Quality of Life in the Nursing Home: An Outcome that Matters

Carol DuMond

St. John Fisher College

Follow this and additional works at: https://fisherpub.sjfc.edu/education_etd

Part of the Education Commons

How has open access to Fisher Digital Publications benefited you?

Recommended Citation

Please note that the Recommended Citation provides general citation information and may not be appropriate for your discipline. To receive help in creating a citation based on your discipline, please visit http://libguides.sjfc.edu/citations.

This document is posted at https://fisherpub.sjfc.edu/education_etd/62 and is brought to you for free and open access by Fisher Digital Publications at St. John Fisher College. For more information, please contact fisherpub@sjfc.edu.
Abstract
This quantitative study collected information to determine how elders living at the nursing home studied perceived their quality of life, determined if there are differences in quality of life among neighborhoods, and if there are differences experienced by those living in private rooms compared to shared rooms. A descriptive, correlational, and cross-sectional design was applied. An instrument that focused on enhanced quality of life, the Quality of Life Scales for Nursing Home Residents, was used to guide 155 structured interviews. Data collected provided information on eleven domains of quality of life including safety, physical comfort, food enjoyment, meaningful activities, relationships, functional competence, dignity, privacy, individuality, autonomy, and spiritual well-being. The mean score for each domain ranged from 3.06 to 3.77 on a scale of one (low) to four (high). Younger participants report experiencing more engaging and meaningful social interactions with others than older participants. Respondents who have lived at the nursing home longer reported higher levels of dignity, but lower levels of spiritual wellbeing. Four of the neighborhoods had statistically significant findings on one of the quality of life scales. Elders who live in private rooms rate privacy higher than those living in shared rooms. This study demonstrates that quality of life can be measured for individuals with varying levels of cognitive impairment by using this survey instrument which incorporates a Likert-type scale or binary response options. Nursing measure the impact of culture change activities. This baseline information is critical for nursing homes anticipating a significant organizational change.

Document Type
Dissertation

Degree Name
Doctor of Education (EdD)

Department
Executive Leadership

First Supervisor
Mary Collins

Second Supervisor
Lynn Nichols

Subject Categories
Education

This dissertation is available at Fisher Digital Publications: https://fisherpub.sjfc.edu/education_etd/62
Quality of Life in the Nursing Home: An Outcome that Matters

By

Carol DuMond

Submitted in partial fulfillment
of the requirements for the degree
Ed.D. in Executive Leadership

Supervised by

Mary Collins, Ph.D. RN FAAN

Committee Member

Lynn Nichols, Ph.D. RN

Ralph C. Wilson, Jr. School of Education
St. John Fisher College

August 2010
Dedication

This work is dedicated to Myrtle “Kitch” Aydelotte. I met Kitch at a community event near her home in Western, New York in 2008. I heard her speak about elders, and knew I wanted to get to know her better. I had the opportunity to meet her and was intrigued by the enormous level of wisdom she possessed. After concluding my first visit with her, I quickly ran back to my office to write down as many thoughts she had shared which I could remember. On subsequent visits, I made sure I had a pad of paper to take notes. Kitch mentored me as I moved through the first year of the dissertation process. She challenged my world view on each occasion we interacted. The hours I spent with her were invaluable. Unfortunately, her health status declined and the ability to interact with my new friend ended. I will always remember and cherish the time I spent with her. She died on January 7, 2010. She earned her Bachelor’s, Master’s, and Ph.D. in nursing from the University of Minnesota. She was the founding Dean for the Nursing Program at the University of Iowa. She served as a captain in the Army Nurse Corps during World War II. She had more than 56 works published, was the principal investigator on multiple studies, consulted for many academic, government, and healthcare organizations, and won a multitude of awards.
Biographical Sketch

Carol R. DuMond is currently the Director of Quality Management and Performance Improvement at St. John’s Home. Ms. DuMond attended the University of Rochester from 2004 to 2005 and graduated with a Bachelor of Sciences in Nursing degree in 2005. She returned to the University of Rochester from 2006 to 2007 and graduated with a Master of Sciences degree in Health Care Systems Leadership in 2007. She came to St. John Fisher College in the summer of 2008 and began doctoral studies in the Ed.D. Program in Executive Leadership. Ms. DuMond pursued her research in Quality of Life in Nursing Homes under the direction of Dr. Mary Collins and received the Ed.D. degree in 2010.
Acknowledgments

A doctoral dissertation may appear to be independent work; however a project of this scale requires a network of support. I am indebted to many people. I am most especially grateful to the St. John’s Community who provided support throughout the doctoral program.

I am especially appreciative of the following individuals Dr. Mary Collins, Dr. Lynn Nichols, Al Power, Gill Krepps, Marilyn Krepps, Cheri Dills, Charlotte Melvin, Andrea Burgess, Daniel Wright, Lauren Della Villa, Alysha Mahunik, Darlene Byrns, Anne Roberts, Linda Reid, Lori Lorraine, Mickey O’Neill, Laverne Carter, Charlie Runyon, Veronica Barber, Gerald Stryker, and Mark Peartree.
Abstract

This quantitative study collected information to determine how elders living at the nursing home studied perceived their quality of life, determined if there are differences in quality of life among neighborhoods, and if there are differences experienced by those living in private rooms compared to shared rooms. A descriptive, correlational, and cross-sectional design was applied. An instrument that focused on enhanced quality of life, the Quality of Life Scales for Nursing Home Residents, was used to guide 155 structured interviews. Data collected provided information on eleven domains of quality of life including safety, physical comfort, food enjoyment, meaningful activities, relationships, functional competence, dignity, privacy, individuality, autonomy, and spiritual well-being.

The mean score for each domain ranged from 3.06 to 3.77 on a scale of one (low) to four (high). Younger participants report experiencing more engaging and meaningful social interactions with others than older participants. Respondents who have lived at the nursing home longer reported higher levels of dignity, but lower levels of spiritual well-being. Four of the neighborhoods had statistically significant findings on one of the quality of life scales. Elders who live in private rooms rate privacy higher than those living in shared rooms.

