (HA * Z_8) + (CA * Z_9) + (HI * Z_{10}) + (PO * Z_{11}) + (MCARE * Z_{12}) + (MCAID * Z_{13}) + (PORG * Z_{14}).$$

**In these equations,** abbreviations refer to the independent variables described above and

connotations of  $X_1$  to  $X_{14}$ ;  $Y_1$  to  $Y_{14}$  and  $Z_1$  to  $Z_{14}$  correspond to regression coefficients of each independent variable in each equation. By utilizing these equations, this research aims to explore the relationship between organizational religiosity and the effectiveness of nursing homes. Having three dependent variables will also make it possible to see if religiosity has different effects on three different aspects of institutional efficiency. For example, it is possible that one of the three dependent variables could significantly be affected by institutional religiosity while the others are not. Besides, regression analyses will be utilized to test the strength of the relationship (if there is any) between organizational religiosity and the performance of nursing homes. To simply report that there is a significant relationship between organizational religiosity and institutional effectiveness of nursing homes is not enough to judge the strength of the relationship. OLS regression results will help to explore the strength of any observed relationship between institutional religiosity and the effectiveness of nursing homes.

Adding other independent variables into the equation, including the control variables to the proposed model will help to test if any observed relationship between organizational religiosity and effectiveness of nursing homes will hold after adding these variables. In addition, comparing the standardized coefficients of OLS will reveal the relative impact of all independent variables on the dependent variables of this research. Thus, it will be possible to conclude at the end, whether organizational religiosity is a predictor of effectiveness of nursing homes alongside other independent variables in the formulated equations.

### **Reliability and Validity Issues**

Validity and reliability are important issues that should be dealt with very carefully. Since the main bulk of the data was collected by a federal agency (CMS) the researcher of this study has no control over the collection of those data sets. There are unified types of forms given to nursing homes to gather needed information. Even though the given forms are all the same,

because the information is administrative and self-reported, the collection of data differs from that which is based on the understanding of the reporter. As Mor indicated (2005), differences from institution to institution in reporting data may possibly bring into question the validity of comparisons among service agencies. Another remarkable point here is that the data set is a mixture of both process and outcome. However, once again, it should be indicate that the data sets collected are not solely about patient outcomes; there are administration and facility evaluations in the data sets as well. What is known about the minimum data set (MDS) is its reliability has been repeatedly tested for interrater reliability and results of these test indicated high levels of reliability as measured by kappa (Mor, 2004). Additionally, the measurement technique to be used, OLS (Ordinary Least Squares) regression, is an appropriate measurement techniques believed to produce reliable results.

The instruments used by CMS to collect much of the data, minimum data set (MDS) and Outcome and Assessment Information Set (OASIS) have been criticized by several researchers in terms of validity. It is indicated that there are problems in the correlation of applicable items and the prediction of next step (Mor, 2005; Fortinsky and Madigan, 2004). Moreover, some researchers consistently found that the information in the CMS records did not match the reality observed in the facilities where they conducted research (Schnelle et al., 2004b; Simmons, Babineau, Garcia and Schnelle, 2002). However, it should be said that CMS has been financing many research studies in order to improve its data's quality in recent years.

In the survey data that will be collected for this study, the initial plan is to reach and collect data from all of the nursing homes certified with the federal government in Virginia. The validity and reliability of data sets are checked in various aspects. To mention some of them here, all nursing homes' web sites were checked to collect as much information as possible about each nursing home. This information along with the information provided on the survey questionnaire will be compared. Some control questions that may reveal the possible

discrepancy in answering the questions will be asked to nursing home administrators. There will be phone calls to check if any information that is provided seems incorrect. The questionnaire is prepared with the help of scholars who have done research in the field in order to prevent any bias or blind side from occurring. The survey questionnaire is intended to be brief in order to increase the response rate, but at the same time the researcher tried to collect any information possibly helpful to ascertain the role of faith, if any, in the service provision of nursing homes.

A web-based pilot survey study was conducted to identify potential problems along the way, before conducting the initial survey at nursing homes in Virginia. The purpose of the pilot study is to increase the reliability of the initial survey data. With this notion, the pilot study was conducted among twenty nursing homes in North Carolina. All twenty nursing homes were CMS certified nursing homes. The pilot study sample nursing homes included government nursing homes, for-profit nursing homes, nonprofit secular nursing homes and religious nonprofit nursing homes. Twelve out of the twenty nursing homes responded the questionnaire. Based on many phone calls, e-mail exchanges and given responses to the questions some changes were made to the survey questionnaire. These changes were mainly made to the way that questions are stated in order to prevent confusion in understanding.

The web-based survey will be prepared for each nursing home with its name and directly sent to the administrator(s) in charge of running the program or organization. Among these types of survey studies, there is always some certain degree of doubt as to whether the survey will be filled out by some other persons that are not in control of organization or fully knowledgeable about the organization (Nardi, 2006; O'Sullivan et al., 2003).

The question "Is it measured what is intended to be measured in this study?" is important to be answered. With the current available data sets, an attempt will be made to measure if there is any difference in business performance between religiously affiliated nursing homes and other secular agencies in the same business. The measurement criteria that CMS determined to

measure the effectiveness of these service providers are unique in many ways. The success of these organizations are evaluated by compliance with federal government regulations, such as those that require some certain physical conditions of the building, living conditions of the patients or residents, officially required paper work to operate the business, the patients or residents' health conditions- declined or improved- since they started receiving the services, etc.

It is important to note that this is not a causal study. Rather, this analysis examines differences between factors. Despite its limitations, we must bear in mind that overall, the data set from CMS and the data sets that will be collected from nursing homes in Virginia provide useful information to measure the relationship between the effectiveness and the religiosity of service providers in long term care.

## CHAPTER V

### DATA ANALYSES AND FINDINGS

This chapter will present the data analyses and findings of the hypotheses. Two major data sets, the CMS' data sets and the religiosity data set collected for this study, are analyzed in this part. The chapter first presents descriptive statistics for both the religiosity survey and the CMS data sets. Secondly, the chapter demonstrates diagnostic statistical tables and figures, which show the reliability and the validity of employed statistical method in order to ascertain comparative nursing home outcomes in the state of Virginia. Finally, Ordinary Least Squares (OLS) regression analyses and their diagnostic statistics are presented for each of the stated hypotheses below.

**The analyses presented below respond to the following two questions:** 1- Are nonprofit, faith-based nursing homes more effective in providing Medicare and Medicaid services compared to their secular nonprofit and for-profit counterparts?

2- Are more religious nursing homes, regardless of their ownership type affiliation, more effective in providing Medicare and Medicaid services compared to their less religious counterparts?

The following hypotheses are tested in order to respond to the above stated questions in this chapter:

**H1a:** Religion related (church-affiliated) nursing homes are more effective than their secular counterparts in improving their long-stay patients' physical and mental health.

**H1aa:** Regardless of ownership type affiliation, more religious nursing homes are more effective than their less religious counterparts in improving their long-stay patients' physical and mental health.

**H1b:** Religion related (church-affiliated) nursing homes are more effective than their secular counterparts in improving their short-stay patients' physical and mental health.

**H1bb:** Regardless of ownership type affiliation, more religious nursing homes are more effective than their less religious counterparts in improving their short-stay patients' physical and mental health.

**H2a:** Religion related (church-affiliated) nursing homes are more effective than their secular counterparts in CMS health inspection deficiency results.

**H2b:** Regardless of ownership type affiliation, more religious nursing homes are more effective than their less religious counterparts in CMS health inspection deficiency results.

### **Sample Size and Ownership Characteristics**

Table 6 below shows the number and percentage of nursing homes according to each ownership type with a comparison of two different data sets in the state of Virginia. The OSCAR (Online Survey, Certification and Reporting) data is collected by the Center for Medicare and Medicaid Services (CMS), 'the survey' column indicates data figures which were collected by this researcher, and the 'response ratio' column shows both the number and ratio of respondent and non-respondent nursing homes to the religiosity survey that was conducted for this study. This response column in Table 6 indicates that 24 percent of 287 nursing homes did not respond to the "religiosity survey".

The table reveals that there are a total of 287 CMS certified nursing homes in the state of Virginia. The number of survey participant nursing homes for this study is 218. Therefore, the response rate is 75.9 percent, which is considered a good response rate based on the literature review mentioned in Chapter IV of this study. At this point, it will be helpful to discuss the survey data collection process before analyzing Table 6 in detail. All of the 287 CMS-registered nursing homes in Virginia were contacted for the purpose of this research. The majority of nursing homes were contacted by phone and e-mail requesting a response for the survey

questionnaire. Some of the nursing homes were contacted first by phone and then by fax. Several nursing homes were visited by surveyors who included this researcher and two other surveyors. The surveys were completed in three ways, manually on the hard copy questionnaire when nursing homes were visited, by e-mail and via fax. The data collected by hard copy questionnaire and fax was manually registered. E-mail surveys were automatically registered on a paid service provider web site. Total time spent for the survey data collection was six and a half weeks; from April 20 to June 7, 2011.

**Table 6: Number and Percentage of Nursing Homes by Type of Ownership**

|                            | OSCAR           | The Survey      | Response Ratio  |
|----------------------------|-----------------|-----------------|-----------------|
| Government Related         | 12<br>(4.2 %)   | 6<br>(2.8 %)    | 6<br>(2.1 %)    |
| NPO- Not Church<br>Related | 69<br>(24.0 %)  | 49<br>(22.5 %)  | 49<br>(17.1 %)  |
| For Profit                 | 193<br>(67.3 %) | 134<br>(61.5 %) | 134<br>(46.7 %) |
| NPO-Church Related         | 13<br>(4.5 %)   | 29<br>(13.2 %)  | 29<br>(10.1 %)  |
| Not Responded              | -               | -               | 69<br>(24 %)    |
| Total                      | 287             | 218             | 287             |

Table 6 indicates that according to CMS' OSCAR data there are twelve government related nursing homes, while the survey for this study indicates that there are 6 government related nursing homes. However, it should not be forgotten that there are 218 responses to the survey out of 287 total nursing homes in the state of Virginia. CMS' OSCAR data indicates that there are 69 nonprofit secular nursing homes in Virginia while the survey data for this study shows that there are 49 nonprofit secular nursing homes. As the table clearly indicates, most of the nursing homes are for profit nursing homes, with a ratio of 67.3 percent (193 out of 287 nursing homes) according to CMS' OSCAR data. According to the religiosity survey conducted for this study, the ratio of for profit nursing homes is 61.5 percent (134 out of 218 nursing

homes. The table reveals that there are 29 (13.3 %) church related nonprofit nursing homes according to the survey's findings. This number is greater than the number that is provided by CMS in the same category. As Ragan (2004) indicated there are variations between CMS' data sets and other data sets, particularly when it comes to 'church affiliation' ownership type, since it means different things to different people. Based on CMS' data ownership categorization the national ratio of church related nursing homes is about six percent. Recently, this researcher ran an ownership calculation based on CMS' OSCAR data. OSCAR data indicated that 4.2 percent of nursing homes are categorized as church related nursing homes in the country. Considering these other findings about the percentage of church related nursing homes, our own survey's findings are higher in number. Reliability of church affiliation ownership type is checked in different ways in the survey for this study, including web site check, chain affiliation - being part of same church related organization, and responses given to other related questions that were asked in the survey. Therefore, hereafter, all statistical tests and their interpretations regarding ownership type will be based on the data set that was collected particularly for this study from nursing homes in Virginia.

The Figure 1 below also indicates proportions of ownership types that were reported in the survey for this study.

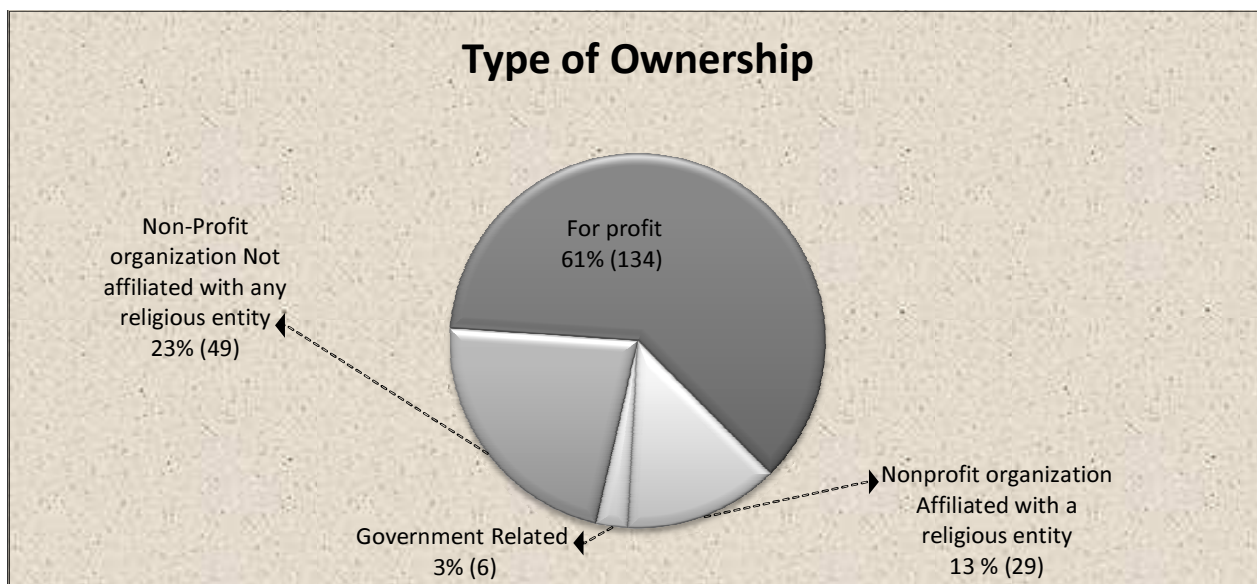


**Figure 1: Proportions of Nursing Homes' Ownership Types**

Responses given to the each survey question by the nursing homes is presented in Table 7 below. The table shows that only about 9 percent of the nursing homes have explicitly religious references in their mission statements, while 13 percent of all responding nursing homes are affiliated with a religious entity, as Figure 1 above also indicates. The same table reveals that over 70 percent of nursing homes in Virginia accept financial or non-financial support, including volunteer help from religious groups or entities. About 31 percent of nursing homes employ a chaplain, and 91 percent of nursing homes are visited by voluntary chaplains or missionaries. Over 95 percent of nursing homes make religious activities, including ecumenical services, available for their residents at nursing homes. The survey results show that over 90 percent of nursing homes apprise their residents of the opportunity to participate in religious activities at the nursing home, or outside of the nursing home at some other venue.

Only five out of 218 (2.29 %) nursing homes said that there is a policy that bans religious volunteer groups' visits to their nursing homes. About 15 percent of the nursing homes use religious values and motivations to encourage their residents to change their behaviors or to cope with health problems. This percentage is higher than the percentage of church related nursing homes.

**Table 7: Responses Given to the Survey Questionnaire**

| Survey Questions                                                                                                                                             |         | YES   | NO    | DON'T KNOW | NA    | MISSING | TOTAL |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|-------|------------|-------|---------|-------|
| Does the mission statement of your organization have any explicitly religious references?                                                                    | N       | 20    | 198   |            |       |         | 218   |
|                                                                                                                                                              | %       | 9.17  | 90.83 |            |       |         | 100   |
|                                                                                                                                                              | Valid % | 9.17  | 90.83 |            |       |         | 100   |
| Was your organization founded by a religious group or entity?                                                                                                | N       | 28    | 177   | 10         | 3     |         | 218   |
|                                                                                                                                                              | %       | 12.84 | 81.19 | 4.59       | 1.38  |         | 100   |
|                                                                                                                                                              | Valid % | 12.84 | 81.19 | 4.59       | 1.38  |         | 100   |
| If your organization is currently affiliated with an external entity, is that entity religious?                                                              | N       | 20    | 147   |            | 51    |         | 218   |
|                                                                                                                                                              | %       | 9.17  | 67.43 |            | 23.39 |         | 100   |
|                                                                                                                                                              | Valid % | 9.17  | 67.43 |            | 23.39 |         | 100   |
| Does your organization accept any financial or non-financial support (including volunteer help) from any religious group or entity?                          | N       | 153   | 64    |            |       | 1       | 217   |
|                                                                                                                                                              | %       | 70.18 | 29.36 |            |       | 0.46    | 99.54 |
|                                                                                                                                                              | Valid % | 70.51 | 29.49 |            |       |         | 100   |
| Are there any sacred images or religious symbols, such as a cross, crucifix, or star of David, present on public display in your organization?               | N       | 52    | 165   |            |       | 1       | 217   |
|                                                                                                                                                              | %       | 23.85 | 75.69 |            |       | 0.46    | 99.54 |
|                                                                                                                                                              | Valid % | 23.96 | 76.04 |            |       |         | 100   |
| Is the board of your organization controlled by explicitly religious members?                                                                                | N       | 8     | 184   | 26         |       |         | 218   |
|                                                                                                                                                              | %       | 3.67  | 84.40 | 11.93      |       |         | 100   |
|                                                                                                                                                              | Valid % | 3.67  | 84.40 | 11.93      |       |         | 100   |
| Is selection of senior management at your organization based upon religious commitment and affiliation?                                                      | N       | 2     | 214   |            |       | 2       | 216   |
|                                                                                                                                                              | %       | 0.92  | 98.17 |            |       | 0.92    | 99.08 |
|                                                                                                                                                              | Valid % | 0.93  | 99.07 |            |       |         | 100   |
| Does faith or religious commitment play an important role in making hiring decisions of staff at all levels of your organization?                            | N       | 2     | 206   | 8          |       | 2       | 216   |
|                                                                                                                                                              | %       | 0.92  | 94.50 | 3.67       |       | 0.92    | 99.08 |
|                                                                                                                                                              | Valid % | 0.93  | 95.37 | 3.70       |       |         | 100   |
| Do you agree with the following statement; "Religious commitment might have a role in making hiring decisions of staff at all levels in this organization."? | N       | 8     | 207   |            |       | 3       | 215   |
|                                                                                                                                                              | %       | 3.67  | 94.95 |            |       | 1.38    | 98.62 |
|                                                                                                                                                              | Valid % | 3.72  | 96.28 |            |       |         | 100   |

Responses Given to the Survey Questionnaire Continues On the Next Page

| Survey Questions                                                                                                                                                              |         | YES     | NO      | DON'T<br>KNOW | NA | MISSING | TOTAL |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------------|----|---------|-------|
| Is there any organized religious practice, such as a staff bible study group, for personnel at your organization?                                                             | N       | 7       | 211     |               |    |         | 218   |
|                                                                                                                                                                               | %       | 3.21    | 96.79   |               |    |         | 100   |
|                                                                                                                                                                               | Valid % | 3.21    | 96.79   |               |    |         | 100   |
| Is there any form of prayer at staff meetings at your organization?                                                                                                           | N       | 31      | 185     |               |    | 2       | 216   |
|                                                                                                                                                                               | %       | 14.22   | 84.86   |               |    | 0.92    | 99.08 |
|                                                                                                                                                                               | Valid % | 14.35   | 85.65   |               |    |         | 100   |
| Is there a chaplain employed at your organization?                                                                                                                            | N       | 67      | 150     |               |    | 1       | 217   |
|                                                                                                                                                                               | %       | 30.73   | 68.81   |               |    | 0.46    | 99.54 |
|                                                                                                                                                                               | Valid % | 30.88   | 69.12   |               |    |         | 100   |
| Are there any voluntary chaplain or missionary visits by religious groups to your organization?                                                                               | N       | 199     | 17      |               |    | 2       | 216   |
|                                                                                                                                                                               | %       | 91.2844 | 7.79817 |               |    | 0.92    | 99.08 |
|                                                                                                                                                                               | Valid % | 92.1296 | 7.87037 |               |    |         | 100   |
| Is there any policy that bans religious volunteer groups' visits to your organization?                                                                                        | N       | 5       | 212     |               |    | 1       | 217   |
|                                                                                                                                                                               | %       | 2.29    | 97.25   |               |    | 0.46    | 99.54 |
|                                                                                                                                                                               | Valid % | 2.30    | 97.70   |               |    |         | 100   |
| Is there any religious activity, including ecumenical services, made available for residents at your organization?                                                            | N       | 208     | 10      |               |    |         | 218   |
|                                                                                                                                                                               | %       | 95.41   | 4.59    |               |    |         | 100   |
|                                                                                                                                                                               | Valid % | 95.41   | 4.59    |               |    |         | 100   |
| Are residents apprised of the opportunity to participate in any religious activity at your organization, or outside of your organization, at some other venues?               | N       | 197     | 18      |               |    | 3       | 215   |
|                                                                                                                                                                               | %       | 90.37   | 8.26    |               |    | 1.38    | 98.62 |
|                                                                                                                                                                               | Valid % | 91.63   | 8.37    |               |    |         | 100   |
| Is any sort of religious material made available for residents' use at your organization?                                                                                     | N       | 164     | 53      |               |    | 1       | 217   |
|                                                                                                                                                                               | %       | 75.23   | 24.31   |               |    | 0.46    | 99.54 |
|                                                                                                                                                                               | Valid % | 75.58   | 24.42   |               |    |         | 100   |
| Does your organization, in any way, use religious values and motivations to encourage clients to change their behaviors or to cope with health problems that they might have? | N       | 33      | 183     |               |    | 2       | 216   |
|                                                                                                                                                                               | %       | 15.14   | 83.94   |               |    | 0.92    | 99.08 |
|                                                                                                                                                                               | Valid % | 15.28   | 84.72   |               |    |         | 100   |

Therefore, this indicates that the religious belief infused in the service provided is not bound by the type of ownership. 'Yes' responses given to questions regarding the role of religion in the hiring process are very low. For instance, only two out of 218 nursing homes responded 'Yes' to the question on the survey asking if faith or religious commitment play an important role in making hiring decisions of staff at all levels of their organization. There are only eight 'Yes' responses to the survey question asking if they agree with the following statement; "Religious commitment might have a role in making hiring decisions of staff at all levels in this organization." This might be due to the lack of knowledge about the Charitable Choice Initiative's regulations that allows religious organizations to hire people based on their religious convictions. The issue also surfaced during couple of site visits by this researcher at nursing homes. The administrators were not aware that they can hire employees who share their nursing home's religious believes. They thought that it would be considered discrimination and a violation of laws.

### **Reliability Tests for the Level of Religiosity Variables**

This research proposed to look at three independent variables obtained by creating new scales of religiosity variables. These independent variables aim to measure a particular type of nursing home's level of religiosity in three aspects: organizational religiosity, staff religiosity and service religiosity. If internal consistency is not met, the three components of religiosity will not be used. Instead, the total score of religiosity, which is obtained by adding up the responses given to 18 questions (type of ownership is taken out of this measure) in the survey, will be used.

The organizational religiosity score is calculated based on answers given to survey questions 1, 2, 3, 4, 5, 6, 7 and 15 (See Appendix C). All of these questions were in the form of "Yes" and "No." For all of the 18 questions, except question 15, "Yes" responses were coded as "1" and "No" responses were coded as "0". For question 15, which inquired about the existence of any organizational policy prohibiting visits by religious volunteer groups in nursing homes,

“Yes” was coded “0” and “No” was coded “1”. At the end, these seven variables were added up and a range of "0" to "7" was obtained. The staff religiosity variable was created and calculated in a similar manner to the organizational religiosity variable. That is to say, the staff religiosity score was calculated by adding up the responses given to six questions (Questions 8, 9, 10, 11, 12 and 13 – See Appendix D) which constituted a range of "0" (zero) to "6". Similarly, the third component of religiosity, namely the "service religiosity" score was calculated by adding up responses given to 5 questions (Ranges from 0 to 5) in the religiosity survey. These questions are 14, 16, 17, 18 and 19 (See Appendix E).

### **Diagnostic Tests for Determining the Internal Consistency of Religiosity Categories**

Table 8 below indicates that the organizational religiosity variable was calculable for 216 of the 218 responding nursing homes in Virginia. Table 9 below shows that the obtained Cronbach's Alpha coefficient is .604. As a rule of thumb, Cronbach's Alpha with value of .7 and greater is accepted as the reliability threshold when collapsing variables into one variable (George and Mallery, 2003; Tabachnick and Fidell, 2007). Therefore, the organizational religiosity variable can be used in further analyses if the two other sub-scales - staff religiosity and service religiosity - variables yield acceptable Cronbach's Alpha scores (i.e. greater than 0.6). The table in Appendix C shows questions included in this variable's calculation and measures for each question in different scales.

**Table 8: Case Processing Summary  
For Organizational Religiosity**

|       |          | N   | %     |
|-------|----------|-----|-------|
| Cases | Valid    | 216 | 99.1  |
|       | Excluded | 2   | .9    |
|       | Total    | 218 | 100.0 |

**Table 9: Reliability Statistics  
For Organizational Religiosity**

| Cronbach's<br>Alpha | N of Items |
|---------------------|------------|
| .604                | 7          |

As described above, the second religiosity sub-scale is the staff religiosity variable, which is created by adding up another set of six questions in the questionnaire for the survey. Table 10 below indicates that 209 of 218 responding nursing homes are included in this measure. The obtained Cronbach's Alpha coefficient in Table 11 is .488, which is below the acceptable threshold of scale reliability measure as briefly discussed above. The table in Appendix D shows that the questions included in staff religiosity measures and measures for each question are on different scales.

**Table 10: Case Processing Summary for Staff Religiosity**

|       |          | N   | %     |
|-------|----------|-----|-------|
| Cases | Valid    | 209 | 95.9  |
|       | Excluded | 9   | 4.1   |
|       | Total    | 218 | 100.0 |

**Table 11: Reliability**

**Statistics for Staff Religiosity**

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .488             | 6          |

The same problem holds true for the service religiosity variable, which was calculated by computing the remaining six questions. Table 12 below shows that the new scale was calculable for 211 (96.8 %) of all of the 218 cases. Obtained Cronbach's Alpha value is .386, which is far below acceptable thresholds in Table 13. Thus, the service religiosity variable will not be computed as an independent variable in regression analyses. The table in Appendix E indicates that the questions considered for the computing service religiosity variable and values for each question is computed on different scales.

**Table 12: Case Processing Summary for Service Religiosity**

|       |          | N   | %     |
|-------|----------|-----|-------|
| Cases | Valid    | 211 | 96.8  |
|       | Excluded | 7   | 3.2   |
|       | Total    | 218 | 100.0 |

**Table 13: Reliability**  
**Statistics for Service Religiosity**

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .386             | 6          |

In an attempt to measure the potential role of religion in a nursing home's performance, the first three levels of measurement have failed to meet the criteria of internal consistency, which are measured by Cronbach's Alpha test. The final attempt to measure the level of religious involvement of a nursing home will be computing a total religiosity score that is calculated by adding up the responses given to the eighteen questions from the survey, excluding the first question, which is the ownership type question. Table 14 below shows that 204 respondents, out of 218, are included in the measurement of overall organizational religiosity. In addition, Table 15 reveals that the scale created by adding up these 18 items constitutes a reliable scale as the reported Cronbach's Alpha statistic is 0.698 which means that obtained Cronbach's Alpha is almost equal to 0.7. Therefore, the overall religiosity scale has internal consistency and will be regarded as an acceptable variable in the analyses of this research including the regression analysis, which provides prediction equations of organizational religiosity in nursing homes' performance.

**Table 14: Case Processing Summary for Overall Religiosity Score**

|       |          | N   | %     |
|-------|----------|-----|-------|
| Cases | Valid    | 204 | 93.6  |
|       | Excluded | 14  | 6.4   |
|       | Total    | 218 | 100.0 |

**Table 15: Reliability Statistics**

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .698             | 18         |

### **Institutional Characteristics by the Ownership Type**

The table below (Table 16) presents descriptive statistics for all of the independent variables of this research, other than the type of ownership variable, which is presented and discussed at the beginning of this chapter. Table 16 reports that, on average, church related nonprofit nursing homes have the highest level of religiosity scores (10.37 out of 18) followed by secular nonprofit nursing homes (6.8). Government related nursing homes, on average, have

the lowest religiosity scores (5.2). For profit nursing homes have slightly higher scores (5.7) than government related nursing homes. This table also reveals that government related nursing homes' religiosity level ranges between 4 to 7 while church related nursing homes' religiosity score ranges from 6 to 17. In addition, Table 16 shows that secular nursing homes' religiosity scores ranges from 3 to 9 while religiosity score of for profit nursing homes varies in between 2 and 11.

The same table shows that 82 percent of for profit nursing homes in Virginia are part of a chain ownership. This is the highest ratio on this measure. CMS considered chain affiliation as one of the variables that might have an influence on performance of nursing homes, since chain affiliation hints that there may be more availability of resources. In the table, 45 percent of church related nursing homes are part of a chain ownership type while government related nursing homes have lowest rate of chain affiliation standing at 33 percent. Overall, about 68 percent of nursing homes are affiliated with a chain ownership in Virginia. Hospital affiliation is only about eight percent of the nursing homes in Virginia.

Hospital affiliation is highest among nonprofit secular nursing homes, while it is lowest among for profit nursing homes. CMS considers hospital affiliation as one of the variables that might have a role in patient outcomes. The table shows that 200 out of 218 survey responding nursing homes are not affiliated with, or part of a hospital. There are only nine out of 49 (18 %) secular nonprofit nursing homes affiliated with a hospital. Secular nonprofit nursing homes are followed by government related nursing homes at approximately 17 percent, and church related nursing homes have a 6.9 percent hospital affiliation rate. For profit nursing homes scored the lowest in this category with about 4 percent (5 out of 134 for profit nursing homes). Table 16 reveals that there is no significant difference in occupancy rates among all four types of nursing homes in Virginia. For profit nursing homes are the most populous nursing homes with little more than 102 residents per nursing home on average. In the same table, church affiliated

nursing homes have about 68 residents per nursing home on average. In terms of occupancy rate, the table shows that, again, there are no significant differences among nursing home groups. The occupancy rate is highest among secular nonprofit nursing homes with about 89 percent on average, while it is about 87 percent on average among for profit nursing homes. Not surprisingly, government related nursing homes have the highest percentage (63.76 %) of residents with Medicaid as their primary payment method. However, religious nursing homes, on average, have the lowest percentage (33.65 %) of residents with Medicaid reimbursement, but these nursing homes have the highest ratio (46.24 %) of residents with private insurance programs. The ratio of residents with Medicare payment is highest among secular nonprofit nursing homes, and it is lowest among government nursing homes. The percentage of private payment is the lowest among government nursing homes. These figures support the notion that church related nursing homes are less dependent on government reimbursement than other types of nursing homes. This suggests higher payments rates and in return more available resources for residents of church related nursing homes (Amirkhanyan, Kim and Lambright, 2009).

Table 16 shows that, on average, 94 percent of nursing homes in Virginia have organizational resident groups. It is argued that organizational resident groups might have an influence on how a nursing home is managed (CMS' web site, 2010 and Amirkhanyan, Kim and Lambright, 2009). Although there are no significant differences among ownership types in regard to the presence of organizational resident groups at nursing homes in Virginia, church related nursing homes have the highest rate of organizational resident groups, with a rate of 97 percent, and government related nursing homes have the lowest rate, with 83 percent.

As an important indicator of quality of service provided in nursing homes, total staff hours per resident per day is highest among government related nursing homes with 5.70 total staff hours and lowest among for profit nursing homes with 3.83. Church related nursing homes have the second highest total staff hours per resident per day, with 4.45. Lower rates of staff

hours per resident per day indicate profitability oriented management type. In this regard, it makes sense why for profit nursing homes have the lowest staff hours per resident per day.

Poverty rate in a county may require government intervention in order to provide nursing home services. Table 16 indicates that government nursing homes are clustered in the counties that have the highest poverty level. Church related nursing homes are clustered in counties that have the lowest poverty rate according to Table 16. These indicators are consistent with the payment type indicators that were mentioned above; government related nursing homes have the highest number of Medicaid reimbursed residents, and church related nursing homes do not only have the lowest number of Medicaid reimbursed residents, but also have the highest percentage of out-of-pocket payer residents.

Market concentration versus market competition might have an impact on nursing homes' performance. Secular nonprofit nursing homes have the highest average value of Herfindahl index score (52). This indicates that these nursing homes, in general, provide services in the least competitive environments, followed by government related nursing homes and then for profit nursing homes. However, church affiliated nursing homes have the lowest market concentration score (35) which is an indication that religiously affiliated nursing homes are operating in the most competitive markets. On the other hand, these nursing homes are mostly located in areas where poverty levels are relatively lower. These two indicators, market concentration index and poverty levels, may mean that church related nursing homes are mostly nested in urban centers.

Table 16: Institutional Characteristics of Nursing Homes in Virginia by the Ownership Type

|                        | Government Related |       |                     |           | NPO- Not Church Related |      |                           |           | For Profit |       |                             |           | NPO-Church Related |       |                            |           | Total         |           |
|------------------------|--------------------|-------|---------------------|-----------|-------------------------|------|---------------------------|-----------|------------|-------|-----------------------------|-----------|--------------------|-------|----------------------------|-----------|---------------|-----------|
|                        | Min                | Max   | Mean                | Std. Dev. | Min                     | Max  | Mean                      | Std. Dev. | Min        | Max   | Mean                        | Std. Dev. | Min                | Max   | Mean                       | Std. Dev. | Mean          | Std. Dev. |
| Religiosity ***        | 4                  | 7     | 5.2                 | 1.1       | 3                       | 9    | 6.77                      | 1.36      | 2          | 11    | 5.69                        | 1.48      | 6                  | 17    | <b><u>10.37</u></b>        | 2.32      | 6.52          | 2.22      |
| Chain Ownership***     | --                 | --    | <b>0.33</b><br>(2)  | 0.52      | --                      | --   | 0.49<br>(24)              | 0.51      | --         | --    | <b><u>0.82</u></b><br>(110) | 0.38      | --                 | --    | 0.45<br>(13)               | 0.51      | 0.68<br>(149) | 0.47      |
| Hospital Related **    | --                 | --    | 0.17<br>(1)         | 0.41      | --                      | --   | <b><u>0.18</u></b><br>(9) | 0.39      | --         | --    | <b>0.04</b><br>(5)          | 0.21      | --                 | --    | 0.07<br>(2)                | 0.26      | 0.08<br>(18)  | 0.28      |
| Staff Hours ***        | 3.83               | 10.39 | <b><u>5.7</u></b>   | 2.62      | 2.46                    | 8.6  | 4.18                      | 1.22      | 2.13       | 10.7  | <b>3.83</b>                 | 0.95      | 2.48               | 7.02  | 4.45                       | 1.01      | 4.04          | 1.14      |
| Number of Residents *  | 19                 | 168   | 96                  | 57.86     | 6                       | 296  | 95.98                     | 64.08     | 4          | 278   | <b><u>102.2</u></b>         | 51.66     | 3                  | 352   | <b>68.41</b>               | 65.9      | 96.16         | 57.51     |
| % Occupied Beds        | 76                 | 100   | 87.17               | 10.68     | 46                      | 100  | <b><u>88.73</u></b>       | 9.69      | 4          | 100   | <b>86.88</b>                | 12.63     | 3                  | 100   | 87.52                      | 18.02     | 87.39         | 12.79     |
| % Medicaid ***         | 16.67              | 97.53 | <b>63.76</b>        | 33.1      | 0                       | 100  | 50.01                     | 31.62     | 0          | 90.91 | 59.96                       | 22.71     | 0                  | 69.6  | <b>33.65</b>               | 20.64     | 54.33         | 26.48     |
| % Medicare             | 0                  | 83.33 | <b>17.2</b>         | 32.5      | 0                       | 100  | <b><u>25.76</u></b>       | 24.96     | 0          | 100   | 19.69                       | 17.18     | 0                  | 83.33 | 20.11                      | 16.8      | 21.04         | 19.65     |
| % Private ***          | 0                  | 60    | <b>19.04</b>        | 24.32     | 0                       | 74.5 | 24.23                     | 18.75     | 0          | 100   | 20.35                       | 19.17     | 12.22              | 100   | <b><u>46.24</u></b>        | 25.45     | 24.63         | 21.79     |
| Resident Groups        | --                 | --    | <b>0.83</b><br>(5)  | 0.4       | --                      | --   | 0.94<br>(46)              | 0.24      | --         | --    | 0.94<br>(126)               | 0.24      | --                 | --    | <b><u>0.97</u></b><br>(28) | 0.19      | 0.94<br>(205) | 0.24      |
| Poverty Rate           | 7.8                | 23.3  | <b><u>18.63</u></b> | 5.63      | 3.4                     | 23.3 | 13.37                     | 5.62      | 3.4        | 26.5  | 13.67                       | 6.05      | 5.6                | 25.1  | <b>12.77</b>               | 5.8       | 13.62         | 5.94      |
| Market Concentration * | 13                 | 100   | 37                  | 33        | 9                       | 100  | <b><u>52</u></b>          | 31        | 9          | 100   | 51                          | 31        | 9                  | 100   | <b>35</b>                  | 25        | 49            | 31        |
| N                      | 6                  |       |                     |           | 49                      |      |                           |           | 134        |       |                             |           | 29                 |       |                            |           | 218           |           |

**Note 1:** Bold indicates lowest score while '**bold and underlined**' indicates highest score among types of ownership. \*Relationship is significant at \* P <.05, \*\* P < .01, \*\*\* P < .001 value.

**Note 2:** Values in parentheses are the numbers of observed cases for categorical variables (Chain Ownership, Hospital Affiliation and Presence of Resident Councils). Also note that significance levels for categorical and dichotomous variables Chi-Square Test significance levels are reported. For other (scale) variables significance levels for ANOVA (means test) significance levels are reported.

Figure 2 below presents the dispersion of religiosity scores of the four types of ownership. The figure depicts that the type of ownership may not be adequate enough to determine level of religiosity at a particular nursing home. The chart shows distribution of religiosity scores for each type of ownership. It reveals that government related nursing homes' religiosity level at the lowest is over 4 out of 18, and based on the data gathered via the religiosity survey for this study. The figure also shows that the highest religiosity level is about 7 at some government related nursing homes in Virginia. As it appears in the figure, there are some secular nonprofit nursing homes that scored lower than government nursing homes while some scored higher (9 out of 18) on religiosity level.

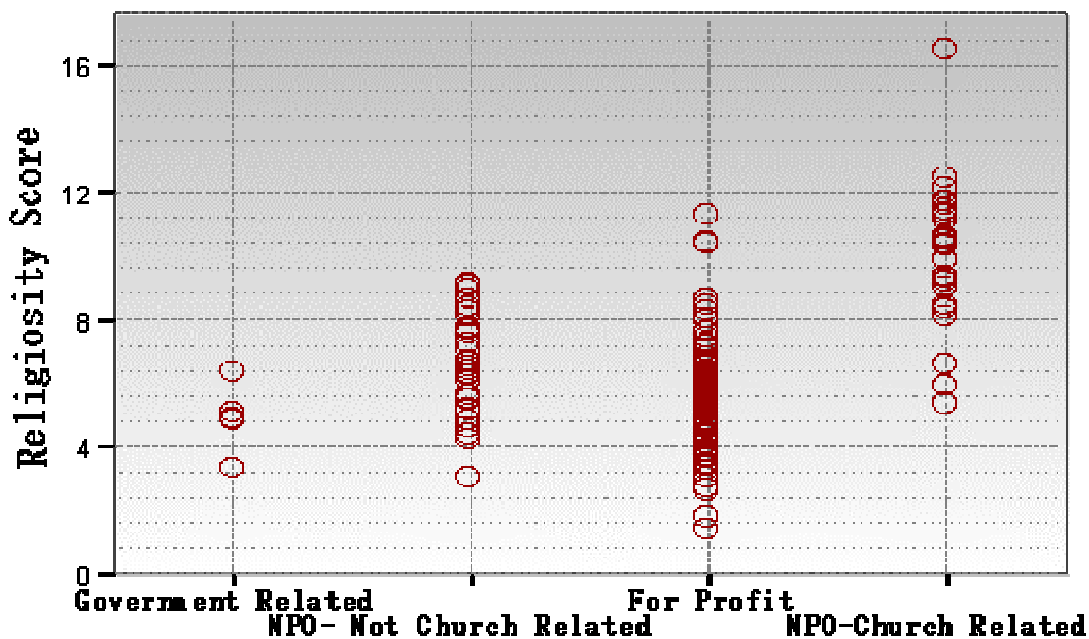


**Figure 2: Religiosity Scores by the Type of Ownership**

Some of the nursing homes in for profit ownership type have the lowest level of religiosity; at about 2 out of 18 compared to all other groups. The highest religiosity score among the for profit nursing homes appears around 11. Religiosity level among for profit nursing homes is clustered between levels of 4 to 7. The most interesting scores are shown among church related nursing homes in the figure above. The figure shows that religious nursing

homes' religiosity scores have the highest levels of variation. There are nursing homes affiliated with religious institutions, which have lower religiosity scores compared to some of the other types of nursing homes. Figure 2 reveals that there are church related nursing homes that have religiosity level as low as 4 out of 18 and as high as 17 out of 18. This chart clearly indicates that being church affiliated does not necessarily indicate a high level of religiosity in an organization. Church related nursing homes' level of religiosity is clustered between 9 to 12 levels. As it is also indicated in Table 16, religious nursing homes have the highest standard deviation value (2.3) of religiosity scores.

### **Reliability Tests for Dependent Variables**

#### **Reliability Test for Health Inspection Deficiency Variable**

Table 17 reports mean and standard deviation values of eight deficiency categories included in the calculation of the health deficiency score. Scores of these eight categories are calculated based on CMS' starring system calculation. The scores of these eight categories are collapsed into one variable in order to find the total health deficiency scores in a statistically manageable way. Higher scores in this table indicate poorer performance for each indicated group in this measure.

As seen in the table below, there are no significant differences among health deficiency variables except for two variables: administration and resident assessment deficiency variables. These findings indicate that church related nursing homes have the lowest administration deficiency score on average (2.34) while for-profit nursing homes have the highest (6.51). Church related nursing homes also have the lowest resident assessment deficiencies (1.52). In this category, government related nursing homes have the highest score (4.67).