This study demonstrates that quality of life can be measured for individuals with varying levels of cognitive impairment by using this survey instrument which incorporates a Likert-type scale or binary response options. Nursing homes should
measure the impact of culture change activities. This baseline information is critical for nursing homes anticipating a significant organizational change.
# Table of Contents

Dedication ........................................................................................................................................ ii

Biographical Sketch ................................................................................................................... iii

Abstract ......................................................................................................................................... v

Table of Contents ........................................................................................................................ vii

List of Tables ............................................................................................................................... x

Chapter 1: Introduction ................................................................................................................ 1
  Esther's Story .............................................................................................................................. 1
  Problem Statement ................................................................................................................... 3
  Theoretical Rationale ............................................................................................................... 5
  Significance of the Study ......................................................................................................... 7
  Statement of Purpose .............................................................................................................. 9
  Research Questions ............................................................................................................... 9
  Definitions of Terms ............................................................................................................. 9
  Summary of Remaining Chapters ......................................................................................... 12

Chapter 2: Review of the Literature ............................................................................................. 13
  Introduction and Purpose ......................................................................................................... 13
  Topic Analysis .......................................................................................................................... 14
  Summary and Conclusion ........................................................................................................ 31

Chapter 3: Research Design Methodology ..................................................................................... 33
Appendix G........................................................................................................................................ 105
Appendix H........................................................................................................................................ 109
<table>
<thead>
<tr>
<th>Item</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Kane’s domains of quality of life</td>
<td>11</td>
</tr>
<tr>
<td>Table 4.1</td>
<td>Age, gender, room type, payer source, length of stay, cognitive performance, activities of daily living characteristics for actual study sample, the total population of the nursing home studied, and the population of nursing home residents in the United States</td>
<td>54</td>
</tr>
<tr>
<td>Table 4.2</td>
<td>Mean scale scores and reliability measures for Quality of Life Scales for Nursing Homes Instrument</td>
<td>56</td>
</tr>
<tr>
<td>Table 4.3</td>
<td>Spearman rho correlations among gender, age, length of stay, room type, activities of daily living, and cognitive performance on Quality of Life Scales for Nursing Home Instrument</td>
<td>58</td>
</tr>
<tr>
<td>Table 4.4</td>
<td>The nursing home mean scores by neighborhood on the Quality of Life Scales for Nursing Homes Instrument</td>
<td>60</td>
</tr>
<tr>
<td>Table 4.5</td>
<td>Summary of significant findings by neighborhood</td>
<td>61</td>
</tr>
<tr>
<td>Table 5.1</td>
<td>Mean scale score and reliability measures comparing the Kane study with this study</td>
<td>65</td>
</tr>
</tbody>
</table>
Chapter 1: Introduction

Esther's Story

Esther grew up in a large Italian family. She left her childhood home to marry her high school sweetheart, Charlie. Charlie and Esther proudly raised four children. Esther enjoyed cooking, entertaining, and caring for the children and the house. Her husband established a prominent business. Childrearing could be challenging at times, but each child successfully left home, married, had children, and established a successful career. Charlie retired, allowing the active couple time to enjoy grandparenting, entertaining, and traveling to many destinations around the world. Esther’s favorite vacation was to Sydney, Australia.

The entire family felt an emotional loss when their first grandchild’s life was taken in the attack on 9/11/01. The family bound together to help one another cope with this loss. A short time later, Esther developed heart problems that resulted in a slowing down of her active life style. Charlie began to lose weight and no longer felt like his “chipper” self. He was evaluated by a physician and diagnosed with terminal cancer.

As Charlie’s health diminished, his care needs and the household chores were more than Esther was able to provide with her heart limitations. Charlie moved into the “Comfort Care Unit” at a nursing home in Rochester, New York. Esther moved to a senior apartment complex 18 miles from Charlie’s new address. Esther missed spending her days with her husband of 73 years. She spent her quiet time playing with her cat “George” and enjoyed reading outdoors on the patio. The senior living apartment
transportation bus drove her to and from the nursing home three days a week. During these visits, she would spend six hours with her husband. They ate lunch together, played cards, and reminisced. When they were not together they spent countless hours on the phone with one another. As the days and weeks rolled on, Esther’s heart condition progressed. The nursing home staff saw her endurance shorten and each step seemed to require greater effort. One day Esther did not arrive at the nursing home for her regular visit nor did she answer her apartment telephone. Charlie’s anxieties heightened. His children soon arrived and shared the news that Esther had experienced a heart attack and was hospitalized. Esther’s cardiac status had declined significantly. She was unable to return to her senior apartment complex because her ability to prepare meals, complete light housekeeping, and care for herself had diminished. Esther left the hospital and moved into the nursing home. She looked forward to being closer to Charlie, but moving into the nursing home was an extreme adjustment for her which negatively impacted her quality of life.

The world that Esther knew became disrupted. She moved into a semi-private room. She had enjoyed sharing a bedroom with her husband at home, but sharing a bedroom and a bathroom with a complete stranger felt odd. A sheer curtain separated her side of the room from her roommate’s. She could not help but overhear her roommate’s personal conversations with family or physicians. Sometimes the smells that wafted into her side of the room were unpleasant.

Esther had lived in a 3000-square foot home filled with furniture acquired throughout her lifetime. She gave away some of those material possessions when she moved to the 1000-square foot senior living apartment, yet was able to keep most of the items that reminded her of significant events and memories of her life. Now Esther was
faced with a new challenge, her new personal space was 144-square feet, basically the size of a 12 X 12 room. This space was already filled with a twin-sized hospital bed, bedside table, and dresser, which left a very small space to bring her personal possessions.

Similarly, while living in her apartment, Esther was able to choose what time to wake up in the morning, or go to bed at night. She decided when and what she wanted to eat. She selected her own clothing, planned her daily routine and activities and cuddled with her cat. She enjoyed her privacy and having control over her environment. Life changed drastically for her. Although Esther enjoyed the staff and other residents at the nursing home, her daily routine became regimented. She was awakened in the morning before the “breakfast trays” from the kitchen arrived. She ate when the meal trays arrived on the unit. She went to the bathroom when the staff made “rounds”. While most staff took the time to allow her to choose her own clothing, some made the choice for her. Some staff would enter the room without knocking. She missed her time spent with her cat and longed to spent time outdoors on the patio like she did at her previous home and apartment. As Esther struggled to adjust to her new surroundings and quality of life in the nursing home, her world was shattered once again. Charlie died. Esther suffered from multiple losses.