**Table 17: Health Inspection Deficiency Categories by Type of Ownership**

| Deficiency Category                 | Government Related |           | NPO- Not Church Related |           | For Profit |           | NPO-Church Related |           | Total |           |
|-------------------------------------|--------------------|-----------|-------------------------|-----------|------------|-----------|--------------------|-----------|-------|-----------|
|                                     | Mean               | Std. Dev. | Mean                    | Std. Dev. | Mean       | Std. Dev. | Mean               | Std. Dev. | Mean  | Std. Dev. |
| Quality Care Deficiencies           | 10.00              | 13.33     | 7.51                    | 6.51      | 9.74       | 10.58     | 5.93               | 6.20      | 8.74  | 9.44      |
| Administration Deficiencies **      | 5.33               | 5.47      | 4.16                    | 6.05      | 6.51       | 7.55      | 2.34               | 3.47      | 5.39  | 6.90      |
| Resident Assessment Deficiencies ** | 4.67               | 3.01      | 3.43                    | 5.23      | 4.42       | 5.64      | 1.52               | 2.25      | 3.82  | 5.23      |
| Residents Rights Deficiencies       | 0.00               | 0.00      | 1.55                    | 2.81      | 2.42       | 3.83      | 2.21               | 3.64      | 2.13  | 3.56      |
| Nutrition Deficiencies              | 5.33               | 8.26      | 3.18                    | 5.77      | 4.93       | 7.80      | 5.79               | 7.06      | 4.66  | 7.31      |
| Pharmacy Deficiencies               | 5.33               | 7.00      | 2.94                    | 3.44      | 4.09       | 6.88      | 1.66               | 3.47      | 3.54  | 5.93      |
| Mistreatment Deficiencies           | 0.67               | 1.63      | 1.47                    | 3.80      | 3.05       | 12.18     | 0.69               | 1.54      | 2.32  | 9.77      |
| Environmental Deficiencies          | 3.33               | 3.01      | 7.76                    | 10.44     | 8.07       | 10.76     | 3.59               | 5.99      | 7.27  | 10.13     |

**Note:** \*\* indicates that observed difference between types of ownership is significant at  $p < .05$  value.

Before adding up these eight categories, internal consistency diagnostics are checked to test if these variable constitute a reliable scale. As Table 18 below shows, all 218 nursing homes are included in an internal consistency test. Table 19 reveals that the scale created by adding up the eight health inspection deficiency categories into one variable has internal consistency and therefore are reliable as reported according to Cronbach's Alpha statistic of .736.

**Table 18: Case Processing Summary**

|       |          | N   | %     |
|-------|----------|-----|-------|
| Cases | Valid    | 218 | 100.0 |
|       | Excluded | 0   | .0    |
|       | Total    | 218 | 100.0 |

**Table 19: Reliability Statistics**

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .736             | 8          |

### Health Inspection Deficiencies by Type of Ownership

Table 20 below shows health inspection deficiency scores according to the type of ownership. As it is indicated in the methodology part (Chapter IV) of this study, health inspection deficiency scores are calculated by using CMS's starring system, which grades each inspection deficiency based on its severity and level of threat to residents' health, safety and general well-being.

**Table 20: Health Inspection Deficiency Scores by the Type of Ownership**

| Type of Ownership       | Minimum | Maximum | Mean         | Std. Deviation | N   |
|-------------------------|---------|---------|--------------|----------------|-----|
| Government Related      | 4       | 72      | 34.67        | 28.81          | 6   |
| NPO- Not Church Related | 0       | 112     | 32.67        | 25.81          | 49  |
| For Profit              | 0       | 248     | 43.71        | 41.56          | 133 |
| NPO-Church Related      | 0       | 64      | <b>26.62</b> | 16.43          | 26  |
| <b>Total</b>            | 0       | 248     | 38.88        | 36.29          | 214 |

**Note:** Variation of Health Deficiency Scores by Type of Ownership is significant at the  $p < .1$  Value. Higher numbers denote higher deficiency scores.

Table 20 indicates that for profit nursing homes in Virginia not only have the highest health inspection deficiency scores (43.71) on average, but that they also have the highest standard deviation. Nonprofit church related nursing homes have the lowest health deficiency score (26.62) and lowest standard deviation among all other ownership types. For profit nursing homes' deficiency scores are followed by government related nursing homes with a score of 34.67 and nonprofit secular nursing homes with a score of 32.67.

Table 21 compares the health inspection deficiency scores of church related nursing homes to all other ownership types. Without weighing the influence of any other interacting variable on the outcomes, this table reveals that church related nursing homes have on average a 26.62 deficiency value while all other types of nursing homes have on average a 40.29

deficiency value. It is clearly seen that church related nursing homes are better positioned in this measure.

**Table 21: Health Inspection Deficiency Scores, Church Related vs. All Other Types**

|                   | Minimum | Maximum | Mean  | Std. Deviation | N   |
|-------------------|---------|---------|-------|----------------|-----|
| Church Related NH | 0       | 64      | 26.62 | 16.43          | 26  |
| All Other NH      | 0       | 248     | 40.29 | 37.69          | 188 |
| Total             | 0       | 248     | 38.88 | 36.29          | 214 |

**Note:** Variation of Health Deficiency Scores by Type of Ownership is significant at the p. <.1 value. Higher numbers denote higher deficiency scores.

Figure 3 below depicts the assessment placement for each nursing home based on the health inspection deficiency scores for each ownership type. The figure shows outlier problems that might violate the linearity assumption of ordinary least squares (OLS). Considering the small sample size of this study, these outliers can be a threat to linearity assumption. In order to determine if these outliers violate linearity assumption of OLS, a plot of unstandardized residuals and predicted values will be run. If it becomes a threat, then natural log (ln) of health deficiency scores will be calculated and used in the regression model. In the figure it appears that there are some for-profit nursing homes that have scores of health inspection deficiency over 240, which is well over the average deficiency scores. The figure reveals that church-related nonprofit nursing homes have the lowest variation in health inspection deficiency scores.

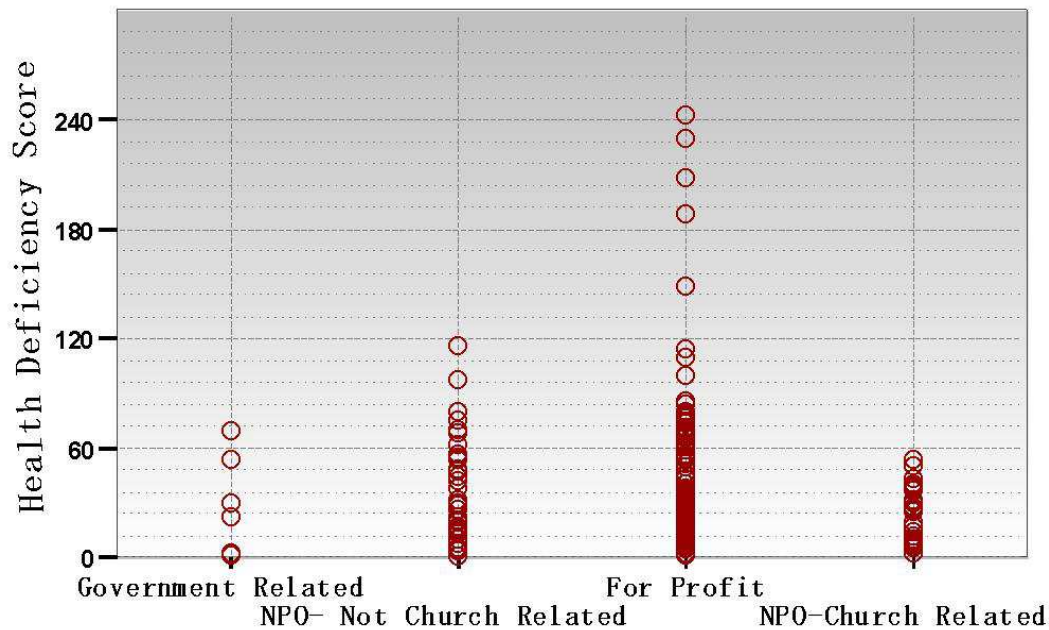


**Figure 3: Health Inspection Deficiency Scores by Type of Ownership**

#### **Reliability Test for Long-Stay (Chronic Care) Variable**

Table 22 presents the descriptive statistics of the long-stay patient quality measure variables. As can be seen in the table, long-stay patient quality measures include 13 items. The 13 items of long-stay (Chronic Care) quality measures are computed into one variable. The variations of these 13 variables are different. For example, “Percent of long-stay residents who were physically restrained” variable ranges from 0 to 6 with a mean of 1.00 percent, while “Percent of low-risk long-stay residents who lose control of their bowels or bladder” variable ranges from 14 percent to 89 percent with a mean of 58.93 percent. Therefore, adding these variables with different levels of variations into a new variable without any transformation would create an unreliable variable as the impact of variables with larger average values would be much greater than the variables with smaller averages. One of the options to eliminate this problem would be to take z-scores from each variable and then compute them into a new variable. However, the presentation for z-scores is more complicated than the presentation of percentage scores. That is why fractional rank percentages, which take percentile rank of each

case in the distribution of a variable, which is basically very similar to reporting z-scores in the form of percentiles, were chosen to compute these 13 variables into one variable. That is to say, if a nursing home has the highest score in one of these items it is assigned the value of 100, and if it has the lowest score, it is assigned a value of one. At the end, these fractional rank percentiles are added up into a new variable and the total score is divided by the number of items included in the calculation of the new variable.

**Table 22: Descriptive Statistics: Long-Stay Patient Quality Care Measures**

|                                                                                               | N   | Min | Max | Mean  | Std. Dev. |
|-----------------------------------------------------------------------------------------------|-----|-----|-----|-------|-----------|
| Percent of high-risk long-stay residents who have pressure sores                              | 200 | 0   | 31  | 11.38 | 5.54      |
| Percent of long-stay residents given influenza vaccination during the flu season              | 199 | 68  | 90  | 88.24 | 4.27      |
| Percent of long-stay residents who are more depressed or anxious                              | 200 | 0   | 41  | 15.34 | 7.96      |
| Percent of long-stay residents who had a urinary tract infection                              | 201 | 1   | 27  | 10.06 | 4.48      |
| Percent of long-stay residents who have a catheter inserted and left in their bladder         | 200 | 0   | 19  | 4.07  | 2.57      |
| Percent of long-stay residents who lose too much weight                                       | 201 | 1   | 25  | 9.06  | 4.32      |
| Percent of long-stay residents who spend most of their time in bed or in a chair              | 201 | 0   | 38  | 5.25  | 5.37      |
| Percent of long-stay residents who were assessed and given pneumococcal vaccination           | 201 | 0   | 90  | 86.23 | 9.92      |
| Percent of long-stay residents who were physically restrained                                 | 201 | 0   | 16  | 1.00  | 1.93      |
| Percent of long-stay residents whose ability to move about in and around their room got worse | 191 | 3   | 36  | 12.61 | 5.75      |
| Percent of long-stay residents whose need for help with daily activities has increased        | 199 | 3   | 38  | 16.51 | 6.78      |
| Percent of low-risk long-stay residents who have pressure sores                               | 160 | 0   | 18  | 2.34  | 3.14      |
| Percent of low-risk long-stay residents who lose control of their bowels or bladder           | 197 | 14  | 89  | 58.93 | 13.24     |
| Valid N (listwise)                                                                            | 159 |     |     |       |           |

For example, in the case of long-stay (Chronic Care) patient quality measures the total score is divided by 13. The same process is followed to compute short-stay (Post-acute) patient quality measures as well. The short-stay (Post-Acute) patient quality measure variable was obtained by collapsing four variables into one variable.

### **Testing Internal Consistency of Long-Stay (Chronic Care) and Short-Stay (Post-Acute) Patient Quality Measures**

As it can be seen in Table 24, the long-stay patient quality care measure variable, which was created by adding up 13 variables, yielded an Alpha level of 0.336, which is an indication that these 13 variables do not constitute a new variable with a reliable internal consistency. The only way to achieve Alpha level exceeding 0.6 was by checking the item-total statistics (Ex: Table 22) and excluding some of the 13 items, thereby increasing the Alpha value.

**Table 23: Case Processing Summary (Long - Stay Quality Measures)**

|       |          | N   | %     |
|-------|----------|-----|-------|
| Cases | Valid    | 159 | 72.9  |
|       | Excluded | 59  | 27.1  |
|       | Total    | 218 | 100.0 |

**Table 24: Case Processing Summary (Long - Stay Quality Measures)**

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .336             | 13         |

### **Exclusion Process of Sub-Variables for Internal Consistency of Long-Stay (Chronic Care) Patient Quality Care Measure Variable**

Each item was deleted one at a time by looking at the item-total statistics table until the Alpha level equals to or is greater than 0.6. After repeating this procedure seven times

(excluding 7 items in 7 steps), an Alpha level of 0.612 was obtained (Table 18). Table 26 shows that deleting more items after the 7th step would not increase the Alpha value. Eventually, a new variable was constructed by adding the six remaining items (sub-variables). The reliability of excluded variables were also checked to see if they can separately form a new variable with a reliable internal consistency, but their reliability levels were lower than 0.2. As a result, this researcher decided to continue with a created variable, which consists of six variables, rather than the originally intended 13 variables, and computed them into one variable in order to assure statistical reliability for the further analyses.

**Table 25: Reliability Statistics**

| Cronbach's<br>Alpha | N of Items |
|---------------------|------------|
| .612                | 6          |

**Table 26: Item-Total Statistics for Testing Internal Consistency of Long-Stay Patient QM**

|                                                                                       | Scale Mean<br>if Item<br>Deleted | Scale<br>Variance if<br>Item Deleted | Corrected<br>Item-Total<br>Correlatio<br>n | Squared<br>Multiple<br>Correlatio<br>n | Cronbach's<br>Alpha if<br>Item<br>Deleted |
|---------------------------------------------------------------------------------------|----------------------------------|--------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------------|
| Percent of high-risk long-stay residents who have pressure sores                      | 30.4780                          | 120.656                              | .464                                       | .245                                   | .512                                      |
| Percent of long-stay residents who had a urinary tract infection                      | 32.3019                          | 152.465                              | .328                                       | .115                                   | .575                                      |
| Percent of long-stay residents who have a catheter inserted and left in their bladder | 38.0377                          | 172.923                              | .356                                       | .160                                   | .580                                      |
| Percent of long-stay residents who lose too much weight                               | 33.4340                          | 153.652                              | .349                                       | .162                                   | .567                                      |
| Percent of long-stay residents who spend most of their time in bed or in a chair      | 36.6226                          | 138.806                              | .300                                       | .165                                   | .598                                      |
| Percent of low-risk long-stay residents who have pressure sores                       | 39.7862                          | 161.612                              | .361                                       | .176                                   | .567                                      |

### **Reliability Test for Short-Stay (Post-Acute) Patient Quality Care Measures**

Table 27 below shows the number of nursing homes for which each indicated variable was measured for post-acute patients and their minimum and maximum values alongside the mean and variation values for each variable. As indicated in Chapter IV of this study, these four variables are collapsed into one variable "Post-Acute Quality Measures Variable" in order to make the study methodologically feasible. In the process of creating the new variable fractional rank percentages, the method that was mentioned above is used when collapsing these four items into one variable.

**Table 27: Descriptive Statistics: Short-Stay (Post-Acute) Patient Quality Care Measures**

|                                                                                      | N   | Min | Max | Mean  | Std. Dev. |
|--------------------------------------------------------------------------------------|-----|-----|-----|-------|-----------|
| Percent of short-stay residents given influenza vaccination during the flu season    | 199 | 17  | 90  | 81.05 | 13.13     |
| Percent of short-stay residents who have delirium                                    | 200 | 0   | 17  | 1.34  | 2.01      |
| Percent of short-stay residents who have pressure sores                              | 199 | 0   | 48  | 12.49 | 6.08      |
| Percent of short-stay residents who were assessed and given pneumococcal vaccination | 201 | 1   | 90  | 80.23 | 16.58     |
| Valid N (listwise)                                                                   | 197 |     |     |       |           |

Two tables below, Table 28 and Table 29, help to determine if the data collapsed is statistically acceptable, that is to say, if it is internally consistent. Table 28 reveals that 197 cases, out of 218, are included in the process of testing. Table 29 shows that internal consistency in collapsing four short-term patient quality measures into one variable is questionable. Cronbach's Alpha value is .596, which is below the value of .7. Since the Cronbach's Alpha is equal to 0.60 when rounded to the second decimal, this new variable yields a questionable, and yet acceptable Cronbach's Alpha score (George and Mallery, 2003; Zinbarg, Revelle, Povel and Li, 2005). That is why, this researcher decided to keep these four items in the calculation of the Short-Term (Post-Acute) Patient Quality Measure variable.

**Table 28: Case Processing Summary (Short-Term Quality Measures)**

|       |          | N   | %     |
|-------|----------|-----|-------|
| Cases | Valid    | 197 | 90.4  |
|       | Excluded | 21  | 9.6   |
|       | Total    | 218 | 100.0 |

**Table 29: Reliability Statistics (Short-Term Quality Measures)**

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .596             | 4          |

### Descriptive Statistics for Two Patient Outcome Quality Care Measure Variables

Table 30 below shows average fractional rank percentage scores of quality measure (patient outcomes) variables including both chronic care (long-stay) patient quality measures and post-acute (short-stay) patient quality measures by type of ownership. In the distribution of fractional rank percentages, higher scores indicate poorer performance measures. According to the table, for profit nursing homes have the highest average of fractional rank percentages of chronic care quality measures (52.72 %), which means that they perform worse than all other nursing home types on this measure. The table indicates that church related nursing homes perform better than all other nursing home ownership types in chronic care quality measures with a 38.57 average fractional rank percentages. Church related nursing homes are followed by government related nursing homes (47.89 %) and secular nonprofit nursing homes (48.69 %) respectively.

**Table 30: Patient Outcome Quality Measures by Type of Ownership**

|                                | Long-Stay Quality Measure |       |              |          |     | Short-Stay Quality Measure |       |              |          |     |
|--------------------------------|---------------------------|-------|--------------|----------|-----|----------------------------|-------|--------------|----------|-----|
|                                | Min                       | Max   | Mean         | Std. Dev | N   | Min                        | Max   | Mean         | Std. Dev | N   |
| <b>Government Related</b>      | 41.73                     | 51.05 | 47.89        | 5.33     | 3   | 18.1                       | 72.35 | <b>45.23</b> | 38.36    | 2   |
| <b>NPO- Not Church Related</b> | 20.99                     | 81.27 | 48.69        | 16.65    | 34  | 23.7                       | 76.87 | 51.27        | 13.36    | 43  |
| <b>For Profit</b>              | 12.22                     | 89    | <b>52.72</b> | 15.32    | 110 | 10.58                      | 86.31 | 49.65        | 17.03    | 130 |
| <b>NPO-Church Related</b>      | 25.88                     | 67.53 | <b>38.57</b> | 13.73    | 12  | 22.4                       | 70.73 | <b>53.16</b> | 12.13    | 22  |
| <b>Total</b>                   | 12.22                     | 89    | 50.7         | 15.76    | 159 | 10.58                      | 86.31 | 50.35        | 15.94    | 197 |

**Note 1:** This table reports average Fractional Rank Percentages. The Chronic Care Patient Quality Care Measure consists of 13 items and Post-Acute Patient Quality Measure consists of 4 items.

**Note 2:** Variation of Short-Stay (Post-Acute) And Long-Stay (Chronic Care) Patient Quality Care Measures by Type of Ownership is significant at the p. <.1 values. Higher numbers denote poorer quality.

In terms of short-stay patient outcomes (post-acute patient quality care measures) the table above reveals that government related nursing homes seem to perform better than all other ownership types, at 45.23 percent. Table 30 shows that even though church related nursing homes perform better than all other nursing home types in regard to long-stay patient outcomes, they perform the worst among all other ownership types when it comes to short-stay patient outcomes, with the highest average percentage of 53.16. In this evaluation category, the government related nursing homes are followed by for profit nursing homes with an average percentage of 49.65 and secular nonprofit nursing homes with an average percentage of 51.27 respectively.

**Table 31: Patient Outcome Quality Measures, Church Related vs. All Other Types**

|                          | Long-Stay Quality Measure |       |                     |          |     | Short-Stay Quality Measure |       |                     |          |     |
|--------------------------|---------------------------|-------|---------------------|----------|-----|----------------------------|-------|---------------------|----------|-----|
|                          | Min                       | Max   | Mean                | Std. Dev | N   | Min                        | Max   | Mean                | Std. Dev | N   |
| <b>Church Related NH</b> | 25.88                     | 67.53 | <u><b>38.57</b></u> | 13.73    | 12  | 22.40                      | 70.73 | 53.16               | 12.13    | 22  |
| <b>All other NH</b>      | 12.22                     | 89.00 | 51.69               | 15.54    | 147 | 10.58                      | 86.31 | <u><b>50.00</b></u> | 16.35    | 175 |
| <b>Total</b>             | 12.22                     | 89.00 | 50.70               | 15.76    | 159 | 10.58                      | 86.31 | 50.35               | 15.94    | 197 |

**Note:** Variation of Short-Stay (Post-Acute) and Long-Stay (Chronic care) Patient Quality Measures by Type of Ownership is significant at the p. <.1 Value. Higher numbers denote poorer quality scores.

Table 31 compares the performance of church related nursing homes to all other types of nursing homes in two measures: Long-stay (chronic care) and short-stay (post-acute) patient quality measures without weighing possible impact of any interacting variables that were laid out in the regression analyses. This table confirms findings of Table 30. Church related nursing homes perform better than all other types of nursing homes in combined long-stay patient quality measures with a value of 38.57. In the category of short-stay (post-acute) patient quality measures, church related nursing homes perform worse than all other types of nursing homes combined, with a value of 53.16.

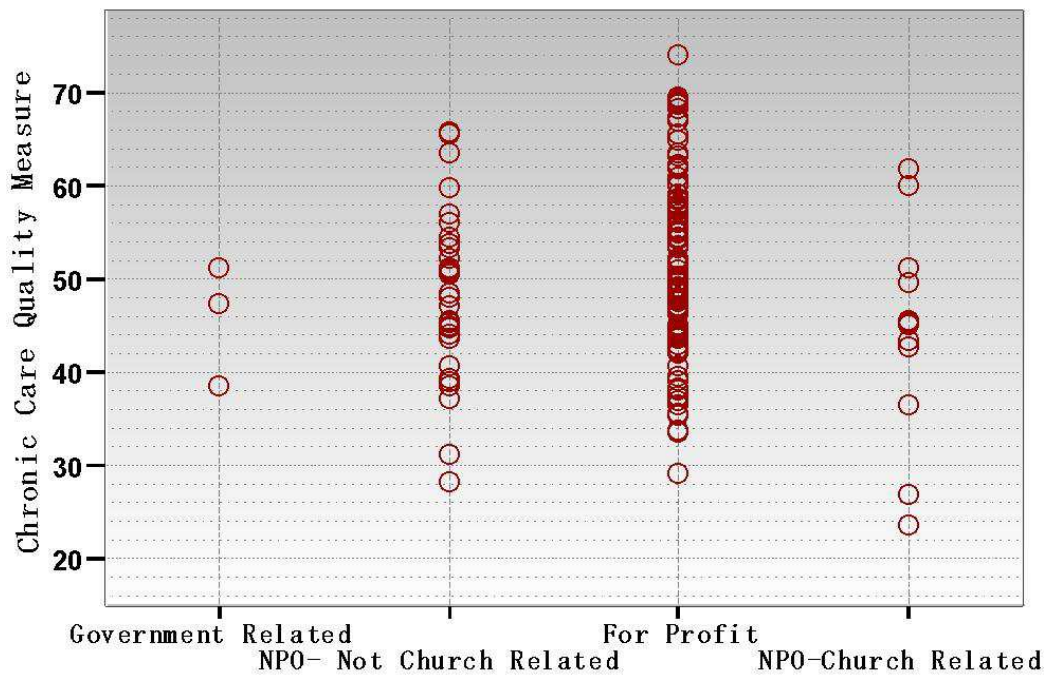


**Figure 4: Chronic Care Patient Quality Measures by Type of Ownership**

Figure 4 illustrates chronic care quality measures based on four different ownership types. The figure presents a clear picture of the values presented in Table 30. With the help of this figure, it can be observed that the two nursing homes with the lowest average percentages are those of religious nonprofit nursing homes. Figure 4 also reveals that all four groups have evenly distributed fractional rank percentages of chronic care patient quality measures and that there are no outlier cases, which would make the average percentages reported in Table 30 unreliable. The same table also reports that standard deviation values of all groups are not high compared to the means reported in Table 30. Therefore, both Table 30 and Figure 4 reveal that the averages of chronic care (long-stay) patient quality measures reported provide reliable information.

As it can be seen in Figure 5 below and Table 30 above, there are only two government related nursing homes for which the post-acute patient quality care measure - short-stay patient outcome- was calculated. Figure 5 shows that these two government related nursing homes'

scores are far apart from one another. Such a variance is also reflected in the higher standard deviation value (38.36 – See Table 30) of this group. That is why, the average scores of post-acute patient quality measures for which these nursing homes are excelling, might not be a reliable measure of the success of the government related nursing homes. Since government related nursing homes' success in post-acute patient quality measures is arguable, for profit nursing homes can be considered the most successful group in this measure, especially when consistency is taken into consideration. The figure below also reveals that although for profit nursing homes are, on average, relatively more successful and that the most successful nursing home in this category is also a for profit nursing home with the score of over 10 percent, the least successful nursing home is also a for profit nursing home with a score of over 86 percent.

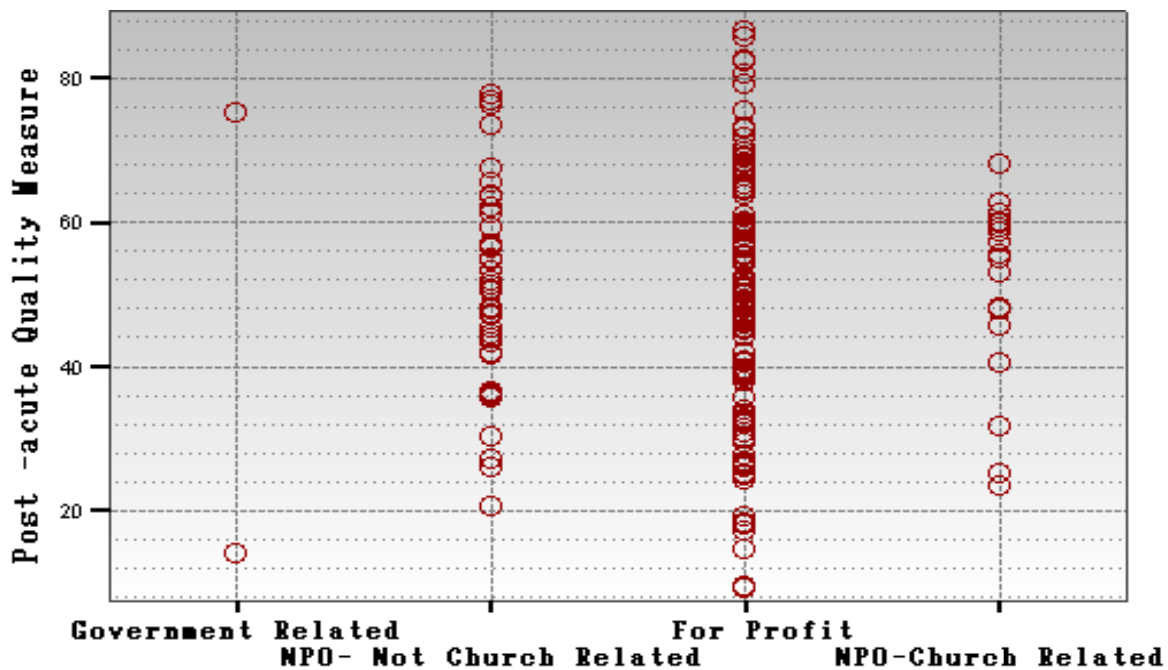


**Figure 5: Post-Acute (Short-Stay) Patient Quality Measures by Type of Ownership**

## **BIVARIATE CORRELATIONS**

### **Correlations Between Independent Variables**

Table 32 below reports bivariate correlations between the independent variables of this research. According to this table, the two highest correlations are observed between the percent of private (pay) and the percent of Medicaid (reimbursement) (0.684), and between church related nonprofit nursing homes and for profit nursing homes (.680). The percent of Medicaid and the percent of Medicare (reimbursement) and the percent of private (pay) are part of one variable, which is why these variables can be analyzed as dummy variables. When dummy coded variables are added into regression, one variable is excluded from the model as a reference group. Therefore, only two of these variables (Percent Medicare and Percent Private) will be included in the regression analyses and Percent of Medicaid will be excluded as a reference group. Similarly, the higher correlation between church related nonprofit nursing homes and for profit nursing homes (-.680) does not pose any problem in regression analysis, because only the dummy coded variable of the church related nursing homes variable will be included in the regression model as a measure of type of ownership. This research particularly compares church related nursing homes to all other type of nursing homes. Even if church related nonprofit nursing homes and for profit nursing homes were included in the model, this higher correlation would not be a problem since it is already lower than the critical value of 0.7. That is why this higher correlation of 0.684 which is very close to the critical Cronbach's Alpha value of 0.7 will not lead to a collinearity problem.

The third largest correlation is observed between the religiosity score and church related nonprofit nursing homes (0.677). The correlation between the religiosity score and nonprofit church related nursing homes is also less than the critical value of 0.7, and thus it does not lead to a collinearity problem (George and Mallery, 2003; Zinbarg, Revelle, Povel and Li, 2005). Therefore, these two variables (the religiosity score and nonprofit church related nursing home)

can safely be included in the regression models of this research. All of the other correlations between the independent variables are apparently less than 0.7, and even less than 0.6.

**Table 32: Bivariate Correlations Between the Independent Variables**

|                               | 1        | 2        | 3        | 4        | 5       | 6        | 7        | 8        | 9       | 10      | 11       | 12       | 13      | 14    | 15   | 16 |
|-------------------------------|----------|----------|----------|----------|---------|----------|----------|----------|---------|---------|----------|----------|---------|-------|------|----|
| <b>Government Related</b>     | 1        |          |          |          |         |          |          |          |         |         |          |          |         |       |      |    |
| <b>For Profit</b>             | -.212*** | 1        |          |          |         |          |          |          |         |         |          |          |         |       |      |    |
| <b>NPO-Not Church Related</b> | -.091    | -.680*** | 1        |          |         |          |          |          |         |         |          |          |         |       |      |    |
| <b>NPO- Church Related</b>    | -.066    | -.495*** | -.211 ** | 1        |         |          |          |          |         |         |          |          |         |       |      |    |
| <b>Religiosity Score</b>      | -.095    | -.493*** | .057     | .677**   | 1       |          |          |          |         |         |          |          |         |       |      |    |
| <b>Part of Chain</b>          | -.127*   | .373**   | -.224**  | -.198**  | -.232** | 1        |          |          |         |         |          |          |         |       |      |    |
| <b>Hospital Affiliated</b>    | .051     | -.173**  | .198**   | -.019    | -.027   | -.047    | 1        |          |         |         |          |          |         |       |      |    |
| <b>Staff Hours</b>            | .247**   | -.237**  | .065     | .140**   | .125*   | -.292*** | .393***  | 1        |         |         |          |          |         |       |      |    |
| <b>Number of Residents</b>    | .000     | .134**   | -.002    | -.189**  | -.104   | -.015    | -.187**  | -.346*** | 1       |         |          |          |         |       |      |    |
| <b>% Occupied Beds</b>        | -.003    | -.050    | .057     | .004     | .070    | -.019*   | -.218**  | -.413*** | .334*** | 1       |          |          |         |       |      |    |
| <b>% Medicaid</b>             | .060     | .269***  | -.088    | -.307*** | -.149** | -.003    | -.096    | -.218**  | .259*** | .132**  | 1        |          |         |       |      |    |
| <b>% Medicare</b>             | -.033    | -.087    | .130*    | -.019    | -.014   | .056     | .129*    | .264***  | -.144** | -.057   | -.589*** | 1        |         |       |      |    |
| <b>% Private</b>              | -.040    | -.249*** | -.010    | .389***  | .193**  | -.047    | .000     | .024     | -.185** | -.109   | -.684*** | -.187**  | 1       |       |      |    |
| <b>Resident groups</b>        | -.076    | .000     | -.004    | .042     | .106    | .079     | -.417*** | -.508*** | .280*** | .237*** | .172**   | -.360*** | .116*   | 1     |      |    |
| <b>Poverty Rate</b>           | .142**   | .011     | -.023    | -.056    | -.043   | -.019    | .195**   | -.014    | -.013   | .006    | .183**   | -.019    | -.205** | -.090 | 1    |    |
| <b>Market Concentration</b>   | -.065    | .092     | .063     | -.178*** | -.125*  | .139**   | .024     | -.169**  | -.157** | -.188** | .158**   | -.071    | -.128*  | .084  | .097 | 1  |

Note: \*  $p < .1$  ; \*\*  $p < .05$  ; \*\*\* $p < .001$

Correlations between the independent and dependent variables are depicted in Table 33. As can be seen in the table below, only a third (18 out of 48) of the correlations between independent and dependent variables is significant and the highest correlation (between Number of Residents and Post-Acute Patient Quality Measure) is -.258. The second highest correlation (-.221) is observed between nonprofit church related nursing homes and the chronic care patient quality measure, which means that being a nonprofit church related nursing home is associated with lower levels of chronic care quality score (better performance). All of the other correlations are less than .2.

**Table 33: Bivariate Correlations Between Independent and Dependent Variables**

| Independent Variables         | Dependent variables     |                              |                             |
|-------------------------------|-------------------------|------------------------------|-----------------------------|
|                               | Health Deficiency Score | Chronic Care Quality Measure | Post -Acute Quality Measure |
| <b>Government Related</b>     | -.019                   | -.025                        | -.033                       |
| <b>For Profit</b>             | .177 **                 | .193 **                      | -.061                       |
| <b>NPO-Not Church Related</b> | -.101                   | -.067                        | .030                        |
| <b>NPO- Church Related</b>    | -.124 *                 | -.221 **                     | .063                        |
| <b>Religiosity Score</b>      | -.165                   | -.194                        | .083                        |
| <b>Part of Chain</b>          | .097                    | .154 *                       | -.104                       |
| <b>Hospital Affiliated</b>    | -.112                   | .068                         | .141                        |
| <b>Staff Hours</b>            | -.174 **                | .107                         | .194**                      |
| <b>Number of Residents</b>    | .204 **                 | .035                         | -.258 ***                   |
| <b>% Occupied Beds</b>        | .135 **                 | -.174 **                     | -.140                       |
| <b>% Medicare</b>             | .093                    | -.008                        | -.145 **                    |
| <b>% Medicare</b>             | -.040                   | .174 **                      | .055                        |
| <b>% Private</b>              | -.079                   | -.137 *                      | .132 *                      |
| <b>Resident groups</b>        | .160 **                 | -.043                        | -.193 **                    |
| <b>Poverty Rate</b>           | -.004                   | -.026                        | .069                        |
| <b>Market Concentration</b>   | -.112                   | -.056                        | .109                        |

Note: \*  $p < .1$  ; \*\*  $p < .05$  ; \*\*\* $p < .001$

It is worth noting that correlation does not necessarily mean that there is a causal relationship between variables. More complex analysis, such as regression analysis should be used to make inferences about causal relationships between variables. Bivariate (pierson) correlation can not detect spurious relationships while regression analysis can, especially when a model is successfully built. One of the crucial steps of building a succesful regression model is to check it against a diagnostics test of regression models in order to determine if the assumptions of OLS regression are violated or not (Cohen, Cohen, West and Aiken, 2003; Hayes and Matthes, 2009).

Bivariate correlations among the three dependent variables of this research is presented in Table 34 below, which shows that only one out of three correlations are significant (at the  $p < .001$  level). According to this table, there is a negative (-.265) correlation between health deficiency scores and post-acute patient quality measures. This indicates that higher levels of health deficiencies are associated with lower levels of post-acute patient quality measures.

The fact that the one observed correlation is weak (less than 0.3) when the three independent variables are tested in regression analyses indicates that this research will not be measuring the same variable multiple times (Tabachnick and Fidell, 2007). Therefore, it is statistically safe to run three separate regression anlayses for each stated dependent variables.

**Table 34: Correlations Between the Dependent Variables**

|                                                 | <b>Health<br/>Deficiency</b> | <b>Chronic Care<br/>Quality</b> | <b>Post-Acute<br/>Care<br/>Quality</b> |
|-------------------------------------------------|------------------------------|---------------------------------|----------------------------------------|
| <b>Health Inspection<br/>Deficiency</b>         | 1                            |                                 |                                        |
| <b>Chronic Care (Long Stay)<br/>Quality</b>     | .031                         | 1                               |                                        |
| <b>Post-Acute (Short-Stay)<br/>Care Quality</b> | -.265***                     | .122                            | 1                                      |

**Note: \*  $p < .1$  ; \*\*  $p < .05$  ; \*\*\* $p < .001$**

## **MULTIVARIATE REGRESSION ANALYSES**

As described in the Chapter IV, this research explores the role of religiosity on three dependent variables (Health Deficiencies, Long Term Quality Care and Short-Term Quality Care) in two different aspects. The first aspect is to test whether nonprofit church related nursing homes perform better than all other types of ownership as hypothesized. The second aspect is to explore the possible impact of religiosity of nursing homes on performance independent of the types of ownership.

In addition, this research is testing the impact of the control variables of Chain Ownership, Hospital Affiliation, Number of Residents, Percentage of Occupied Beds, Percentage of Medicaid Reimbursed Patients (excluded from the regression analysis as a reference group as part of a dummy variable), Percentage of Medicare Reimbursed Patients, Presence of Organizational Resident Groups, Staff Hours, Market Concentration Index and Poverty Rates. Therefore, the impact of 12 independent variables on the three indicated dependent variables is tested in three different regression analyses in this study.

### **Diagnostic Tests for Three Regression Models**

#### **Mean Independence**

One of the main assumptions of OLS regression is that unexplained variance (random disturbance -  $U$ ) varies independent of any observable factor. There are two major reasons that may violate the mean independence assumption. These are Endogeneity (reverse causal order) and omitted variables.

One might argue that the assumption of a mean independence might be violated because there may be a reverse causal association (Endogeneity) between the three dependent variables

(Health Deficiencies, Long-Stay Patient Quality Care and Short-Stay Patient Quality Care) and the independent variables, number of residents and percentage of occupied beds. It is possible that prospective residents check the performance of nursing homes in these three areas through the information made publicly available by CMS. That is why more prospective residents could decide to go to the nursing homes which perform better in these areas. If this is the case, it can be concluded that there is a reverse causal order (Endogeneity) and that the random disturbance value (unexplained variation) would be influenced by the variation of dependent variables. However, there is no evidence (in the scholarship) suggesting that such a relationship exists. The mean independence assumption of OLS could also be violated by the exclusion of an independent variable (e.g., an intermediary variable that explains a causal relationship between the religiosity and the health inspection deficiency score) which should be in the model. Exclusion of such a variable will lead to the dependence of random disturbance factor because random disturbance will not be randomly changing for every case, rather it will be changing in relation to one of the variables (for instance, one that is related to a variable, which has causal relationship with the omitted variable). This study has reviewed the literature and included most of the independent variables reported to have significant impact on the dependent variables, including the external factors such as the poverty rate and the market concentration index. That is why it is not highly likely that a variable, which had strong explanatory power, is excluded in this model.

### **Collinearity Assumption**

Table 35 presents collinearity diagnostics (Tolerance and Variance Inflation Factor -VIF) of all of the independent variable in the three regression models used to predict three dependent variables. Tolerance values ( $1-R^2$ ) are obtained by subtracting the unique R-Square of each

independent variable from one (1). In the table below, values that are less than 0.2 imply problems of collinearity. The table shows that there is no 'Tolerance Value' in all of the three regression models, which is lower than 0.2.

**Table 35: Collinearity Diagnostics**

|                                 | <b>Health Inspection<br/>Deficiency</b> |       | <b>Long-Term Patient<br/>Quality Care</b> |       | <b>Short-Term Patient<br/>Quality Care</b> |       |
|---------------------------------|-----------------------------------------|-------|-------------------------------------------|-------|--------------------------------------------|-------|
|                                 | Tolerance                               | VIF   | Tolerance                                 | VIF   | Tolerance                                  | VIF   |
| (Constant)                      |                                         |       |                                           |       |                                            |       |
| <b>NPO- Church<br/>Related</b>  | .473                                    | 2.115 | .495                                      | 2.019 | .486                                       | 2.057 |
| <b>Religiosity<br/>Score</b>    | .537                                    | 1.860 | .573                                      | 1.746 | .563                                       | 1.775 |
| <b>Part of Chain</b>            | .803                                    | 1.246 | .845                                      | 1.183 | .825                                       | 1.212 |
| <b>Hospital<br/>Affiliated</b>  | .701                                    | 1.426 | .929                                      | 1.077 | .672                                       | 1.487 |
| <b>Staff Hours</b>              | .582                                    | 1.718 | .938                                      | 1.066 | .545                                       | 1.833 |
| <b>Number of<br/>Residents</b>  | .523                                    | 1.913 | .763                                      | 1.311 | .476                                       | 2.102 |
| <b>% Occupied<br/>Beds</b>      | .760                                    | 1.317 | .831                                      | 1.203 | .733                                       | 1.364 |
| <b>% Medicare</b>               | .714                                    | 1.400 | .872                                      | 1.147 | .683                                       | 1.463 |
| <b>% Private</b>                | .821                                    | 1.217 | .899                                      | 1.112 | .730                                       | 1.371 |
| <b>Resident<br/>groups</b>      | .715                                    | 1.398 | .721                                      | 1.386 | .702                                       | 1.424 |
| <b>Poverty Rate</b>             | .891                                    | 1.122 | .918                                      | 1.089 | .876                                       | 1.142 |
| <b>Market<br/>Concentration</b> | .851                                    | 1.175 | .746                                      | 1.340 | .850                                       | 1.176 |

Variance Inflation Factor (VIF) is obtained by dividing '1' by the tolerance value ( $1/\text{Tolerance}$ ). VIF reports the degree of increase in the variation of the regression coefficient as a result of collinearity. The values that are higher than four indicated inflated variance are due to

collinearity. Table 35 reports that none of the independent variables in all of the three models have VIF values higher than four. That is why, it is concluded that the collinearity assumption of the OLS is not violated.