Problem Statement

Elders experience significant disruptions in their lives when moving to a nursing home. The medically-focused model of a nursing home is more like an institution than a home. There are long, tiled hallways, nurses’ stations, large dining rooms, overhead announcements, flashing lights, and disturbing unfamiliar noise. The amount of personal private space decreases from what they occupied prior to the move to an average of 135
square feet per elder (Calkins & Cassella, 2007). Although 97.5% of facilities have outdoor space, only 44.3 % of elders have access to the outdoors (Bowman, 2008). Large industrial kitchens are inaccessible to elders, creating an inability for elders to participate in cooking, baking or to enjoy the smell of meals being prepared (Baker, 2007). Meal times are dictated by the facility schedules, limiting the elders’ ability to choose their daily routine. Rigid routines for meals, bathing, toileting, and programmed activities provide efficiencies for staff yet minimize elder choices (Baker, 2007). Traditional nursing homes were philosophically designed to support the medical needs of residents, yet, they lack emphasis on the quality of life (Rantz & Flesner, 2004; Calkins, 2007; Kane, 2003; Thomas, 2004). Calkins (2005) reports that there are no theoretical underpinnings of the traditional hospital design that support quality of care or quality of life.

An urban, western, New York nursing home operated as a traditional nursing home until 2001, when the organization began a journey to revolutionize nursing home care and improve quality of life for elders living there. The home adopted the Eden Alternative philosophy which is the most recognized and respected culture change path in the nursing home industry. This pathway works towards eliminating loneliness, helplessness, and boredom within homes. The adoption of the Eden Alternative created significant philosophical and operational changes, while maintaining the physical structure of the nursing home. However, the nursing home plans to incorporate a structural change with the next transition. The home plans to transform nursing home care by building THE GREEN HOUSE ® model homes. The Green House model suggests moving nursing home residents out of institutions and into residential homes (NBC Capital Impact, 2008; Thomas, 2004; Rabig, Thomas, Kane, Cutler, and McAlilly,
2006). These homes are designed to accommodate ten elders with private bedrooms and bathrooms. The homes’ architecture blends in with neighborhood homes (NBC Capital Impact). Common and accessible areas include a cozy hearth, with a large fireplace, open kitchen with breakfast bar, large family-style dining table and outdoor areas. This social model focuses on quality of life along with support of medical needs (Thomas). In The Green House model, elders are valued, respected and able to live in a home environment rather than an institutional environment. Other nursing home providers have built several of these homes on one campus, yet this home will be set apart from other providers by being the first in the nation to build these homes in community neighborhoods. The Green House homes should intuitively result in a better quality of life for elders, yet only minimal evidence has been reported in the literature. In order to test this hypothesis, this organization obtained quantifiable, objective, baseline quality of life data in order to compare outcomes to those of The Green House model.

Theoretical Rationale

Kralik, Visentin, and Van Loon (2006) define transition as “not simply change, but rather the process that people go through to incorporate the change or disruption into their lives.” The change elders experience when moving from a residential home to a traditional nursing home creates a significant change and disturbance in the elders’ lives. Wilson’s (1997) work focused on the elders’ transitions. The purpose of Wilson’s (1997) study was to identify variance in the initial responses of older adults who experienced a planned or unplanned permanent move to a nursing home. The research question in the study was “What are initial experiences of older adults in making the transition to nursing home life when the admission was planned or unplanned”? The researcher used grounded theory to guide the exploratory, descriptive, qualitative study. Data were
collected by observation and 45 to 60 minute interviews every other day for two weeks
and one month after elders moved into a nursing home. The sample included 15 elders
living among three long-term care facilities in a large Midwestern city over a six-month
period. The elders ranged from age 76 to age 97, spoke English, and passed a short
mental status questionnaire. The interview questions were designed so the researcher
could understand the initial experience of the elders’ transitions to the nursing home and
how it changed over time. Example questions include “Can you tell me what it is like for
you being in a nursing home”? and “Is living in a nursing home an adjustment for you”?
The interviews were taped and the observations recorded in field notes. Data analysis was
completed using the constant comparative method. Interviews and field notes were
analyzed line by line and coded to sort for topics and categories. Themes were identified
and phases of adjustment emerged.

Wilson (1997) suggests that the transition to nursing home life occurs in three
phases including overwhelmed, adjustment, and initial acceptance. The overwhelmed
phase is the initial response to the nursing home which include feelings of loneliness,
sadness, crying, fear, and a sense of loss. Elders were reluctant to share these feeling with
their support system. A delay in establishing phone service prevented contact between
elders and their friends and family which contributed to isolation. Adjusting to the small
room size, lack of privacy, and sharing bedrooms contributed to difficulties elders
experienced. Elders who planned to relocate to the nursing home moved through the
overwhelmed phase quicker than those who had an unplanned move.

The adjustment phase is the process of transitioning to living in a nursing home
(Wilson, 1997). During this phase the elders started focusing on the future and their daily
lives. Elders shared “You have to report for everything and they have control over
everything. They tell you what you can have and what you can’t have (Wilson).”

Another elder shared “There’s so many rules and regulations. You can’t go here, you
can’t go there. You’ve got to do this; you’ve got to do that. I’m used to doing things my
way (Wilson).” Another elder shared “What hurt me is the doctor told all this stuff to my
daughter and he didn’t tell it to me. There’s a slip on the table where I eat and it says
diabetic diet. That threw me. I’ve never been a diabetic from the day I was born. Why
didn’t he tell me (Wilson)?” During this phase the elders tried to have a positive outlook
and established new friends. Elders worked on concerns regarding lack of control,
autonomy, decision making, and institutional regimentation. After internalizing the move
to the nursing home in the adjustment phase, elders progressed to the initial acceptance
phase.

In the initial acceptance phase elders began to become more self-confident and
believed they could adjust to the new environment (Wilson, 1997). The elders began to
participate in activities, developed friendships, became less self-focused, and displayed
positive emotional responses. Additionally they took control of their situation and
reported a greater sense of well-being. Knowledge gained from Wilson’s transition model
can enable practitioners to implement strategies to support elders transitioning to life in a
nursing home and improve quality of life. Strategies to support family are not fully
incorporated into the framework. Elders transitioning into nursing homes are individually
affected along with whom they have relationships.