### **Homoscedasticity Assumption**

Another assumption of the OLS is Homoscedasticity, which means that the variance of residuals across the regression line is homogeneous. Regression line is also the line of predicted values. Therefore, variance of residuals with predicted values should be checked to observe whether the assumption of homoscedasticity is violated. The plot of unstandardized regression residuals with unstandardized predicted values is used for this diagnostic in order to test if the homoscedasticity assumption is violated. To test the assumption of homoscedasticity the three models should be examined separately with relevant plots and diagnostics statistics.

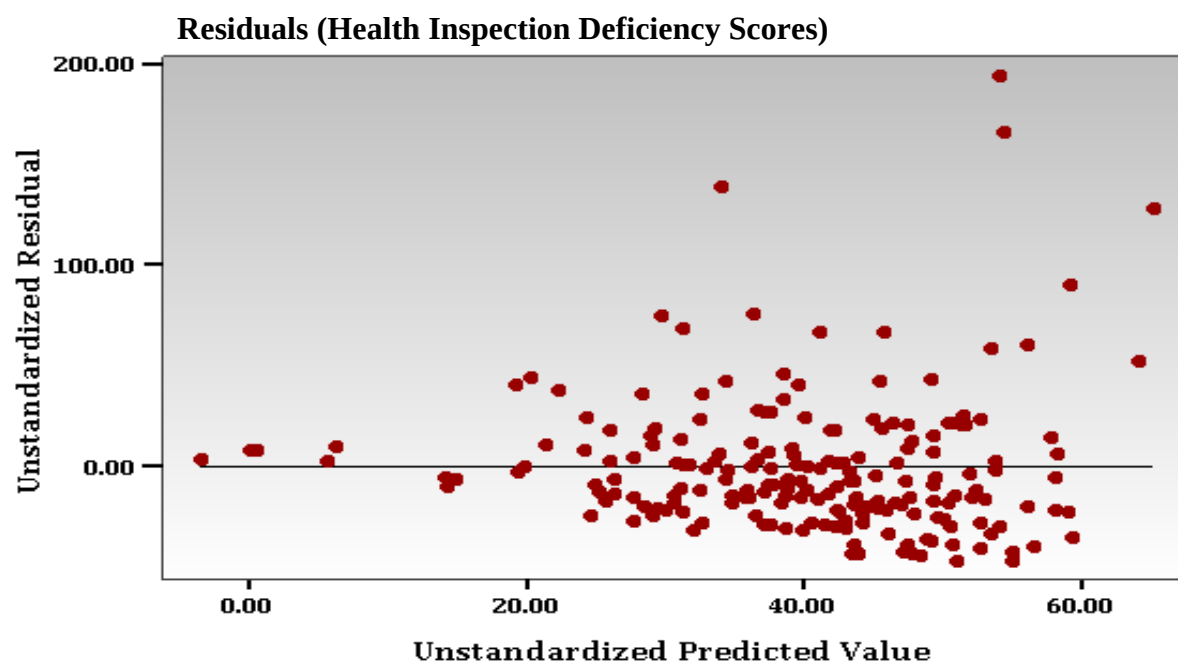


**Figure 6: Plot of Unstandardized Predicted Values vs. Unstandardized**

Figure 6 indicates that there may be a violation of the homoscedasticity assumption

when the variance of these variables apart from each other is different in lower values of predicted values versus the higher values of the predicted values. However, this pattern is not very obvious. There are only four outlier cases with unstandardized residuals of 100 or higher. If these four cases are not taken into account the shape of the variation looks like homogeneous variation. That is why residual statistics should be examined in order to determine if these four cases or other cases lead to more than a tolerable impact or distortion on the regression line.

**Table 36: Residuals Statistics for Health Inspection Deficiency**

|                                      | Minimu<br>m | Maximu<br>m | Mean    | Std.<br>Deviation | N   |
|--------------------------------------|-------------|-------------|---------|-------------------|-----|
| Predicted Value                      | -3.0035     | 66.2823     | 39.5930 | 11.97413          | 199 |
| Std. Predicted Value                 | -3.557      | 2.229       | .000    | 1.000             | 199 |
| Standard Error of<br>Predicted Value | 3.765       | 20.200      | 8.588   | 3.051             | 199 |
| Adjusted Predicted<br>Value          | -4.1081     | 61.7636     | 39.4998 | 12.51020          | 199 |
| Residual                             | -48.27175   | 194.06142   | .00000  | 34.55203          | 199 |
| Std. Residual                        | -1.354      | 5.444       | .000    | .969              | 199 |
| Stud. Residual                       | -1.377      | 5.516       | .001    | .997              | 199 |
| Deleted Residual                     | -49.89701   | 199.28650   | .09320  | 36.63201          | 199 |
| Stud. Deleted<br>Residual            | -1.380      | 6.016       | .008    | 1.027             | 199 |
| Mahal. Distance                      | 1.213       | 62.576      | 11.940  | 9.991             | 199 |
| Cook's Distance                      | .000        | .150        | .005    | .015              | 199 |
| Centered Leverage<br>Value           | .006        | .316        | .060    | .050              | 199 |

a Dependent Variable: Health Inspection Deficiency Score

As Table 36 depicts, Cook's D. is one of the measures that tests the influence of each point on the distribution of residuals. For the model predicting health inspection deficiencies, maximum Cook's Distance value is .150 which is tolerable given the critical value for Cook's distance is 1. The mean of Cook's Distance Value is also very low (.005). Thus, there are no

observed cases or points on the regression line which has extra ordinary influence on the distribution of residuals and therefore on the regression equation and regression line. This is inconsistent with the earlier visual examination of homoscedasticity, which might mean that the violation of the homoscedasticity assumption is not as serious as it appears visually. Therefore, there is no need to apply any variation into the model.

The Plot of Residuals below and expected values for the long-stay patient quality care measure reveals that the variance of residuals is homogeneous around the regression line. For this reason, there is no expectation for the violation of the homoscedasticity assumption in the model predicting the variation of long-stay patient quality care measure.

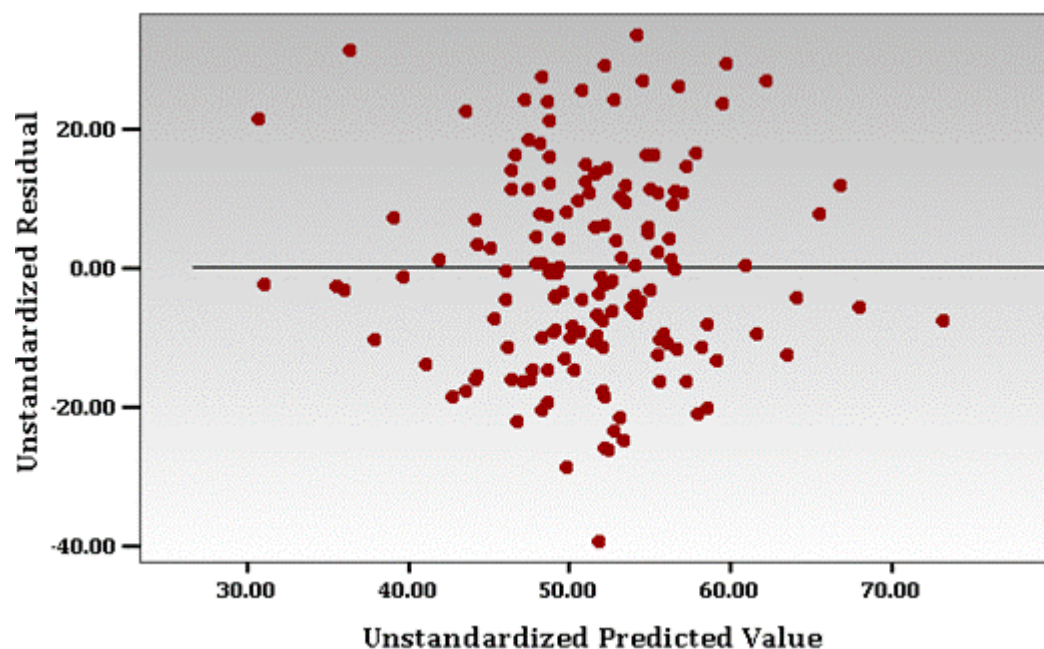


**Figure 7: Plot of Unstandardized Predicted Values vs. Unstandardized Residuals (Long-Stay Patient QM)**

The residuals statistics table below confirms the plot of residuals because the maximum Cook's Distance Value observed is .042 and the mean of the same parameter is only .006, which

are far lower than the critical value of 1. That is why it is concluded that the homoscedasticity assumption is not violated in this model.

**Table 37: Residuals Statistics for Long-Stay Patient Quality Measure (QM)**

|                                      | Minimum   | Maximum  | Mean    | Std.<br>Deviation | N   |
|--------------------------------------|-----------|----------|---------|-------------------|-----|
| Predicted Value                      | 30.0138   | 73.2559  | 51.2655 | 6.35524           | 151 |
| Std. Predicted Value                 | -3.344    | 3.460    | .000    | 1.000             | 151 |
| Standard Error of<br>Predicted Value | 1.937     | 9.280    | 4.146   | 1.532             | 151 |
| Adjusted Predicted<br>Value          | 26.2435   | 75.4444  | 51.3331 | 6.61922           | 151 |
| Residual                             | -39.47202 | 33.43114 | .00000  | 14.44411          | 151 |
| Std. Residual                        | -2.621    | 2.220    | .000    | .959              | 151 |
| Stud. Residual                       | -2.682    | 2.267    | -.002   | .998              | 151 |
| Deleted Residual                     | -41.32898 | 34.87211 | -.06756 | 15.64752          | 151 |
| Stud. Deleted<br>Residual            | -2.745    | 2.302    | -.002   | 1.003             | 151 |
| Mahal. Distance                      | 1.490     | 55.971   | 11.921  | 10.390            | 151 |
| Cook's Distance                      | .000      | .042     | .006    | .009              | 151 |
| Centered Leverage<br>Value           | .010      | .373     | .079    | .069              | 151 |

a Dependent Variable: Long-Stay Patient Quality Care Measure

A similar pattern is observed for the variance of residuals for the model predicting the short-stay patient quality care measures. Residuals are homogenously dispersed around the regression line and no outlier case is visually observed in Figure 8 below.

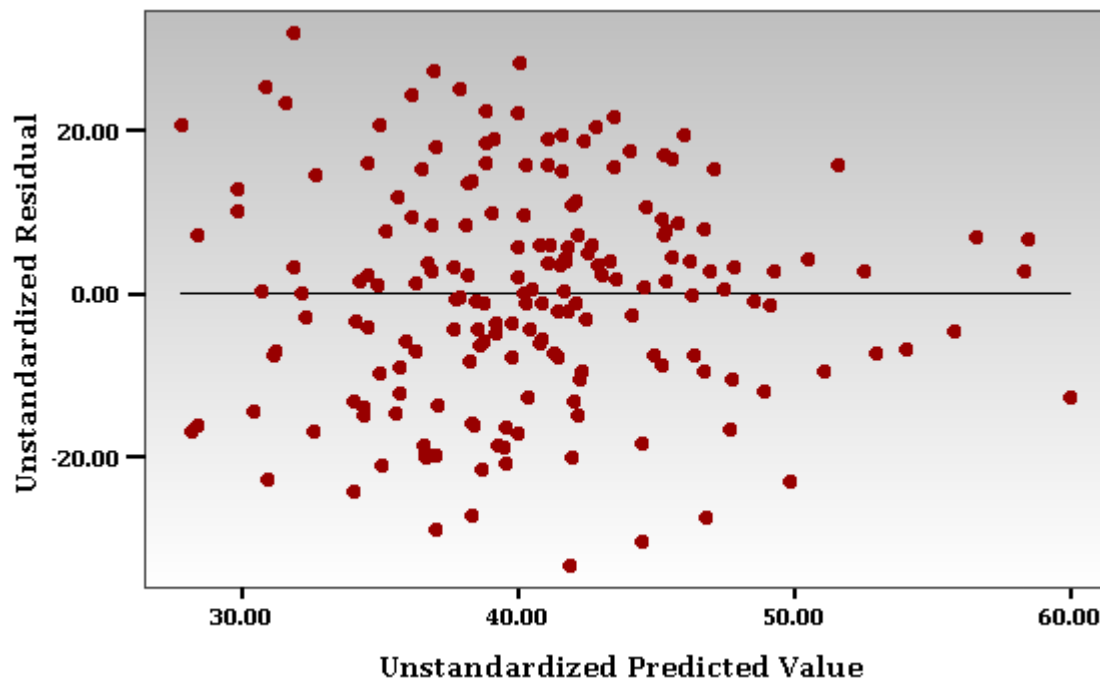


**Figure 8: Plot of Unstandardized Predicted Values vs. Unstandardized Residuals (Short-Stay Patient QM)**

The residual statistics table below, for the same model (short-stay patient quality care measure) reveals that, in fact, the homoscedasticity assumption is not violated because of the lower values obtained for Cook's Distance (Max=.039 and Mean = .005) parameter.

**Table 38: Residuals Statistics for Short-Stay Patient Quality Care Measure (QM)**

|                                      | Minimu<br>m   | Maximu<br>m | Mean    | Std.<br>Deviation | N   |
|--------------------------------------|---------------|-------------|---------|-------------------|-----|
| Predicted Value                      | 34.1384       | 69.9585     | 50.0137 | 6.08052           | 183 |
| Std. Predicted Value                 | -2.611        | 3.280       | .000    | 1.000             | 183 |
| Standard Error of<br>Predicted Value | 1.696         | 9.146       | 3.871   | 1.362             | 183 |
| Adjusted Predicted<br>Value          | 37.1158       | 75.2080     | 50.0606 | 6.19756           | 183 |
| Residual                             | -<br>39.91258 | 37.89375    | .00000  | 14.87731          | 183 |
| Std. Residual                        | -2.593        | 2.462       | .000    | .966              | 183 |
| Stud. Residual                       | -2.629        | 2.512       | -.001   | .998              | 183 |
| Deleted Residual                     | -<br>41.02223 | 39.46938    | -.04692 | 15.88142          | 183 |
| Stud. Deleted<br>Residual            | -2.676        | 2.553       | -.002   | 1.003             | 183 |
| Mahal. Distance                      | 1.214         | 63.253      | 11.934  | 9.735             | 183 |
| Cook's Distance                      | .000          | .039        | .005    | .008              | 183 |
| Centered Leverage<br>Value           | .007          | .348        | .066    | .053              | 183 |

A Dependent Variable: Short-Stay Patient Quality Care Measure

### **Hypothesis Testing for Health Inspection Deficiencies**

Table 39 below presents model summary statistics of regression analysis, which explores the role of independent variables (IVs) in health deficiency scores. R-square (0.107) of the first model reported in Table 39 indicates that 10.7 percent of the variation among health deficiencies is successfully explained by the independent variables included in the model. Table 40 indicates that the model (F value) is overall significant at the  $p < .05$  level. The F value is obtained by dividing the mean square regression value by the mean square residual ( $2365/1270=1.86$ ). Significant F values indicate that the model fits the data and that the model successfully tests a relationship between the independent variables and the stated dependent variable.

**Table 39: Model Summary for Health Inspection Deficiency**

| Model | R    | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
| 1     | .327 | .107     | .050              | 35.64919                   |

**Table 40: Model Summary for Health Inspection Deficiency**

| Model |            | Sum of Squares | df  | Mean Square | F     | Sig. |
|-------|------------|----------------|-----|-------------|-------|------|
| 1     | Regression | 28389.219      | 12  | 2365.768    | 1.862 | .042 |
|       | Residual   | 236380.812     | 186 | 1270.865    |       |      |
|       | Total      | 264770.030     | 198 |             |       |      |

T-statistics reported in regression coefficients table is the coefficient divided by its standard error (standard deviation of B coefficients for the given independent variable). T-values can be used to test whether the coefficient for each independent variable is significantly different from zero. If the significance value associated with the t-statistics is lower than the threshold p (significance level) values, it means that the independent variable's coefficient is significantly different from zero. In other words, this independent variable has a significant explanatory power in the model. If it is greater than the threshold value, it is an indication that the coefficient of the variable is not significantly different from zero.

Standardized Beta Coefficients reported in the table indicate a possibility of variation in the dependent variable when there is one standard deviation variation in the independent variable. Because these Beta scores are standardized by taking standard deviation differences into account instead of actual point by point differences. Beta coefficients can be used to determine the relative strength of the independent variables in the model. A higher absolute

value of the Beta means a higher impact of the independent variables on a dependent variable. Also, negative signs indicate an inverse relationship between the independent variables and the dependent variable while a positive sign indicates a positive relationship. In addition, a reported B in this table indicates that when there is a one unit increase in the independent variable it affects the amount of equal variation in dependent variable. For dummy coded variables, the B value gives the average difference between the group included in the model and the control group (i.e., Church related nonprofit and all other types of ownership).

This table depicts how a negative significant relationship is observed between the independent variable religiosity scores and the dependent variable health inspection deficiency scores, which means that controlling for all other factors, nursing homes which have higher religiosity scores tend to have lower levels of health inspection deficiency scores (i.e., better performance). Similarly a negative relationship is observed between market concentration and health inspection deficiency scores. The finding indicates that nursing homes operating in monopolistic markets appear to have lower levels of health deficiencies.

As it can be seen in Table 41 (Model 1), two of the 12 variables have significant explanatory power (significant t-statistics) in this model. These two variables are the religiosity score and the market concentration index. The impact of religiosity score on the health inspection deficiency is largest due to the absolute Beta value of the religiosity score (-.173) which is greater than Beta scores of market concentration (-.161). Moreover, the B values of the religiosity Score (-2.878) indicates that a one unit increase in the religiosity score decreases health inspection deficiency score by 2.878 points. This also means that controlled for all other factors, nursing homes, which have the highest possible religiosity level (18) would have 51.80 ( $18 * 2.878 = 51.80$ ) points lower health inspection deficiency scores compared to the nursing

homes possessing the lowest possible religiosity score (0). Similarly, a one unit (percent) increase in market concentration is associated with .196 points decrease in health inspection deficiencies. The table below shows that the church related nonprofit nursing homes variable has no significant p value at  $p < 0.1$ ,  $p < .05$ , and  $p < .001$  levels of measurement.

**Table 41: Coefficients for Health Inspection Deficiency**

| Model |                                           | Unstandardized Coefficients |            | Standardized Coefficients |          | Sig. |
|-------|-------------------------------------------|-----------------------------|------------|---------------------------|----------|------|
|       |                                           | B                           | Std. Error | Beta                      | t        |      |
| 1     | (Constant)                                | 33.429                      | 41.253     |                           | .810     | .419 |
|       | NPO- Church Related NH                    | .921                        | 11.089     | .008                      | .083     | .934 |
|       | Religiosity Score                         | -2.878                      | 1.571      | -.173                     | -1.831*  | .069 |
|       | Part of Chain Nursing Homes               | 5.940                       | 6.064      | .076                      | .980     | .329 |
|       | Hospital Affiliated Nursing Home          | -1.177                      | 10.797     | -.009                     | -.109    | .913 |
|       | Total Staff Hours                         | -1.263                      | 3.050      | -.040                     | -.414    | .679 |
|       | Number of Residents                       | .055                        | .051       | .085                      | 1.071    | .285 |
|       | Percentage of Occupied Beds               | .130                        | .353       | .030                      | .368     | .713 |
|       | Percent Medicare                          | -.047                       | .143       | -.025                     | -.331    | .741 |
|       | Percent Private                           | -.088                       | .147       | -.049                     | -.599    | .550 |
|       | Presence of organizational resident group | 20.078                      | 13.913     | .131                      | 1.443    | .151 |
|       | Poverty Rate in the County                | .176                        | .455       | .028                      | .386     | .700 |
|       | Market Concentration index (Herfindalh)   | -.196                       | 0.91       | -.161                     | -2.140** | .034 |

a Dependent Variable: Health Inspection Deficiency Score

Note: \*  $p < 0.1$ , \*\*  $p < .05$ , and \*\*\*  $p < .001$

In conclusion, based on the outputs of the regression analyses the null hypothesis **H2a0** will be accepted: **Religion related (church-affiliated) nursing homes are not more effective than their secular counterparts in CMS health inspection deficiency results.**

Although Table 20, in the descriptive section, revealed that church related nonprofit nursing homes, on average, have lower levels of health deficiency scores, this table reports that such a relationship was explained out when controlled for other factors because this table report that t-statistics of church related nonprofit nursing homes is not significant. Therefore, the null hypothesis **H2a0** will be accepted.

However, the regression model **rejects the null hypothesis of H2b0** stating: **Regardless of ownership type affiliation, more religious nursing homes are not more effective than their less religious counterparts in CMS health inspection deficiency results.**

The reason why this null hypothesis was rejected is that the significance value associated with t-statistics of religiosity score was higher than the significance threshold (confidence interval) value of 0.1 which indicated that the religiosity score variable had a significant explanatory power in the model. In addition, B and beta values associated with the religiosity score were negative, which indicated that one unit (for B) or one standard deviation (for Beta) increase in the religiosity score is associated with a significant decrease in health deficiency scores.

### **Hypothesis Testing for Long-Stay Patient Quality Care Measures**

Table 42 reports that the obtained R-Square of the first model is .162, which means that this model successfully explained 16.2 percent of all variation in the long-stay patient quality care measure. Table 43 confirms Table 42 by reporting that the overall model, which was constructed to predict long-stay patient quality care measures is a reliable model as the F statistics of this model is significant at the  $p < .05$  level.

**Table 42: Model Summary for Long-Stay Patient Quality Care**

| Model | R    | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
| 1     | .403 | .162     | .089              | 15.05902                   |

**Table 43: ANOVA for Long-Stay Patient Quality Care**

| Model |            | Sum of Squares | Df  | Mean Square | F     | Sig. |
|-------|------------|----------------|-----|-------------|-------|------|
| 1     | Regression | 6058.365       | 12  | 504.864     | 2.226 | .014 |
|       | Residual   | 31294.843      | 138 | 226.774     |       |      |
|       | Total      | 37353.208      | 150 |             |       |      |

As it can be seen in Table 44, three independent variables significantly ( $p < .100$ ) predict the variation in the dependent variable long-stay patient quality care. These three variables are a percent of Medicare, total staff hours and percentage of occupied beds. By looking at beta values in this table, it can be concluded that the percent of Medicare variable has the highest impact (.182) on the dependent variable long-stay patient quality care measure in comparison to staff hours (.154) and the percentage of occupied beds (-.139).

Because the sign for the variable percentage of occupied beds' Beta values are negative, we conclude that there is an inverse relationship between this variable and the dependent variable (long-stay patient quality care measures). In other words, higher values for the percentage of occupied beds are associated with lower levels of long-stay patient quality care measures. Since, higher values in this variable means poorer performance, this finding indicates that nursing homes which have higher percentages of occupied beds are performing better in this measure.

The B value for the percentage of occupied beds reveals that a one unit increase in the percentage of occupied beds is associated with a .323 decrease in long-stay patient quality care measures.

However, this table reports that two variables, the percent of Medicare (reimbursed) and staff hours, hold a positive association with the long-stay patient quality care scores. In other words, nursing homes with a higher percentage of Medicare reimbursed patients and higher staff hours, on average, tend to perform poorly (higher long-stay patient quality care scores) on this measure. A one unit increase in percent of Medicare (reimbursement) is associated with 0.185 increases in the dependent variable while a one unit increase in total staff hours per resident per day is associated with 4.189 higher long-stay patient quality care scores.

Findings reported in Table 44 reject the findings of Table 30 that there is a significant relationship between being a church related nursing home and long-term quality measures. Table 44 reveals that the significant relationship observed in Table 30 is explained out after controlling for the stated independent variables since the reported "t" value of church related nonprofit nursing homes is not significant.

Therefore, based on the findings indicated the null hypothesis **H1a0** will be accepted.

**H1a0: Religion related (church-affiliated) nursing homes are not more effective than their secular counterparts in improving their long-stay patients' physical and mental health.**

Similarly, the null hypothesis **H1aa0** will be accepted since analysis shows that the religiosity score does not have a significant contribution (t-statistics) to the prediction of the dependent variable.

The null hypothesis **H1aa0** states that **regardless of ownership type affiliation, more religious nursing homes are not more effective than their less religious counterparts in improving**

their long-stay patients' physical and mental health.

**Table 44: Coefficients for Long-Stay Patient Quality Care Measure**

| Model |                                           | Unstandardized Coefficients |            | Standardized Coefficients | t       | Sig. |
|-------|-------------------------------------------|-----------------------------|------------|---------------------------|---------|------|
|       |                                           | B                           | Std. Error | Beta                      |         |      |
| 1     | (Constant)                                | 60.189                      | 24.823     |                           | 2.425   | .017 |
|       | NPO- Church related NH                    | -9.795                      | 6.438      | -.168                     | -1.521  | .130 |
|       | Religiosity Score                         | -.516                       | .851       | -.062                     | -.606   | .545 |
|       | Part of Chain Nursing Homes               | 3.972                       | 2.997      | .112                      | 1.325   | .187 |
|       | Hospital Affiliated Nursing Home          | 4.757                       | 6.048      | .064                      | .787    | .433 |
|       | Total Staff Hours                         | 4.189                       | 2.420      | .154                      | 1.731*  | .086 |
|       | Number of Residents                       | .017                        | .026       | .057                      | .665    | .507 |
|       | Percentage of Occupied Beds               | -.323                       | .195       | -.139                     | -1.661* | .099 |
|       | Percent Medicare                          | .185                        | .083       | .182                      | 2.219** | .028 |
|       | Percent Private                           | -.028                       | .076       | -.034                     | -.370   | .712 |
|       | Presence of organizational resident group | .956                        | 9.066      | .008                      | .105    | .916 |
|       | Poverty Rate in the County                | -.038                       | .213       | -.015                     | -.179   | .858 |
|       | Market Concentration index (Herfindalh)   | .004                        | .047       | .008                      | .086    | .931 |

A Dependent Variable: Long-Stay Patient Quality Care Measure / **Note:** \* p. <0.1, \*\* p <.05

### Hypothesis Testing for Short-Stay Patient Quality Care Measures

Table 45 below shows that the obtained R-Square ( $R^2$ ) of the first model is .143 which means that this model successfully explains 14.3 percent of all of the variation in the short-stay patient quality care measure variable.

**Table 45: Model Summary for Short-Stay Patient Quality Care Measure**

| Model | R    | Adjusted R Square | Std. Error of the Estimate |
|-------|------|-------------------|----------------------------|
| 1     | .378 | .143              | 15.39344                   |

Table 46 confirms Table 44 by reporting that the overall model, which was constructed to predict short-stay patient quality care measures is a reliable model as the F statistic of this model is significant at the  $p < .05$  level. Significant values of F indicate that there is a goodness-of-fit between the data and this model, which means that the  $R^2$  is significantly different from "0" (zero).

**Table 46: ANOVA for Short-Stay Patient Quality Care Measure**

| Model |            | Sum of Squares | Df  | Mean Square | F     | Sig. |
|-------|------------|----------------|-----|-------------|-------|------|
| 1     | Regression | 6729.046       | 12  | 560.754     | 2.366 | .008 |
|       | Residual   | 40282.849      | 170 | 236.958     |       |      |
|       | Total      | 47011.895      | 182 |             |       |      |

According to Table 47 below, there are only two variables, which have statistically significantly explanatory powers in the model, which predicts variation in short-stay patient quality care measures. These two variables are the number of residents and the percent of private pay patients. The number of residents has a higher standardized Beta coefficient value (-.176), therefore it holds more explanatory power compared to the percent of privately paid patients (.168).

These findings (negative beta values) suggest that two indicated variables are inversely associated with the dependent variable, which means that the higher number of residents, on average, are associated with lower short-stay patient quality measure scores (better

performance). However, the percentage of private pay is positively associated with the dependent variable of this model. A one unit increase in the percentage of private payment type is associated with .132 increase in short-stay quality measures and one unit increase in the number of residents is associated with a -.050 decrease in short-stay patient quality measures. In a hypothetical situation in which one nursing home has 50 and the other has 100 residents, the second nursing home, controlled for all other factors, is expected to have a 2.5 lower score on this scale compared to the first one. However, there is only 14.3 percent likelihood of such a difference being observed in this way in real world because R-square reports that this model only explains 14.3 of all of the variance in the dependent variable.

**Table 47: Coefficients for Short-Stay Patient Quality Measure**

| Model |                                           | Unstandardized Coefficients |            | Standardized Coefficients | t        |            | Sig. |
|-------|-------------------------------------------|-----------------------------|------------|---------------------------|----------|------------|------|
|       |                                           | B                           | Std. Error | Beta                      | B        | Std. Error |      |
| 1     | (Constant)                                | 56.500                      | 19.880     |                           | 2.842    |            | .005 |
|       | NPO- Church related NH                    | -4.196                      | 5.120      | -.083                     | -.819    |            | .414 |
|       | Religiosity Score                         | .689                        | .740       | .088                      | .932     |            | .353 |
|       | Part of Chain Nursing Homes               | -3.000                      | 2.795      | -.084                     | -1.074   |            | .285 |
|       | Hospital Affiliated Nursing Home          | -.331                       | 5.058      | -.006                     | -.065    |            | .948 |
|       | Total Staff Hours                         | .854                        | 1.684      | .052                      | .507     |            | .613 |
|       | Number of Residents                       | -.050                       | .023       | -.176                     | -2.123** |            | .035 |
|       | Percentage of Occupied Beds               | -.048                       | .164       | -.025                     | -.292    |            | .771 |
|       | Percent Medicare paid                     | -.003                       | .067       | -.004                     | -.048    |            | .962 |
|       | Percent Private pay                       | .132                        | .067       | .168                      | 1.979**  |            | .049 |
|       | Presence of organizational resident group | -10.609                     | 6.482      | -.157                     | -1.637   |            | .104 |
|       | Poverty Rate in the County                | .121                        | .206       | .045                      | .588     |            | .558 |
|       | Market Concentration index (Herfindalh)   | .063                        | .041       | .117                      | 1.526    |            | .129 |

A Dependent Variable: Short-Stay Patient Quality Measure. **Note:** \* p. <0.1, \*\* p <.05

As discussed in the descriptive section of this chapter, Table 30 reports that there is a significant relationship between the type of ownership and short-stay patient quality measures. Specifically church related nursing homes had poorest performance among all other ownership types according to this measure. Findings of Table 47 suggest that such a significant relationship is explained out after controlling for other factors with the OLS regression analysis.

Significance values associated with the t-statistics in the table above reveals that there is no significant association between two indicated independent variables, the church related nonprofit nursing homes and the religiosity score, and the dependent variable short-stay patient quality care measure.

Therefore, both null hypotheses for short-stay patient quality measures will be accepted. The null hypothesis **H1b0** states: **religion related (church-affiliated) nursing homes are not more effective than their secular counterparts in improving their short term patients' physical and mental health.**

The null hypothesis **H1bb0** states: **regardless of ownership type affiliation, more religious nursing homes are not more effective than their less religious counterparts in improving their short-stay patients' physical and mental health.**

Overall, only one out of six hypotheses is accepted. The outputs of the three regression models also indicated that part of chain nursing homes, hospital affiliated nursing home, presence of organizational resident groups, and the poverty rate in a county variables did not yield any statistically significant explanatory power in the three regression models. However, this does not mean that these variables should not have been in these models in the first place. Relevant studies have been testing the affects of these variables and some have reported that some of these variables yielded statistically significant explanatory powers in their models

(Amirkhanyan, Kim, Lambright, 2009; Ben-Ner and Ren, 2008; Grabowski and Hirth, 2003). As discussed in the diagnostics section of the regression analyses, the exclusion of a variable, which should be in the model could violate the assumptions of the OLS regression and therefore could yield biased results.

### **Comparing the Findings to the Similar Studies**

Compared to previous similar studies, this study has some important differences. First of all, this study looks into performance of faith based service provider nursing homes beyond a simple ownership type grouping. With the theory it proposed, relevant literature review, and data collection, this study placed religion in the center of discussion. When faith based service providers are part of a debate, in fact religion and the role of religious affiliation is being discussed, not type of an organizational ownership. Therefore, the fundamental point is not to discuss an ownership type, but to determine whether religious involvement has an impact on organizations' performance. That is why, an attempt is made to create a comprehensive theory which is not a typical organization theory.

Similar studies in long term care have failed to ascertain the possible role of religion by not going beyond ownership type grouping (Ragan, 2004, Knox, Blankmeyer and Stutzman, 2006; Amirkhanyan, Kim and Lambright, 2009; White et al., 2006). In those studies, the possible role of religion in service outcome is speculated by the type of ownership, but not with relevant data sets that provide helpful insight about the degree of organizational religious involvement. To address this shortcoming of other studies in the field, this researcher conducted a survey among all Medicare and Medicaid certified nursing homes in the state of Virginia in order to determine the degree of religious involvement at the organizational level. The total religiosity score of each nursing home group or ownership type is correlated to the stated three dependent

variables along side the other eleven interacting variables.

Findings of this study, in part, are consistent with those of Amirkhanyan et al. (2009), and Knox et al. (2006). Amirkhanyan et al. (2009) found that certain organizational and environmental factors are more influential than the faith based character - status - in comparison to the quality of nursing home services. Similarly, Knox et al. (2006) conducted a study that evaluated the economic efficiency of nonprofit nursing homes in Texas. Their study did not find any difference in the quality of care provided among nonprofit nursing homes. On the other hand, the finding of this study contrasted findings of Ragan (2004) and Weisbrod and Schlesinger (1986). These two studies found a correlation between the religious affiliation of nursing homes and their performance. The difference between these two studies and this study might be due to the methodological approach to the subject. For instance, Ragan (2004) employed a very simplistic statistical method (ANOVA) that did not measure the impact of interacting variables on dependent variables, unlike this study and Amirkhanyan et al. (2009) did.

## CHAPTER VI

### SUMMARY, CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS

#### Summary and Discussion

The primary purpose of this study is to determine whether being a church affiliated nursing home influences performance. Performance is measured based on criteria put in place by the Center for Medicare and Medicaid Services (CMS). The secondary purpose is, regardless of ownership type - religiously affiliated or secular - to investigate if religiously involved nursing homes perform better than their less religiously involved counterparts. These two purposes are hypothesized with six different hypotheses each of which are tested by utilizing OLS regression analysis in Chapter V.

As it is extensively discussed in chapters I and II of this study, the subject has been part of serious debates among policy makers, practitioners and scholars after President George W. Bush's creation of the White House Office of Faith-Based and Community Initiatives in 2001. There have been two fundamental aspects of the debates regarding the Charitable Choice Initiative since creation of that office. First it is debated as to whether the law and its implementation violate the constitutional rule of 'separation of church and state', and secondly, whether church related nonprofit social service providers are more effective compared to their secular counterparts.

Chapter II broadly discusses the development process of the Charitable Choice Initiative, how it was brought to the attention of conservative lawmakers, and then to the desk of President Bill Clinton who signed the Charitable Choice Initiative into law as part of a massive welfare reform bill in 1996. As it was discussed in Chapter II, there was no doubt that supporters of the

initiative truly believed that religion can make a difference in the lives of those who were left behind and can help to resolve great social issues of our time. Proponents believe that the government and traditional service providers have come short in addressing previously discussed social issues. Not only the members of this early conservative movement genuinely believed and pushed this agenda, but also President Bush believed that religion and people of faith can make a difference in the lives of the needy and poor in the United States. According to this premise, organizations that are created by churches and congregations ought to be supported by the government through grants and contracts alongside traditional secular organizations which also provide much needed social services.

Although there have been lawsuits filed against the Charitable Choice Initiative law and its individual implementations, so far, the Supreme Court of the United States has not ruled against the law thus far. Since the Supreme Court did not decide against the law, debates have shifted, over time, from challenging the constitutionality of the initiative to challenging whether the government should fund organizations whose effective service outcomes have not been proven through research and analyses. The notion that the government cannot simply give away tax payers' money because of an ideological leaning toward religiously affiliated service providers in the policy maker circles, intrigued and prompted scholars to study the performance of church related service providers in various service provisions. Many of these studies are mentioned in Chapter I and in Chapter III of this research. While some of the studies concluded that church related service providers perform better than their secular counterparts, some found no substantial difference in performance compared to secular service providers. Since the findings in the literature review are mixed, and there is no clear conclusion on the subject, and consequently the debates still continue, this research sought to ascertain the possible role of

church affiliation and religiosity on the performance of Medicare and Medicaid certified nursing homes in the state of Virginia, USA.

### **Research Questions and Hypotheses**

There are two questions stated for this research: **1-** Are nonprofit, faith-based nursing homes more effective in providing Medicare and Medicaid services compared to their secular nonprofit and for-profit counterparts? **2-** Are more religious nursing homes, regardless of their ownership type affiliation, more effective in providing Medicare and Medicaid services compared to their less religious counterparts?

The first research question intends to compare the performance of church related nursing homes to all other ownership types. In order to measure the relative performance of church related nursing homes there are three hypotheses stated. These three hypotheses are:

**H1a:** Religion related (church-affiliated) nursing homes are more effective than their secular counterparts in improving their long-stay patients' physical and mental health.

**H1b:** Religion related (church-affiliated) nursing homes are more effective than their secular counterparts in improving their short term patients' physical and mental health.

**H2a:** Religion related (church-affiliated) nursing homes are more effective than their secular counterparts in CMS health inspection deficiency results.

These stated hypotheses aim to analyze whether church affiliated nursing homes perform better than their secular counterparts on account of long-stay patient quality care measures, short-stay patient quality care measures and health inspection deficiency results. As statistical tests performed in Chapter V showed, the regression analyses found no evidence that church related nursing homes perform better than their secular counterparts in Virginia. Therefore, none of the stated hypotheses for the first question were supported in this study. In other words, the 'church

affiliated nonprofit nursing home' variable did not yield any statistically significant results.

The second question aims to measure the possible role that religion plays in determining the performance of nursing homes, regardless of ownership type affiliation. Since 'religion' is presumed as an influential interacting variable in this study, the possibility of religion influencing performance is analyzed independent of ownership type affiliation. As the religiosity survey conducted for this research unfolded, the fact that there are some nursing homes which are not affiliated with a religious organization, but have more religious components than some of the church related nursing homes, it became clear that religion is not bound with ownership type affiliation. This finding led to analyzing religion's potential impact on service outcomes, regardless of ownership type affiliation. The second question is tested with the same type of hypotheses stated for the first question. There are three hypotheses stated to analyze the possible role of religion for this research question too.

**H1aa:** Regardless of ownership type affiliation, more religious nursing homes are more effective than their less religious counterparts in improving their long-stay patients' physical and mental health.

**H1bb:** Regardless of ownership type affiliation, more religious nursing homes are more effective than their less religious counterparts in improving their short-stay patients' physical and mental health.

**H2b:** Regardless of ownership type affiliation, more religious nursing homes are more effective than their less religious counterparts in CMS health inspection deficiency results.

For the second question, the potential influence of the degree of religiosity is analyzed through these stated hypotheses in order to make predictions about whether more religious nursing homes perform better than their less religious counterparts in regard to long-stay patient

quality care measures, short-stay patient quality care measures and CMS health inspection deficiency results. OLS regression analyses supported only one of the three stated hypotheses. The supported hypothesis states that 'Regardless of ownership type affiliation, more religious nursing homes are more effective than their less religious counterparts in CMS health inspection deficiency results'. This finding indicates that more religious nursing homes have fewer health inspection deficiencies compared to their less religious counterparts.

To analyze the above stated hypotheses for both of the research questions, two main data sets were employed. The data for the stated three dependent variables come from the Center for Medicare and Medicaid Services (CMS). These data sets included patient quality measures, both long-stay and short-stay patient quality measures, and health inspection deficiencies. Other than poverty (county level) and organizational religiosity data sets, data sets for all independent variables come from CMS as well. Poverty data at county levels comes from the U.S. Census Bureau and organizational religiosity data was collected from 218 out of 287 CMS certified nursing homes in the state of Virginia by this researcher. The organizational religiosity survey data is taken as a base for statistical analyses when determining ownership type for each nursing home. In other words, 218 out of 287 nursing homes that responded to the questionnaire for this study are included in the analyses; non-respondent nursing homes were left out of the analyses.

Six government related nursing homes, 49 nonprofit secular nursing homes, 193 for profit nursing homes and 29 church related nonprofit nursing homes responded to the religiosity survey conducted for this study. The number of respondents to the survey for all ownership types, other than church affiliated nursing homes, are naturally lower than what CMS' OSCAR data reports for the state of Virginia. OSCAR data reports that there are 13 church related nursing homes out of 287 CMS registered nursing homes. The reason for this discrepancy may

be because of unclear definitions for 'church affiliation' or 'faith based' terms. As Ragan (2004) indicated there are variations between CMS' data sets and other data sets, particularly when it comes to the 'church affiliation' ownership type, since it means different things to different people. But, as it is explained in Chapter V, the reliability of responses according to ownership type in the questionnaire is verified through different means to ensure that responses given to ownership type question are true.

### **The Impact of Interacting Variables**

In terms of institutional characteristics of church related versus all other types of nursing homes, findings reveal that church related nursing homes' religiosity score, overall, is higher than all other ownership types with an average of 10.37 out of 18. The findings of this study show that even though church affiliated nursing homes, on average, are more religious than other nursing home types, religiosity is not bound with church affiliation status. As Figure 2 in Chapter V depicts, there are some for profit and secular nonprofit nursing homes that are more religious than some of the church related nursing homes. Thus, it is important to analyze whether more religious nursing homes perform differently than their less religious counterparts in order to make assessments about the possible role of religion in service outcomes.

As a matter of fact, the religiosity score plays a role in service outcomes according to the regression analysis for health inspection deficiency scores for nursing homes. The religiosity score variable had the most significant explanatory power in that particular modal. As the B value for the religiosity score indicated, a one unit increase in religiosity score decreases the health inspection deficiency score by 2.878 points. Therefore, the only null hypothesis rejected in this study is "**Regardless of ownership type affiliation, more religious nursing homes are not**

**more effective than their less religious counterparts in CMS health inspection deficiency results."** It should be reiterated that the church affiliated nonprofit nursing home variable did not yield any significant explanatory power in the same model that measured the impact of twelve independent variables on the health inspection deficiency variable. That is why the null hypothesis **"Religion related (church-affiliated) nursing homes are not more effective than their secular counterparts in CMS health inspection deficiency results"** was accepted. It also ought to be noted that the 'total religiosity' variable did not yield any significant t-value in either of the two other regression models: the long-stay patient quality care measures and the short-stay patient quality care measures.