Significance of the Study

Kane (2003) reports some perceive the quality of life experienced in nursing homes
ranges from bad to unspeakably abysmal, while others compare living in a nursing home
to being incarcerated. Connors et. al. (1995) report nearly 30% of seriously ill older
people would “rather die” than move permanently to a nursing home. There are 1.5 million United States residents living in nursing homes each day. The Federal Interagency Forum on Ageing-Related Statistics (2008) suggests the costs for this group of individuals exceed $102 trillion dollars annually. Historically, regulators focused attention on markers of poor health care such as dehydration, fecal impaction, pressure ulcers, and falls rather than quality of life. Providers and regulators have an ethical responsibility to understand and improve quality of life for these individuals, as well as being concerned with markers of poor physical health.

The nursing home in this study has planned an action research agenda to guide continual improvement within the organization for elders, staff, family members, and the community. Action research is completed by organizational insiders wishing to make a difference in their own setting. Action research studies focus on cycles of actions implemented by organizations to address problematic situations (Herr & Anderson, 2005). This first study obtained quantifiable, objective baseline data to understand the elders’ perceptions of quality of life, identified opportunities for improvement of highlighted areas of best practices, and determined a baseline to compare outcomes from implementation of The Green House model.

Transitioning a nursing home environment from the medical model to a culture that embraces the holistic well-being of elders and implementing The Green House homes should intuitively result in a better quality of life for elders, yet only minimal evidence has been reported in the literature. The current literature indicates there is improved quality of life and elder satisfaction in The Green House model, yet the studies had small sample sizes and could not be generalized to the population. Understanding the differences in the quality of life outcomes between the community-based Green House
homes and a traditional nursing home contributes to knowledge by extending existing research, replicates a study with new participants at a new site, provides voice to people less heard in society, adds to current knowledge, and informs practice.

Statement of Purpose

The purpose of this study was to understand the quality of life experienced by elders living in this Eden Alternative nursing home, identify opportunities for improvement, and highlight areas of best practice that can be disseminated to other areas. The study was completed to understand if elders living in a shared or private room experience differences in quality of life. Finally, the study was completed to assess the baseline perceptions of the elders about their quality of life in preparation for the transition to community-based Green House homes.

Research Questions

This study was completed to answer the questions

1. How do elders living at the nursing home perceive their quality of life?

2. Is there a difference in quality of life experience for elders living in different neighborhoods within the home?

3. Is there a difference between quality of life experienced by those living in a private room versus a shared room?

Definitions of Terms

The definition of quality of life used in this study was developed by Kane (2003). Kane’s definition combines the voice of elders living in nursing homes, quality of life regulations and Residents’ Rights standards. Quality of life is comprised of eleven domains including autonomy, dignity, privacy, individuality, security, comfort,
relationships, meaningful activity, enjoyment, functional competence and spiritual well-being. The definitions of each of these domains appear in Table 1.1.

Some refer to individuals who live in nursing homes as patients or residents. This researcher prefers to use the term elder. Barkan’s definition of an elder is a person who is still growing, still a learner, still with potential and whose life continues to have within it promise for, and connection to, the future. An elder is still in pursuit of happiness, joy and pleasure, and her and his birthright to these remains intact. Moreover, an elder is a person who deserves respect and honor and whose work it is to synthesize wisdom from long-life experience and formulate this into a legacy for future generations (Thomas, 2004).

The Eden Alternative (2002) uses the word “neighborhood” when describing what a traditional nursing home calls a “nursing unit.” A traditional nursing unit has a cost-effective, hierarchical structure where decisions are made by management and carried out by staff. Approximately 16,000 United States nursing homes function with this model. Conversely, a neighborhood has the same physical environment as the traditional homes; however, nursing staff have permanent assignment which supports stronger relationships and understanding of the needs, wants, and desires of individual elders. Nonclinical staffs are assigned to neighborhoods and participate in relationship building and neighborhood
### Table 1.1

*Kane’s Domains of Quality of Life*

<table>
<thead>
<tr>
<th>Domain</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety, security, and order</td>
<td>Residents feel secure and confident about their personal safety, are able to move about freely, believe that their possessions are secure, and believe that the staff has good intentions. They know and understand the rules, expectations, and routines of the facility.</td>
</tr>
<tr>
<td>Physical comfort</td>
<td>Residents are free from pain, uncomfortable symptoms, and other physical discomforts. They perceive that their pain and discomfort are noticed and addressed by staff.</td>
</tr>
<tr>
<td>Food Enjoyment</td>
<td>Residents enjoy meals and food.</td>
</tr>
<tr>
<td>Meaningful activities</td>
<td>Residents engage in discretionary behavior that results in self-affirming competence or active pleasure in the doing of or watching of an activity.</td>
</tr>
<tr>
<td>Relationships</td>
<td>Residents engage in meaningful person-to-person social interchange with other residents, with staff, and/or with family and friends who live outside the nursing home.</td>
</tr>
<tr>
<td>Functional competence</td>
<td>Residents are as independent as they wish to be within the limits of their physical and cognitive abilities.</td>
</tr>
<tr>
<td>Dignity</td>
<td>Residents perceive their dignity is intact and respected. They do not feel belittled, devalued, or humiliated.</td>
</tr>
<tr>
<td>Privacy</td>
<td>residents have bodily privacy, can keep personal information confidential, can be alone as desired, and can be with others in private.</td>
</tr>
<tr>
<td>Individuality</td>
<td>Residents express their preferences, pursue their past and current interests, maintain a sense of their own identity, and perceive they are known as individuals.</td>
</tr>
<tr>
<td>Autonomy/Choice</td>
<td>Residents take initiative and make choices for their lives and care.</td>
</tr>
<tr>
<td>Spiritual well being</td>
<td>Residents’ needs and concerns for religion, prayer, meditation, spirituality and moral values are met.</td>
</tr>
</tbody>
</table>
events. This structure promotes close and continuing contact between caregivers and elders. In this model staff and elders learn and grow with one another.