CMS considers chain affiliation to be one of the variables that might have a role in the performance of nursing homes, because it implies more availability of resources for affiliates. However, findings for empirical studies in respect to the impact of a chain affiliation status on performance are mixed (Anderson et al., 2003). In the current study, church related nursing homes came third among all other four types of nursing homes with a 45 percent chain affiliation rate. For profit nursing homes, not surprisingly, have the highest chain affiliation rate of 82 percent. In this study, the 'chain affiliation' variable did not yield any significant contribution in predicting any of the three regression models that were constructed for health inspection deficiencies, the long-stay patient quality care measures and short-stay patient quality care measures.

Hospital affiliation or being adjunct to a hospital is thought to influence the performance of a nursing home's patient outcomes (Grabowski and Hirth, 2003; Amirkhanyan et al., 2009). Descriptive statistics in Chapter V show that only seven percent of church related nonprofit nursing homes are affiliated with, or adjunct to a hospital in Virginia. Interestingly, only four

percent of for profit nursing homes in Virginia are affiliated with, or adjunct to a hospital. The hospital affiliation variable did not produce a significant t-value, and therefore did not have any explanatory power in the three regression models that aimed to predict the possible role of twelve independent variables on three dependent variables.

Church affiliated nonprofit nursing homes in Virginia have the second highest staff hours per resident per day, on average, after government related nursing homes. For profit nursing homes fared the lowest on this measure. The reason for the lowest staff hours among all other groups might be profitability oriented management philosophy of for profit nursing homes. As discussed in Chapter IV, CMS considers higher staff hours per resident per day as an implication of better care. Similarly, studies have found that there is a correlation between higher staff hours and better quality of care in nursing home settings (Stanton, 2004; McGrail and McGregor, 2007; Harrington et al., 2000; Schnelle et al., 2004a; Zhang and Grabowski, 2004; Kane, Shamliyan, Mueller, Duvai and Witt, 2007). This study, in contrast to the mentioned previous studies, in at least one measure, found that total staff hours per resident per day is negatively associated with better performance on long-stay patient quality care measures. There are two possible explanations for this finding. First, this might occur due to the methodology employed in analyzing the data sets. Particularly the data aggregation procedure might have an impact on this finding. Second, as an expert in the nursing field expressed to this researcher, "Sole staff hours may not be adequate enough to predict role of the workforce in patient outcomes in nursing homes. Characteristics of the nursing staff, such as the level of employee satisfaction, low turnover and consistent assignment play a far greater role in the quality of care delivered than simply head count" (E-mail interview with Hobart Harvey, 2011).

In terms of the number of residents, church related nursing homes had the lowest number

on average among all other groups with 68.41 residents. For profit nursing homes had the highest number of residents on average 102.2. The 'number of residents' variable has a statistically significant explanatory power in one out of three regression models that predicted three different dependent variables. This independent variable has a statistically significant explanatory power on the dependent variable short-stay patient quality care measure much more than the 'percent private pay' variable, which is the only other variable with significant t-value. According to the findings of this study, church related nonprofit nursing homes have the lowest number of short-stay patients and performed worse than all other nursing home types on short-stay patient quality care measure. Thus, the role of the number of residents in this measure makes more sense. The findings reveal that the higher the number of residents at a nursing home the better the short-stay patient quality care after controlling for other factors.

Even though there is no substantial difference among all types of nursing homes in terms of the percent of occupied beds, church related nonprofit nursing homes fared in second place with 87.52 percent, right after nonprofit secular nursing homes. The percentage of the occupied beds variable had a significant explanatory power in one out of three regression models, which is the regression model of long-stay patient quality care measures. The regression output (Table 44) in Chapter V indicates that as the percentage of occupied beds increases, the quality of care for long-stay patients gets better. Taking into account the role of financial health in an organization's performance, this finding makes more sense. It is obvious that the higher the occupancy rate, the better the revenue for a nursing home.

The payment type of the residents is considered as a significant interacting variable that impacts the performance of a nursing home. Studies argue that nursing homes try to avoid admitting residents with Medicaid reimbursement, which pays for chronic care for low income

individuals. Medicare reimbursement, private insurance and out-of-pocket payment types are more desirable for long term care providers because of a higher cost-profitability ratio compared to Medicaid reimbursement rates (The Lewin Group, 2002; Wodchis et al., 2007; Castle, 2006; Amirkhanyan et al., 2009).

The ANOVA analyses (Table 16) in Chapter V indicates that church related nonprofit nursing homes have the lowest number of Medicaid reimbursed patients, while government related nursing homes have the highest number of Medicaid reimbursed patients. This finding is parallel with the notion that religious nonprofit nursing homes have a high ratio of private-pay residents, and therefore these nursing homes have more availability of resources. This notion might be true, when the means comparison (ANOVA) is run, without weighing the possible impact of any interacting variable. In means comparison (ANOVA), church affiliated nursing homes performed better than all other ownership types in long-stay patient quality care measures. After weighing the role of independent variables, that finding disappears in the regression analysis. In fact, payment types have significant explanatory powers in two regression models in this study. The percentage of Medicare reimbursed patients variable has a significant impact in predicting long-stay patient quality care measure, while the percentage of the private payment variable has a significant impact in predicting short-stay patient quality care measures.

The presence of organized resident groups in nursing homes is considered a variable that might have a positive influence on the way that a particular nursing home is managed (CMS, 2010; Amirkhanyan et al., 2009). Even though there is no substantial difference among all nursing home types, church related nonprofit nursing homes in Virginia have the highest percentage rate (97 percent) for the presence of organized resident groups. As an interaction variable for this study, the presence of an organized residents groups variable did not have any

significant explanatory power in predicting any of the three regression models in the data analyses chapter.

Church related nursing homes in Virginia provide services in areas where the poverty rate is lowest compared to all other ownership types. In contrast to church affiliated nursing homes, government related nursing homes provide services in markets where the poverty rate is highest. This finding is also parallel with Medicaid and private payment types. As mentioned above, government related nursing homes have the highest rate of Medicaid reimbursed residents and the lowest rate of privately paying residents, while church related nonprofit nursing homes have the complete opposite percentages. But, the 'poverty rate in a county' variable did not produce any statistically significant results in predicting any of the three regression models, which were run for health inspection deficiency, long-stay patient quality care measures and short-stay quality care measures in the analyses chapter.

The market concentration index variable is thought to have an impact on a nursing home's performance as an external variable (Grabowski and Hirth, 2003; Amirkhanyan et al., 2009; Ben-Ner and Ren, 2008). The market concentration index is calculated based on each nursing home's share of all occupied beds in a county. Squares of the shares for each nursing home in a given county are added and multiplied by 100 to find the Herfindahl index score for each county. Higher scores indicate higher levels of market concentration. In the data analyses, church affiliated nursing homes have the lowest market concentration score (35), which is an indication that religiously affiliated nursing homes operate in the most competitive markets in Virginia. The market concentration index variable has a significant explanatory power in one out of three regression models in this study. It is statistically significant in explaining health inspection deficiency scores. The regression analysis indicates that as the market concentration

index increases the health deficiency scores decrease. This finding contradicts the findings of Grabowski and Hirth (2003), Konetzka (2010), Sari (2003), Grabowski and Town (2011), which support the notion that more competition in a market will result in the betterment of outcomes for service providers.

### **Approaches to the Analyses and Theory Testing**

To test the stated hypotheses, two different approaches are taken in order to observe the difference between the means comparison (ANOVA) statistics and regression analyses, which measure the impact of interacting variables on dependent variables. The study demonstrated that a simple means comparison method, like one that Ragan (2004) did, is not sufficient enough to reach conclusions about relative performance of both church related nonprofit nursing homes and more religiously involved nursing homes versus less religious nursing homes. At the beginning of the data analysis chapter (Chapter V), descriptive statistics tables are presented showing the comparison made between church related nursing homes and all other types of ownership. In the mentioned analyses, it is clearly demonstrated that church related nonprofit nursing homes outperformed their secular counterparts in two out of three measures. Church related nonprofit nursing homes performed better than all other groups in health inspection deficiency outcomes and long-stay (chronic care) patient quality measures. However, church related nonprofit nursing homes performed worse than any other ownership type in short-stay (post-acute) patient quality measures.

This outlook changes when independent variables weigh into the equation. There are twelve independent variables in the regression models. The possible impact of these variables on three dependent variables are measured by testing six stated hypotheses. After the regression analyses are performed, as indicated above, only one out of six null hypotheses is rejected.

Since most of the hypotheses are not supported by the findings in Chapter V, the theory used to explain role of religious motivation in the performance of organizations requires further studies. In Chapter I, the field of faith based nonprofit organizations study was extensively discussed and its need for a theory that frames the role of religion in the performance of organizations. This study, in the theory section, proposed that the self regulation theory, which was originally created by Carver and Scheier (1998) and later adapted by McCullough and Willoughby (2009), explains the role of religion in self regulation. In other words, the self regulation theory is used to explain the theoretical framework for this study. The theory, both the original and its adapted forms, is an individual level theory. McCullough and Boker (2007) defined self regulation “as the process by which a system uses information about its present state to change that state”. Carver and Scheier (1998) state that when individuals self regulate they are, in fact, readjusting their behaviors in order to reach some desired goals or ends that they think are better than their current state. McCullough and Willoughby (2009) argue that for an individual to live up to standards that people think are better, individuals regulate their behaviors deliberately or sometimes effortlessly. For self regulation to take place, four elements are required in the process: standards, monitoring, willpower and motivation (Baumeister and Vohs, 2007). As discussed broadly in Chapter I, it is believed that religion promotes these components, and therefore religion has the power to force self regulation (McCullough and Willoughby, 2009).

This study applied self regulation theory to organizations by using metaphors as many newly developing fields of studies have done (Cornelissen and Kafouros, 2008; Whetten, Felin and King 2009; Arnetz 2005; Huy 1999). The current research has gradually provided examples of studies that measured and discussed the motivational role of religion on individuals, groups,

organizations and institutions. Since the field of faith based service provision study is in search of developing a theory, the examples provided to support the theory are at different levels of the social construct, ranging from religious school children to religious prisoners, and from religious groups of individuals to church related nonprofit service providers. However, since only one hypothesis out of six stated hypotheses is supported, in the end, this study fell short in fully supporting the theory in its findings. Thus, as indicated previously, the finding that more religious nursing homes have lower health inspection deficiencies provides an edge for further research to test this finding and consequently the proposed theory in similar settings.

### **Policy Implications**

There are fundamentally two motivations behind the Charitable Choice Initiative which brought it to the attention of lawmakers: first, the proposition that religiously affiliated social service providers deliver more compassionate and caring services to poor and needy than their secular counterparts, and second, that faith based organizations (FBOs) needed recognition as equal partners in delivering much needed social services alongside traditional secular service providers. In other words, ending discrimination against FBOs and leveling the playing field was the other reason for enacting the initiative.

This notion was expressed by President George W. Bush in 2001;

*"The paramount goal is compassionate results, and private and charitable groups, including religious ones, should have the fullest opportunity permitted by law to compete on a level playing field, so long as they achieve valid public purposes.... The delivery of social services must be results-oriented and should value the bedrock principles of pluralism, nondiscrimination, even handedness, and neutrality" (Davis, 2008).*

As the public awareness about health care related issues has increased in the United States, practitioners and policy makers are more concerned about the quality of care provided in health care organizations. As the U.S. population ages, and the number of service recipients increases more attention is being given to long term care providers, particularly nursing homes. Variables that influence quality of care, cost-benefit parameters, accessibility of care, adequacy of government oversight, and enforcement mechanisms contribute to debates in policy making circles. These debates over policy effectiveness and its ability to increase the performance of nursing homes and improve over-all well being of service recipients, continue at both the state and national levels (Institute of Medicine, 2001; Ragan, 2004; Amirkhanyan et al. 2009).

Since the Charitable Choice Initiative is still in effect under the Obama administration, and debates about the government funding of FBOs and their effectiveness still continue, the current research focuses on the comparative effectiveness of FBOs and the possible role of the religiosity element in the performance of long term care organizations. As discussed above, this study did not find any substantial differences between FBOs and their secular counterparts, as well as more religious versus less religious nursing homes, with the exception of one supported hypothesis. Discussions in the literature review section reveal that it is difficult to conclude superiority of FBOs over secular providers in delivering social services. Scholarly research findings are mixed and inconclusive. It is obvious that there is a need for more robust methods to determine whether there is a measurable difference between these two mentioned types of service providers. This point is important, because the government cannot simply give away taxpayers' money without holding recipients accountable for outcomes of services provided.

As the data collected for this study revealed, there are some church affiliated nursing homes that are less religiously involved than some for profit and nonprofit secular nursing

homes. This finding shows that religion is not bound with 'church affiliation' status. With the help of similar studies (Davis, 2008; Amirkhanyan et al., 2009; White et al., 2006; Alexander, 1999; Salamon, 1997; Twombly, 2002) it becomes more obvious that there is an isomorphism among different types of service providers. Due to the market pressure, secular organizations and FBOs adopt similar technologies and management styles in order to compete in a free and highly competitive environment. To attract and satisfy different types of clientele, service providers offer a mixed method of service provision. The question is whether this isomorphism among different types of service providers translates into better and equal care for service recipients.

Another reason for isomorphism in the field of nursing home care is broad government regulation. Both state and federal agencies require Medicare and Medicaid certified nursing homes to comply with various regulations in order to place minimum standards for safety and well-being of residents. This may affect church related social service provider organizations more than secular service providers, since church related organizations usually have smaller budgets; they are local and have less professionalized management personnel. Therefore, the cost of complying with government regulations, such as billing, accounting, reporting and oversight systems may become a burden for FBOs (Amirkhanyan et al., 2009).

The data for the current study revealed that church related nursing homes are not aware of government regulations when it comes to hiring staff that shares their organizational values and beliefs. As discussed in Chapter II, the Charitable Choice Initiative allows FBOs to hire personnel that are in line with their core organizational values. The survey results show that less than one percent of respondent nursing homes in the state of Virginia chose 'Yes' answers for both "Is selection of senior management at your organization based upon religious commitment and affiliation?" and " Does faith or religious commitment play an important role in making

hiring decisions of staff at all levels of your organization?" questions. However, the 'Yes' response given to question "Do you agree with the following statement: "Religious commitment might have a role in making hiring decisions of staff at all levels in this organization."?" is slightly higher, with 3.67 percent. These findings parallel with what a couple of church related nursing home administrators told this researcher during site visits. They said they cannot simply hire people that share their core religious values, since it is against laws. When the Charitable Choice Initiative was mentioned by this researcher, they said that is not what their lawyers tell them. This lack of knowledge about current laws and regulations, at least regarding the hiring staff dimension, may force church related nursing homes to operate like secular ones. This reality, frankly, requires government agencies to inform FBOs about their rights in business conduct so that these service providers reflect their true character, which is what encompasses all the current debates, in their work. As briefly discussed above, the current study, in contrast to previously mentioned studies found that total staff hours per resident per day are negatively associated with better performance on long-stay patient quality care measures. The finding of this study may mean that workforce characteristics, such as level of job satisfaction, higher rates of nurse turnover, level of experience, and inconsistent assignments play a role in the performance of staff. Therefore, it may not be adequate enough to report plain staffing ratios (Dunton, Gajewski, Susan and Belinda, 2007). Nursing home administrations and policy makers in states and federal government's long term care departments need to consider these mentioned aspects pertaining to the workforce in order to achieve better quality of care results.

It is clear that the financial health of an organization has an important impact on services provided. This is no different for nursing home settings. As findings of this research reveal, the number of residents, the percentage of occupied beds and the payment type variables produced

statistically significant results in above mentioned regression models. These variables directly affect a nursing home's fiscal state. While the 'number of residents' and 'private pay' variables have statistically significant explanatory power in short-stay patient quality care measure, the 'percent of occupied beds' and 'percent of Medicare reimbursed patients' variables have statistically significant explanatory power in long-stay patient quality care measure. These findings imply that it may be beneficial for consumers to know the fiscal state of the nursing home where they consider receiving service. It is a strong possibility that a financially healthy and resource rich nursing home will address needs of its residents effectively.

As the studies mentioned above and many more indicate, competition is considered a good thing for consumers and for the betterment of services. However, the analyses of this study found that the market concentration index is negatively associated with health inspection deficiencies. Parallel to the finding of this study, Knox et al. (2006) in their study conducted among Texas nursing homes, found that urban facilities have lower quality than their rural counterparts. Urban areas are usually considered more competitive than rural areas. Harmful impact of competition, if there is any, may be minimized by giving umbrella organizations and associations in the industry more regulatory power. An effective self regulation with government oversight might produce better results for both consumers and service providers.

The literature review in this study indicates that if FBOs, in a particular field, do not perform better than their secular counterparts, they do not lag behind dramatically either. However, the regression analyses of this study did not yield any significant results in terms of performance comparison between FBOs and their secular counterparts. The criticism that government policies unfairly promote one type of service providers over the others comes into play when government agencies reward FBOs with grants and contracts, not based on their

proven track record, but based on their affiliation. As it has been discussed in the literature review of the current study, government agencies need to reward grants and sign contracts based on the performance of service providers. Public funds shall not be wasted based on some religious tendencies and propositions.

### **Limitations of the Study**

The design of this study is cross sectional design, which has inherent limitations in its nature. Since the data is collected via questionnaire at a single point in time, the direction of causality cannot be determined. Therefore, it becomes impossible to conclude causality among independent and dependent variables (O'Sullivan, Rassel and Berner 2003). Clearly, the gathered data possesses some inherent deficiencies as well. As CMS indicates on its web site, most of the data sets were provided by nursing homes' administrations. In this regard, the gathered data may be biased since it is furnished by the service providers as part of inspection even though there are checks and balances in the system. By nature, the collection of this data requires the subjective determinations of resident and patient attributes by nursing home staff, which might be reported inaccurately for a number of reasons. Furthermore, as CMS indicates, some of the data failed to be reported because 'the number was too small to report' or 'the data is missing'. It is difficult to speculate as to how much this missing data might affect the outcome of findings. In addition to these shortfalls, it should not be forgotten that this data represents only a snapshot of a process that is continually in motion. Thus, the reporting of the data might have been affected by the reporter's mood or an understanding and interpretation in the moment of completing the survey. However, on its web site, CMS (2010) indicates that the quality measures developed under CMS contracts to ABT Associates and research team have been developed and based on the most recent research available. CMS also says that it is constantly evaluating its methods of collecting

quality measures data to address the evolving consumer needs with its best abilities.

Conducting a web-based survey might be a limitation in order for respondents to express the reality. A mixed method that includes both qualitative and quantitative studies of service providers would likely be able to provide a greater depth of insight about the role of religious affiliation. As Yamane (2000) has argued, the contribution of a narrative approach is possibly the best method for studying religious experience. The role of observation should not be underestimated in these types of studies (Modesto, 2006). Translating observations and thoughts into statistically measurable values might provide deeper insight about the subject.

A possible limitation to this study may have been the position of survey respondents in nursing homes. Individuals responding to the survey questionnaire held different positions and responsibilities in nursing homes. In other words, those who responded to the questionnaire for each nursing home were not necessarily administrators or the director of admission. Director of marketing, director of social work and people who work at different levels in administration at nursing homes also responded the questionnaire. It is possible that the perception and knowledge of these individuals about their nursing home differ in the way they respond to the survey questions. This may have influenced and generated differences between the information provided and reality.

An important limitation to this study might be the statistical method used to deal with dependent and some of the independent variables. Since there were many dependent variables, this researcher used data aggregation method to bring the number of dependent variables at a feasible level in order to make statistical tests possible. As explained in Chapter V, during the data collapse process some of the variables were left out, since the diagnostic test did not permit such a data combination. It is not known how much the variables that were left out could affect

the outcome of the statistical tests. Besides, it is possible that richness of information diminishes during the data collapse procedure even though the diagnostic tests permit data collapse at a statistically acceptable level. Similarly, three levels of religiosity in nursing home ownership types were planned for use in the analyses to determine the possible role of religion at different levels in a nursing home, such as organizational religiosity, service religiosity and staff religiosity. Statistical tests, as explained in Chapter V, did not allow such grouping. It would be interesting to observe the influence of different religiosity levels on the indicated dependent variables in a nursing home. At the end, one type of religiosity measure (over all religiosity) was used to determine the possible role of religion on the performance of service providers.

The current study employed the data that was collected from only 218 nursing homes in the state of Virginia. Considering the total number of Medicare and Medicaid certified nursing homes to be around 16 000 in the United States, the population of this study may not represent all nursing homes in the country. Therefore, the findings of this study may not be generalized. In addition, this study was conducted in a field of social services that is highly regulated by government. As discussed above, heavy government regulations may lead to isomorphism, which may confine service providers to perform in a unique way. Thus, the true religious character of FBOs might not be reflected into the services provided in the field of long term care.