Summary of Remaining Chapters

Chapter two provides a summary of the quality of life in the literature on nursing homes. Chapter three describes the research question, population and sample, and data collection and analysis procedures used in this study. Chapter four presents the research findings. Chapter five discusses the interpretations of the findings.
Chapter 2: Review of the Literature

Introduction and Purpose

Kane (2003) reports some perceive the quality of life experienced in nursing homes ranges bad to unspeakably abysmal, while others compare living in a nursing home to being incarcerated. Connors et al. (1995) report nearly 30% of seriously ill older people would “rather die” than move permanently to a nursing home. Family members feel guilt and anguish when moving elders to nursing homes. There are 1.5 million United States residents living in nursing homes each day. The Federal Interagency Forum on Aging-Related Statistics (2008) report costs for this group of individuals exceeds $102 trillion dollars annually. Regulators focus attention on markers of poor health care such as dehydration, incontinence, pressure ulcers, and falls rather than quality of life. Providers and regulators have an ethical responsibility to understand and improve quality of life for these individuals, as well as being concerned with markers of poor physical health. The purpose of this study was to understand the quality of life experienced by elders living in this Eden Alternative nursing home, identify opportunities for improvement, and highlight areas of best practice that can be disseminated to other areas. The study was completed to understand if elders living in a shared or private room experience differences in quality of life. Finally, the study was completed to assess the baseline perceptions of the elders about their quality of life in preparation for the transition to community-based Green House homes.
A systematic search was executed using Proquest, PsychINFO, CINAHL, and Sage Reference with the key words environment, quality of life, nursing home, skilled nursing facility, older adult, building design, and person-centered care. The results were limited to the English language; evidence-based reviews and published between 1999 and 2009. Journal articles discussing the physical environment for special care populations, for example elders with dementia, were excluded as the topic of interest relates to the general nursing home population. The abstracts were reviewed for pertinent information and references examined for additional appropriate articles.

**Topic Analysis**

*Population trends and costs.* As the United States population increases, the significance of the quality of life in nursing home grows. According to the 2004 National Nursing Home Survey there are 16,100 nursing homes with 1.5 million residents in the United States. The survey also reports the average monthly charge for nursing home care per elder was $5,690 in 2004. This represents national cost of $8.5 billion monthly or $102 trillion annually. The Federal Interagency Forum on Aging-Related Statistics (2008) reports the population of persons 85 years and older in the United States grew from just over 100,000 in 1900 to 5.3 million in 2006. The U.S. Census Bureau (2008) reports this group will triple by the year 2050. Moody (2010) suggests approximately 4% of people over age 65 are in nursing homes at any given time, and 40% will spend time in a home over the course of a lifetime. The Centers for Disease Control and Prevention (2007) states for every 100 individuals over age 85 nearly 14 will live in nursing homes.

Approximately 61.5% of nursing homes are proprietary while 30.8% are operated as voluntary nonprofit organizations. The remaining 7.7% are government entities. The
majority of nursing homes (87.6%) are certified by both Medicare and Medicaid. Medical service provided to individuals in nursing homes may be provided by private physicians (85.9%), contracts with physician group practices (30.1%), or by employing physicians on staff (19.6%). There are a total of 936,000 persons providing care to nursing home residents. Certified Nursing Assistants represent the majority of staff at 600,800.

The nursing home population is 71.2% female. The average length of stay is 835 days or 2.28 years. Residents who lived with family, were married, or living with a partner had shorter lengths of stay than those who were widowed, divorced, separated, single or lived with non-family members. Payment sources typically include private funds, Medicare, and Medicaid. More than half of the residents served are totally dependent or require extensive assistance with bathing, dressing, toileting, and transferring. The Centers for Disease Control and Prevention (2009) reports the leading diagnoses include diseases of the circulatory system followed by mental and nervous system disorders.

*Nursing home history.* Each nation provides care to the aged, chronically ill, and disabled. Until about 1850, there was little distinction between the long-term care facility and hospital. Long-term care facilities in England were referred to as hospitals and served the aged, disabled and impoverished citizens without medical staff (Allen, 2003; PBS, 2009). These facilities were primarily associated with monasteries and were known for the dilapidated facilities and inadequate care. In 1546, oversight of these hospitals transferred from the Catholic Church to a public board of citizen directors. The hospital provided 99% long term care and 1% acute care. Over the following 400 years, the population served shifted from chronic care to acute care. Hospitals began to provide
medical care to the individuals who had resources to pay. Eventually, the acute care and chronic care patients were separated within the hospitals. Allen (2003) suggests this history laid the groundwork for the current structure of short-term acute care hospitals and long-term institutions. Calkins (2007) reports the traditional nursing homes that are built today were philosophically designed to support the medical needs of elders (Calkins, 2007).

**Quality of life.** There are volumes of literature that address quality of life from multiple disciplines. Ware (2009) reported the authors of the SF-36 Measurement Model suggest quality of life is made up of physical functioning, physical role, bodily pain, general health, vitality, social functioning, emotional and mental health. Tools such as the Health-Related Quality of Life tool and the World Health Organization Quality of Life tool include measuring physical, functional, psychological, social and satisfaction categories. University of Princeton (2009) WordNet site defines quality-of-life as “personal satisfaction with the cultural or intellectual conditions under which you live”. World Bank defines it as the overall well-being comprised of environment, national security, personal safety, political and economic freedoms and material ownership (The World Bank Group, 2009). The Centers for Disease Control and Prevention’s (2009) definition includes all aspects of community life that influence the physical and mental health of its members. Typically, nursing homes measure quality of life using satisfaction surveys, however, the survey tools used in the past lack the capability to fully capture the perceptions of the elders about their quality of life.

Maslow’s hierarchy of needs is a psychology theory that describes stages of growth in humans. The first needs are physiological which are required for human
survival like breathing, food, clothing, and shelter. The second level of needs include safety and security needs like personal and financial security, health, well-being. Nursing homes provide elders both of these levels of needs. The third level of Maslow’s hierarchy is love and belonging, which involves emotionally-based relationships like friendship, family, and intimacy. The fourth level is esteem, meaning the need to be respected and to have self-esteem and self-respect. The final level is self-actualization meaning the person is able to grow into their full potential. An instrument that measures quality of life indicators from all the levels of Maslow’s hierarchy of needs would provide greater knowledge than instruments that measures only the lower levels.