### **Recommendations for Future Studies**

Limitations mentioned for the current study definitely provide a starting edge for future similar studies. A mixed method of qualitative and quantitative research design has the potential to provide more in-depth analyses. The role of religious intervention in service provision might not be completely revealed solely by cross-sectional studies. The religious intervention of the

service provision should also be observed by talking and listening to administrators and staff of service provider organizations as well as service recipients. In this regard, with a narrative approach, residents of both church affiliated nursing homes and secular nursing homes should be interviewed and asked about their opinion of religious or non-religious intervention in services provided. Obviously, observation and interpretation will have a key role in this method.

Determining the intensity of religious involvement at different levels for organizations is important. For instance, a social service provider organization might be established by a church or congregation, but over time the very same organization might be sold to a secular entity or partnered with a secular entity to deliver the same social services. Being established by a religious organization might not mean the organization is a faith based organization in these sorts of cases. Therefore, the level of religious involvement or the intensity of the religious element in a particular program or organization needs to be determined in order to make more reliable predictions about the role of religion in organizational performance. Studies conducted by Monsma and Soper (2003b) and by Sider and Unruh (2004) provide good examples of this sort of approach.

As it was mentioned above, it might not be sufficient enough to study the possible role of religion in highly-regulated service areas, such as nursing homes, home health care agencies and hospitals. It might be more interesting and more revealing to study the possible role of religion in service outcomes in areas where less state and federal government regulations are in place. For instance, studying nursing homes that are not certified by Medicare and Medicaid might be more revealing about the true religious character of a service provider. Similarly, less regulated service areas, such as homeless services, alcohol abuse programs, mental health programs, domestic violence programs, etc. might reveal the distinctive character of FBOs in services provided. But,

these mentioned service areas usually suffer from lack of reliable and available data, which is difficult and costly to gather (Amirkhanyan et al., 2009).

One point that attracts attentions in the three regression models of analyses in this study is that these models are not very powerful, though statistically significant. In the three created regression models, R squared values varied between 10.7 and 16.2, which means between 10.7 and 16.2 percent of variation in the stated dependent variables are explained by the interacting variables. Few reasons might be mentioned for noticeably low R squared values. As Nau (1981) indicates, the R squared value of a regression model might be small because of a transformation made in a dependent variable during the data collapse process, which might have already explained a substantial amount of the variance. Another reason might be the relatively small sample size of this research. As total sample size increases, the R squared values may possibly increase as well. Lastly, there might be a possibility of excluded interacting variables that are not weighed in the regression analyses. Future studies need to examine the subject in this perspective as well. Future studies might include interacting variables, such as the socio-economic profile of residents for each nursing home, the religiosity levels of residents, urbanization levels where a nursing home provides service, the proportion of nonprofit market share - as Grabowski and Hirth (2003) did - and nursing homes' budget. These and similar independent variables that are not regressed in this study might have power to explain the variation in dependent variables.

Since the field of faith based social service provision is in need of a viable theory to explain the role of religion in organizational outcomes, the self regulation theory deserves to be applied to different type of studies in different settings in order to reach more decisive conclusions about the applicability of this theory. As the literature review brought into light, self regulation theory has potential to guide similar future studies. Similar future studies need to test

self regulation theory by using metaphors to further develop this theory. Studies may be conducted, particularly in areas where the presence of the religious component and the commitment can be measured at the organizational level. As discussed before, since there is a notion that fundamental human and social values have stemmed from religious beliefs and practices over time, studying the influence of the presence of these values on organizational performance in areas such as sacrifice, commitment, compassionate approach and work ethic are more valuable than other subject matter studies in producing helpful results to determine the true role of religion.

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## APPENDICES

### APPENDIX A

#### Survey questionnaire that was prepared for this study

This questionnaire is designed to support a research study that is being conducted at Virginia Commonwealth University (VCU) in Richmond, Virginia. The purpose of the study is to find out if religious affiliation (church or religious entity affiliation) or religious neutrality (secular) has an impact on organizational performance. Organizational performance is measured based on data sets collected from all nursing homes all over the United States. This survey is conducted among all nursing homes that are registered with Centers for Medicare and Medicaid Services (CMS) in Virginia. If this questionnaire is to be useful, it is important that you answer each question to the best of your knowledge and candidly.

The content and use of this questionnaire has been approved by the research committee members at VCU. The names of organizations and individuals will not be mentioned in the analyses of the research. Your answers to these questions are completely confidential. The survey data is solely going to be used for the purpose of this study. Answering this questionnaire is completely voluntary and will not take more than few minutes of your valuable time.

Thank you in advance for your assistance and contribution to this very important study.

|                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>If you have any questions or concerns about this survey, please contact:</p> <p><b>Robyn L. Diehl, PhD</b></p> <p><b>L. Douglas Wilder School for Government and Public Affairs.</b></p> <p><b>923 W. Franklin St. Room: 107</b></p> <p><b>P.O. Box 842028</b></p> <p><b>Telephone: 804-828-2759</b></p> <p><b>E-mail: rldiehl@vcu.edu</b></p> | <p>If you have any questions about your rights as a participant in this study, you may contact:</p> <p><b>Office of Research, Virginia Commonwealth University</b></p> <p><b>800 East Leigh Street, Suite: 113</b></p> <p><b>P.O. Box 980568, Richmond, VA 23298</b></p> <p><b>Telephone: 804 – 827-2157</b></p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

1 - Which of the categories below best describes your organization?

A - Government related

C - For profit

B - Nonprofit organization (Not affiliated with any religious entity)

D- Nonprofit organization (Affiliated with a religious entity)

2 - Does the mission statement of your organization have any explicitly religious references?

Yes

No

3 - Was your organization founded by a religious group or entity?

Yes

Not Applicable

No

Do Not Know

4 - If your organization is currently affiliated with an external entity, is that entity religious?

Yes

Not Applicable

No

5 - Does your organization accept any financial or non- financial support (including volunteer help) from any religious group or entity?

Yes

No

6 - Are there any sacred images or religious symbols, such as a cross, crucifix, or star of David, present on public display in your organization?

Yes

No

7 - Is the board of your organization controlled by explicitly religious members?

Yes

Do Not Know

No

8 - Is selection of senior management at your organization based upon religious commitment and affiliation?

Yes

No

9 - Does faith or religious commitment play an important role in making hiring decisions of staff at all levels of your organization?

Do Not Know

Yes

No

10 - Do you agree with the following statement; "Religious commitment might have a role in making hiring decisions of staff at all levels in this organization."?

Yes

No

11 - Is there any organized religious practice, such as a staff bible study group, for personnel at your organization?

Yes

No

12 - Is there any form of prayer at staff meetings at your organization?

Yes

No

13 - Is there a chaplain employed at your organization?

Yes

No

14 - Are there any voluntary chaplain or missionary visits by religious groups to your organization?

Yes

No

15 - Is there any policy that bans religious volunteer groups' visits to your organization?

Yes

No

16 - Is there any religious activity, including ecumenical services, made available for residents at your organization?

Yes

No

17 - Are residents apprised of the opportunity to participate in any religious activity at your organization, or outside of your organization, at some other venues?

Yes

No

18 - Is any sort of religious material made available for residents' use at your organization?

Yes

No

19 - Does your organization, in any way, use religious values and motivations to encourage clients to change their behaviors or to cope with health problems that they might have?

Yes

No

## **APPENDIX B**

### **Methodology for Constructing the Staring Ratings**

#### **Health Inspection Domain**

Nursing homes that participate in the Medicare or Medicaid programs have an onsite standard (“comprehensive”) survey annually *on average*, with no more than fifteen months elapsing between surveys for any one particular nursing home. Surveys are unannounced and are conducted by a team of health care professionals. State survey teams spend several days in the nursing home to assess whether the nursing home is in compliance with federal requirements. Certification surveys provide a comprehensive assessment of the nursing home, including assessment of such areas as medication management, proper skin care, assessment of resident needs, nursing home administration, environment, kitchen/food services, and resident rights and quality of life. Based on the most recent three standard surveys for each nursing home, results from any complaint investigations during the most recent three- year period, and any repeat revisits needed to verify that required corrections have brought the facility back into compliance, CMS’ Five-Star quality rating system employs more than 200,000 records for the health inspection domain alone.

#### **Scoring Rules**

A health inspection score is calculated based on points assigned to deficiencies identified in each active provider’s current health inspection survey and the two prior surveys, as well as deficiency findings from the most recent three years of complaints information and survey revisits.

- ***Health Inspection Results:*** Points are assigned to individual health deficiencies according to their scope and severity – more points are assigned for more serious, widespread deficiencies, and fewer points for less serious, isolated deficiencies (see Table 1). If the deficiency generates a finding of substandard quality of care, additional points are assigned. If the status of the deficiency is “past non-compliance” and the severity is “immediate jeopardy” (i.e. ‘J’, ‘K’ or ‘L’- level), then points associated with a ‘G’ level deficiency are assigned. Deficiencies from Life Safety surveys are not included in calculations for the Five-Star rating.
  
- ***Repeat Revisits - Number of repeat revisits required to confirm that correction of deficiencies have restored compliance:*** No points are assigned for the first revisit; points are assigned only for the second, third, and fourth revisits and are proportional to the health inspection score (Table 2). If a provider fails to correct deficiencies by the time of the first revisit, then these additional revisit points are assigned up to 85 percent of the health inspection score for the fourth revisit. CMS experience is that providers that fail to demonstrate restored compliance with safety and quality of care requirements during the first revisit have lower quality of care than other nursing homes. More revisits are associated with more serious quality problems.

We calculate a total health inspection score for facilities based on their weighted deficiencies and number of repeat revisits needed. Note that a lower survey score corresponds to fewer

deficiencies and revisits, and thus better performance on the health inspection domain. In calculating the total domain score, more recent surveys are weighted more heavily than earlier surveys; the most recent period (cycle 1) is assigned a weighting factor of  $1/2$ , the previous period (cycle 2) has a weighting factor of  $1/3$ , and the second prior survey (cycle 3) has a weighting factor of  $1/6$ . The weighted time period scores are then summed to create the survey score for each facility.

Complaint surveys are assigned to a time period based on the calendar year in which the complaint survey occurred. Complaint surveys that occurred within the most recent 12 months receive a weighting factor of  $1/2$ , those from 13-24 months ago have a weighting factor of  $1/3$ , and those from 25-36 months ago have a weighting factor of  $1/6$ . There are some deficiencies that appear on both standard and complaint surveys. To avoid potential double-counting, deficiencies that appear on complaint surveys that are conducted within 15 days of a standard survey (either prior to or after the standard survey) are only counted once. If the scope or severity differs on the two surveys, the highest scope-severity combination is used.

For facilities missing data for one period, the health inspection score is determined based on the periods for which data are available, using the same relative weights, with the missing (third) survey weight distributed proportionately to the existing two surveys. Specifically, when there are only two standard health surveys, the most recent receives 60 percent weight and the prior receives 40 percent weight. Facilities with only one standard health inspection are considered not to have sufficient data to determine a health inspection rating and are set to missing for the health inspection domain. For these facilities, no composite rating is assigned and no ratings are reported for the staffing or QM domains even if these ratings are available.

**Table 1**  
**Health Inspection Score: Weights for Different Types of Deficiencies**

| Severity                                                                                | Scope                                 |                                         |                                         |
|-----------------------------------------------------------------------------------------|---------------------------------------|-----------------------------------------|-----------------------------------------|
|                                                                                         | Isolated                              | Pattern                                 | Widespread                              |
| Immediate jeopardy to resident health or safety                                         | <b>J</b><br>50 points*<br>(75 points) | <b>K</b><br>100 points*<br>(125 points) | <b>L</b><br>150 points*<br>(175 points) |
| Actual harm that is not immediate jeopardy                                              | <b>G</b><br>20 points                 | <b>H</b><br>35 points<br>(40 points)    | <b>I</b><br>45 points<br>(50 points)    |
| No actual harm with potential for more than minimal harm that is not immediate jeopardy | <b>D</b><br>4 points                  | <b>E</b><br>8 points                    | <b>F</b><br>16 points<br>(20 points)    |
| No actual harm with potential for minimal harm                                          | <b>A</b><br>0 point                   | <b>B</b><br>0 points                    | <b>C</b><br>0 points                    |

Note: Figures in parentheses indicate points for deficiencies that are for substandard quality of care.

Shaded cells denote deficiency scope/severity levels that constitute substandard quality of care if the requirement which is not met is one that falls under the following federal regulations: 42 CFR 483.13 resident behavior and nursing home practices; 42 CFR 483.15 quality of life; 42 CFR 483.25 quality of care.

\* If the status of the deficiency is "past non-compliance" and the severity is Immediate Jeopardy, then points associated with a 'G-level" deficiency (i.e. 20 points) are assigned.

Source: Centers for Medicare & Medicaid Services

**Table 2**  
**Weights for Repeat Revisits**

| Revisit Number | Noncompliance Points                  |
|----------------|---------------------------------------|
| First          | 0                                     |
| Second         | 50 percent of health inspection score |
| Third          | 70 percent of health inspection score |
| Fourth         | 85 percent of health inspection score |

## APPENDIX C

### Calculation of Organizational Religiosity Scores Based on Answers Given to the Related Survey Questions on Four Levels

#### Measurement of Organizational Religiosity

|                                                                                                                                                | Scale<br>Mean if<br>Item<br>Deleted | Scale<br>Variance<br>if Item<br>Deleted | Corrected<br>Item-<br>Total<br>Correlati<br>on | Cronbach'<br>s Alpha if<br>Item<br>Deleted |
|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------|------------------------------------------------|--------------------------------------------|
| Does the mission statement of your organization have any explicitly religious references?                                                      | 2.1806                              | 1.125                                   | .504                                           | .508                                       |
| Was your organization founded by a religious group or entity?                                                                                  | 2.1435                              | .989                                    | .625                                           | .447                                       |
| If your organization is currently affiliated with an external entity, is that entity religious?                                                | 2.1806                              | 1.107                                   | .539                                           | .496                                       |
| Does your organization accept any financial or non-financial support (including volunteer help) from any religious group or entity?            | 1.5694                              | 1.223                                   | .087                                           | .686                                       |
| Are there any sacred images or religious symbols, such as a cross, crucifix, or star of David, present on public display in your organization? | 2.0324                              | 1.036                                   | .345                                           | .563                                       |
| Is the board of your organization controlled by explicitly religious members?                                                                  | 2.2361                              | 1.316                                   | .388                                           | .564                                       |
| Is there any policy that bans religious volunteer groups' visits to your organization?                                                         | 1.2963                              | 1.540                                   | -.112                                          | .646                                       |

## APPENDIX D

### Measurement of Staff Religiosity

|                                                                                                                                                              | Scale<br>Mean if<br>Item<br>Deleted | Scale<br>Variance<br>if Item<br>Deleted | Corrected<br>Item-Total<br>Correlation | Cronbach's<br>Alpha if Item<br>Deleted |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------|----------------------------------------|----------------------------------------|
| Is selection of senior management at your organization based upon religious commitment and affiliation?                                                      | .5359                               | .663                                    | .298                                   | .463                                   |
| Does faith or religious commitment play an important role in making hiring decisions of staff at all levels of your organization?                            | .5359                               | .654                                    | .361                                   | .451                                   |
| Do you agree with the following statement; "Religious commitment might have a role in making hiring decisions of staff at all levels in this organization."? | .5072                               | .578                                    | .360                                   | .406                                   |
| Is there any organized religious practice, such as a staff bible study group, for personnel at your organization?                                            | .5120                               | .645                                    | .147                                   | .485                                   |
| Is there any form of prayer at staff meetings at your organization?                                                                                          | .4019                               | .424                                    | .377                                   | .355                                   |
| Is there a chaplain employed at your organization?                                                                                                           | .2344                               | .344                                    | .296                                   | .479                                   |

## APPENDIX E

### Measurement of Service Religiosity

|                                                                                                                                                                               | Scale<br>Mean<br>if Item<br>Delete<br>d | Scale<br>Variance<br>if Item<br>Deleted | Corrected<br>Item-Total<br>Correlation | Cronbach's<br>Alpha if<br>Item<br>Deleted |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------|----------------------------------------|-------------------------------------------|
| Are there any voluntary chaplain or missionary visits by religious groups to your organization?                                                                               | 3.7536                                  | .587                                    | .329                                   | .257                                      |
| Is there any policy that bans religious volunteer groups' visits to your organization?                                                                                        | 3.7014                                  | .763                                    | .018                                   | .409                                      |
| Is there any religious activity, including ecumenical services, made available for residents at your organization?                                                            | 3.7251                                  | .638                                    | .315                                   | .288                                      |
| Are residents apprised of the opportunity to participate in any religious activity at your organization, or outside of your organization, at some other venues?               | 3.7630                                  | .601                                    | .257                                   | .297                                      |
| Is any sort of religious material made available for residents' use at your organization?                                                                                     | 3.9242                                  | .518                                    | .139                                   | .405                                      |
| Does your organization, in any way, use religious values and motivations to encourage clients to change their behaviors or to cope with health problems that they might have? | 4.5213                                  | .594                                    | .115                                   | .399                                      |

## APPENDIX F

### Measurement of Overall Organizational Religiosity

|                                                                                                                                                                 | Scale<br>Mean if<br>Item<br>Deleted | Scale<br>Variance if<br>Item<br>Deleted | Corrected<br>Item-Total<br>Correlation | Cronbach's<br>Alpha if<br>Item<br>Deleted |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------|----------------------------------------|-------------------------------------------|
| Does the mission statement of your organization have any explicitly religious references?                                                                       | 6.4265                              | 4.246                                   | .501                                   | .662                                      |
| Was your organization founded by a religious group or entity?                                                                                                   | 6.3922                              | 4.062                                   | .564                                   | .651                                      |
| If your organization is currently affiliated with an external entity, is that entity religious?                                                                 | 6.4314                              | 4.276                                   | .489                                   | .664                                      |
| Does your organization accept any financial or non-financial support (including volunteer help) from any religious group or entity?                             | 5.8284                              | 4.478                                   | .133                                   | .712                                      |
| Are there any sacred images or religious symbols, such as a cross, crucifix, or star of David, present on public display in your organization?                  | 6.2794                              | 4.025                                   | .427                                   | .666                                      |
| Is the board of your organization controlled by explicitly religious members?                                                                                   | 6.4853                              | 4.596                                   | .379                                   | .681                                      |
| Is selection of senior management at your organization based upon religious commitment and affiliation?                                                         | 6.5147                              | 4.813                                   | .295                                   | .692                                      |
| Does faith or religious commitment play an important role in making hiring decisions of staff at all levels of your organization?                               | 6.5147                              | 4.822                                   | .272                                   | .693                                      |
| Do you agree with the following statement; "Religious commitment might have a role in making hiring decisions of staff at all levels in this organization."?    | 6.4853                              | 4.596                                   | .379                                   | .681                                      |
| Is there any organized religious practice, such as a staff bible study group, for personnel at your organization?                                               | 6.4951                              | 4.813                                   | .146                                   | .696                                      |
| Is there any form of prayer at staff meetings at your organization?                                                                                             | 6.3824                              | 4.287                                   | .373                                   | .674                                      |
| Is there a chaplain employed at your organization?                                                                                                              | 6.2108                              | 3.960                                   | .418                                   | .668                                      |
| Are there any voluntary chaplain or missionary visits by religious groups to your organization?                                                                 | 5.6029                              | 4.674                                   | .175                                   | .695                                      |
| Is there any policy that bans religious volunteer groups' visits to your organization?                                                                          | 5.5490                              | 4.968                                   | -.061                                  | .707                                      |
| Is there any religious activity, including ecumenical services, made available for residents at your organization?                                              | 5.5735                              | 4.719                                   | .196                                   | .693                                      |
| Are residents apprised of the opportunity to participate in any religious activity at your organization, or outside of your organization, at some other venues? | 5.6029                              | 4.713                                   | .140                                   | .698                                      |

|                                                                                                                                                                               |        |       |      |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|------|------|
| Is any sort of religious material made available for residents' use at your organization?                                                                                     | 5.7745 | 4.422 | .186 | .702 |
| Does your organization, in any way, use religious values and motivations to encourage clients to change their behaviors or to cope with health problems that they might have? | 6.3676 | 4.421 | .259 | .689 |

## VITA

Bulent Ucar was born in Malatya, Turkey, in 1975. Bulent received his undergraduate degree in communications from Marmara University, in Istanbul, Turkey, in 1996. While a student of journalism at Marmara University, he started working as a staff reporter at an international newspaper in Istanbul until he begin his master's degree program in public administration at Fatih University in 1997.

During his master's studies, he worked as a consultant both at an academic journal and as a member of a "Working group on effectiveness of organizations". He also held the public relations manager position for a year at Fatih University during his education there.

After graduating from the master's program in 2000, Bulent decided to come to the U.S. to pursue higher education and business opportunities. He took computer certificate courses and earned a certificate in information technology in 2001 and a certificate in office management program in 2003 from Virginia International University in Fairfax, Virginia, USA. In addition to his studies, Bulent served as vice president of the American Turkish Friendship Association (Formerly Cosmos Foundation) - a cultural nonprofit organization to help adaptation of Turkish community members to Virginia and Virginians from 2000 to 2003 in Fairfax, Virginia.

Bulent enrolled in the PhD program in Public Policy and Administration at Virginia Commonwealth University in Richmond, VA. During his PhD studies, he founded and managed 7 Brothers, LLC, an international trade company, located in Alexandria, VA. Bulent fulfilled the requirements for the PhD degree in the fall 2011. He is married and a resident of Alexandria, Virginia.