The definition of quality of life used in this study was developed by Kane (2003). Kane’s (2003) definition combines the voice of elders living in nursing homes, Quality of Life regulations and Residents’ Rights standards while deemphasizing sexual lives, productive activity in employment, volunteering and financial security. According to Kane, Quality of Life is comprised of eleven domains including autonomy, dignity, privacy, individuality, security, comfort, relationships, meaningful activity, enjoyment, functional competence and spiritual well-being. The definitions of each of these domains appear in Table 1.

*Quality of life regulations.* A report by the Institute of Medicine highlighting poor quality of care in nursing homes provoked regulation leading to the Federal Nursing Home Reform Act or OBRA ’87 (Hillier & Barrow, 1999). Nursing homes receiving Medicare or Medicaid funding were required to provide service so each resident can “attain and maintain her highest practicable physical, mental, and psychosocial well-being” (Turnham, 2007). This act resulted in nursing homes becoming one of the highest-
regulated industries in the United States (Hillier & Barrow, 1999). It tightened surveillance survey procedures, strengthened residents’ rights, mandated nursing assistant training, and set up punitive action for homes failing to meet minimum federal standards. OBRA ‘87 also emphasized quality of life as well as quality of care (Turnham).

The Centers of Medicare and Medicaid Services and New York State Department of Health implemented quality-of-life regulations to which nursing home staff must adhere. The complete quality of life regulations can be read in Appendix A (federal) and Appendix B (state). The regulations state the facility should care for residents in an environment that promotes or enhances the elders’ quality of life. The resident has the right to 1) choose activities, schedules, and health care consistent with his or her interests, and 2) make choices about aspects of his or her life in the facility. The facility must provide for an ongoing program of activities designed to meet the interests and the physical, mental, and psychosocial well-being of each resident (University of Minnesota, 2008).

**Barriers to quality of life.** Elders experience significant disruptions in their lives when moving to a nursing home. Nursing homes have been called a total institution, a term that describes prisons, mental hospitals, or other organizations that treat people like “inmates” rather than individuals. The traditional nursing home daily routine is regimented and scheduled so individuals living there may lose a sense of control over their environment and become depressed (Moody, 2010).

Kane et al. (2004) studied the relationship between the physical environment and quality of life using a sample of 131 nursing units in 40 nursing homes. Five hundred eighty (29%) elders lived in a private room, 1155 (58%) shared a two-bed room, 177
(9%) a three-bed room, and 76 (4%) a four-bed room. In California, 35% of elders in the sample shared a room with three or more beds. The remaining states had less than 10% of shared rooms with three or more beds. The space per resident rooms ranged from 75 to 411 square feet.

In traditional shared rooms, beds are positioned side by side. Elders share a bathroom and a window. If one elder needs to use the bathroom, they are required to move through their roommate’s private space. Similarly, if one elder desires to look out the window, they are required to move through their roommate’s private space as well. A material curtain hangs between two beds to provide “privacy” for residents. Enhanced shared bedrooms provide each elder with their own distinct space and window, yet share a bathroom. In this design, elders are not required to move through the roommate’s personal space (Calkins and Cassella, 2007).

The traditional shared bedroom square footage ranged from 183-380 with the average room 270 square feet. This leaves each elder private space ranging from 91-190 square feet and an average of 135 square feet. The enhanced shared bedroom square footage ranged from 155-563 with the average room 326 square feet. This leaves each elder private space ranging for 77.5-281 square feet and an average of 163 square feet. The private bedroom square footage ranged from 101-450 with the average room 214 square feet (Calkins and Cassella, 2007).

Elders living in private rooms were more likely to have functional-enhancing and life-enriching environmental features and had greater control over their lives. Elders who lived in private rooms and had fewer roommates were associated with better quality of life in the privacy, functional competence and meaningful activity domains (Kane et al.
Two additional studies that reported elders living in The Green House model with private rooms reported statistically significant perceptions of privacy when compared to the traditional nursing home environment (Kane, Lum, Cutler, & Yu, 2007; Rabig, 2007). Calkins and Cassella (2007) report older adults over age 50 prefer private rooms. Having a private bedroom is the most desired change for nursing home residents. Elders express they have better visits with family, more control, and greater satisfaction with this room configuration. Additionally, there is less risk to acquire nosocomial infections in private rooms.

Calkins and Cassella’s (2007) study highlights challenges for elders and their family members that arise from living in shared rooms. Elders who share bedrooms struggle with roommate conflicts over television and radio volume and programming, wake and sleep hours, curtains or door opened or closed, climate control, private phone calls and conversations, and room personalization. The majority of residents that share rooms report they do not enjoy spending time with their roommate, and do not believe their roommate is sensitive to their feelings. Shared rooms are harder to market than private rooms. Visiting family members report they want to be near their loved one, yet are concerned about disrupting the other individual living in the room. The family may shorten visits, or limit the number of people who gather. Additionally, maintaining confidentiality when discussing health protected information is more challenging in a shared room (Calkins and Cassella, 2007).

Staffs report that when they enter a room to care for elders at night the activity can disrupt the roommate’s sleep. Many elders are checked on every two hours, therefore, the shared room configurations can impact the ability to have a healthy amount of
uninterrupted sleep. Staff also project there may be higher levels of psychotropic medication use, distress behaviors, and medication error rates for elders living in shared rooms. Additionally, staff reported increased time spent marketing, managing conflict and room changes, and cleaning shared rooms (Calkins and Cassella, 2007).

The average cost to build a private room is $14,906, while an enhanced share room is $10,301, and a traditional shared room is $8,252. When adding the cost of debt service at 7% over 30 years the cost for each private room increases to $36,515. The enhanced shared bedroom would increase to $25,121, and the traditional shared bedroom $20,506. Researchers suggested that if the rooms are occupied by private pay residents and the cost per day was $23 greater than a shared room, the provider would recoup the extra costs spent for a private room in 596 days (Calkins and Cassella, 2007).

Kane et al. (2004) also report elders’ quality of life is impacted by shared bathrooms. The study found 42% shared a bathroom with one other person, 5% with 3 elders, 18% with 4 elders, and 11% with 20 elders. The distance elders trek to reach the primary toilet ranged from 2 to 82 feet. In order to use the toilet facilities, 12% of elders must travel out of their bedroom area to a shared bathroom in the hallway. Traveling long distances and waiting for others to vacate the area before they are able to use the facilities impact elders’ quality of life.

Twenty five percent of the residents had a tub/shower in the bathroom. Nearly eight percent of the units did not have a shower or tub on the unit, resulting in elders traveling up to 270 feet to reach the shower/tub room (Kane et al., 2004). The limited tub/shower areas create a barrier for elders to received daily showers or tub baths. Flexible scheduling of the tub room can be difficult since there are a large number of
elders needing to use the room. Typical schedules provide each elder the opportunity to take a bath or shower at least once weekly. In the event an elder requests a schedule change, staff may need to find another elder willing to “switch” bathing times.

Elders experience a dramatic shift in the dining experience when living in a traditional nursing home. Kane’s et al. (2004) study showed elders on 33 units journeyed off the unit to eat, while 83 units had a single dining room. One unit had six dining options. One dining room did not have enough room for all the elders to eat, resulting in 34% of elders eating in their bedrooms. Another facility struggled with the same capacity concern and resolved the issue by adding tables in the hallway. Meals are provided at scheduled times. The meal times often dictate the schedule of the day. For example, if breakfast is served at 7:05 am, the elder is awakened prior to that time to “be ready” for the meal to arrive. Thirty one of the units had a refrigerator and the capability to warm food on the unit yet; full kitchens are located away from the living areas. These units were typically located in innovative facilities with small cluster or neighborhoods of 8-10 elders. The lack of these amenities presents a barrier for elders desiring to eat at times other than the scheduled meal time, participate in cooking or baking activities, or smell meals being prepared (Kane et al. 2004). Regulatory bodies require stoves accessible to residents be equipped with fire suppression features and a switch to disconnect power when unused to prevent accidental hazards (Bowman, 2008). Alternative nursing home delivery models suggest the kitchen should be accessible and safely used by residents and visitors (Baker, 2007; Bowman, 2008; Thomas, 2004).

Scheduled snacks are provided for some elders. Examples of these snacks include peanut butter and crackers, nutritional drinks, and fruit. If an elder feels hungry and
would like a snack there is minimal food available on the unit. For example, bread, butter, crackers, orange juice, ginger ale, and apple sauce may be available upon request. Thomas (2004) and Baker (2007) suggest smaller dining rooms, flexible meal times and snacks of choice available upon request.

The Center for Medicare and Medicaid Services (CMS) Quality of Life study found that 97.5% of facilities had outdoor space yet only 44.3% of resident had access to the space. Of the 1068 individuals with access to outdoor space, 32.2% went outdoors less than once monthly and 13.4% went out less than once weekly. The remaining residents (54.4%) reported going outdoors at least once per week Kane et al. (2004). Multistory large buildings create barriers for busy staff to get residents outdoors. Calkins and Marsden (2000) report that prisoners who are allotted one hour of outdoor time daily receive greater access to outdoor space than nursing home residents. These researchers suggest elders should have direct access to safe outdoor spaces to improve quality of life and autonomy.

Traditional nursing homes operated in a medical model. Similar to acute care hospitals, this model focuses on treatment of medical problems or compensating for the resident’s losses (Thomas, 2004). For example, the care for a nursing home resident who has experienced a stroke might include assistance with bathing and dressing, strength building, and prevention of future strokes (Smeltzer & Bare, 1992). Deutschmann (2001) reports this medical model is appropriate for short-term residence, but not for permanent housing. This model can lead to increased dependence and powerlessness for elders. Peck (2006) interviewed a nursing home administration who stated “The nursing home care model is fundamentally broken. Virtually no one in the country would choose to live in a
nursing home; in fact people usually feel that they’re “sentenced” to this.” While this medical model supports medical needs, it lacks emphasis on the quality of life and limits participation of family and friends (Rantz & Flesner, 2004; Calkins, 2007; Kane, 2003; Thomas, 2004).

The traditional nursing home operates within a hierarchical structure which results in decisions being made at higher levels and a controlling environment (Thomas, 2004). For example, a resident may ask the Certified Nursing Assistant if the resident could move into a private room. The Certified Nursing Assistant would need to ask the nurse, who would ask the Nurse Manager. The Nurse Manager would discuss the request with the social worker. These individuals complete required paper work and submit the request to the administrative group who will make the final decision. This interdependent structure leads to staff incompatibility, conflicts, dissatisfaction, absenteeism and turnover (Deutschmann, 2001). Deutschmann (2001) studied nursing homes identified as excellent and found those organizations’ culture included a shift to shared decision making rather than control. For example, when faced with state budget cuts the staff collaboratively found innovative ways to overcome the cutbacks. Alternative nursing home delivery models suggest flattening the organizational structure (Thomas; Rantz & Flesner, 2004).

Traditional nursing homes are staffed with individuals who focus on specialized tasks. In Peck’s (2006) interview, the nursing home administrator states “We have department upon department in our organizations: nursing, nutrition, laundry, housekeeping, maintenance, and more. No one’s actual home is like this.” Certified Nursing Assistants provide residents help with bathing, dressing, hygiene, and toileting.
Therapeutic Recreational specialists lead organized leisure activities. Laundry staffs wash, dry and fold linens and clothing, while Environmental Service staffs perform housekeeping tasks. Alternative nursing home delivery models suggest universal workers perform a portion of all these tasks, just as a person does in their own home (Baker, 2007; Thomas 2004).

The Institute of Medicine reports excessive staff turnover and absenteeism in long term care, especially within nursing departments (Rantz & Flesner, 2004). Nursing home staff turnover rates in 2006 for Medicaid-certified facilities reveal a 100% turnover for registered nurses, licensed practical nurses, and nursing assistants in the south-central region of the United States (Clarkin, 2008). High levels of staff turnover lead to a reduction in quality of care, decreased employee productivity, financial burdens, and disruption of the relationships between residents and staff (Rantz & Flesner; Baker, 2007; Thomas, 2004).

Kane’s et al. (2004) study demonstrates the nursing homes with private rooms and activity-related features ranked highest in the privacy and meaningful activity quality of life domains. Elders living in nursing homes with reception desks, activity rooms (with games, arts and crafts, musical instruments, and popcorn machines), bathrooms with lockable doors, kitchenettes, gift shops, coffee, snack bars, lounges, and private bedrooms reported higher levels of quality of life. Elders living in nursing homes with secure outdoor areas, carts in hallways, staff yelling, odors from cleaning solution or urine and feces, and facility-wide dining room reported lower levels of quality of life. The medical model, limited participation of family and visitors, hierarchical structure, high levels of staff turnover, shared bedrooms and bathrooms, limited access to
kitchens and outdoor spaces, rigid routine, and lack of privacy represent traditional nursing home model structure that impact quality of life for elders. A growing number of coalitions, organizations, and individuals are developing culture change strategies to transform the traditional nursing home (Pioneer Network, 2009). Transforming traditional nursing home culture should intuitively equate to a better quality of life for the 1.5 million individuals living in nursing homes.

In 1997, nursing home professionals passionate about creating positive change began meeting informally. In 2000, these leaders established the Pioneer Network as a national organization to promote the culture change movement (The Pioneer Network, 2009). The Pioneer Network defines culture change as a transformation that returns control to elders and those who work closest with them. It creates a culture of aging that is “life-affirming, satisfying, humane, and meaningful” and “transforms a ‘facility’ into a ‘home’, a ‘resident’ into a ‘person’ and a ‘schedule’ into a ‘choice’”(Bowman, 2008).

The Pioneer Network grows stronger each year. Their staff and members have collaborated with the Center for Medicare and Medicaid Services to address regulatory issues that present barriers to culture change activities. Over 650 nursing home professionals attended the Center for Medicare and Medicaid Services (CMS) and the Pioneer Network’s seminar titled “Creating Home in the Nursing Home: A National Symposium on Culture Change and the Environmental Requirements” on April 3, 2008. Attendance at the annual Pioneer Network conferences has grown from a few hundred to several thousand professionals between 2000 and 2008.

*Eden Alternative philosophy.* One of the founding members of the Pioneer Network, Dr. William Thomas, worked as a physician in an upstate New York nursing
home with a five-year history of perfect state surveillance surveys. One day he visited an elder with a rash. When leaving the room the elder reached for his arm and said “I’m so lonely.” Dr. Thomas found himself speechless. His medical training had not prepared him to treat loneliness (Thomas, 2004).

From this experience, Thomas and his wife, Judith Meyers-Thomas, developed The Eden Alternative philosophy. This philosophy states the bulk of suffering experienced by elders living in nursing home is caused by loneliness, helplessness, and boredom. Medical treatment for physical and mental illness fail to comfort the injured human spirit. The Eden Alternative homes are an elder-centered community committed to creating a human habitat where life revolves around close and continuing contact with plants, animals and children (Thomas, 2004).

Thomas (2004) suggests that like a thirsty person needs water, a lonely person needs companionship. Companionship is knowing and being with others and is linked to well-being and quality of life. Staff completing the daily tasks, being friendly or keeping a professional distance from elders does not represent companionship. Elders passively sitting and watching activity around the unit also does not constitute companionship. The Eden Alternative purports knowing and integrating natural rhythms of life in nursing homes and developing meaningful relationship with each other by learning and understanding each others’ stories. Thomas indicates that companionship deepens the art of giving care. Strengthening relationships between staff and elders and having animals in the environment alleviate loneliness (Thomas).

The second component of the Eden Alternative focuses on helplessness. Thomas (2004) believes that elders are unintentionally made to feel helpless as they receive more
care than they give. The antidote for this is to provide elders with easy access to opportunities to give care which can be done by adding plants, animals, and children. Elders need to know that they have a purpose, that their life has value, and they contribute to the well-being of others (Thomas).

Boredom is defined by the pain experienced when one seeks but cannot find variety and spontaneity in daily life (Thomas, 2004). Nursing homes have predetermined schedules and routines which can have a deadening effect on those working and living there. Boring homes do not bring about new memories or stories to share. Eden Alternative homes have spontaneous events and happenings which create new memories and stories. One strategy used to create spontaneity includes adding animals and children to the environment. They can be expected to do unpredictable and unexpected things (Thomas).

Eden Alternative nursing homes honor their elders by deemphasizing top-down bureaucratic authority, seeking instead to place the maximum possible decision-making authority in the hands of the elders or of those closest to them (Thomas, 2004). Rather than being told what to do, elders and the staff closest to them make decisions. This allows staff to hear the elders’ voice and facilitates an elder-centered environment. The Eden alternative speaks to a golden rule of “as managers do unto staff, so shall the staff do unto elders”. The final two principals of the Eden alternative state that creating an elder-centered community is a never ending process and that there is no substitute for wise leadership (Thomas).

Thomas and Johansson (2003) reported that a two-year study of five Texas nursing homes that implemented the Eden Alternative philosophy found a 60% decrease
in behavior incidents, a 57% decrease in Stage I & II pressure sores, a 25% decrease in bedfast residents, an 11% decrease in employee injuries, an 18% decrease in restraints, a 48% decrease in staff absenteeism and an 11% census increase.

_The Green House Project_. The Green House Project is an outgrowth of the Eden Alternative. The Green House model suggests moving nursing home residents out of institutions and into residential homes (NBC Capital Impact, 2008; Thomas, 2004; Rabig, Thomas, Kane, Cutler, and McAlilly, 2006). Thomas (2004) described The Green House model as an “intentional community” or a place where a group of unrelated people join together and share daily life and purpose. These homes are designed to accommodate ten elders with private bedrooms and bathrooms. The homes’ architecture blends in with neighborhood homes (NBC Capital Impact). Common and accessible areas include a cozy hearth, with a large fireplace, open kitchen with breakfast bar, large family-style dining table and outdoor areas. This social model focuses on quality of life along with support of medical need (Thomas). Participation of family and friends is encouraged. The flattened organizational structure empowers direct care staff to make household decisions. Additional amenities include paperless medical records, wireless call systems, electronic ceiling lifts, and high speed internet access (NBC Capital Impact). The elders decide what activities they would like to participate in, determine when and what they would like to eat, and have control over their environment. Direct care is provided by a universal worker called a Shahbaz (Thomas, 2004). These certified workers have training in personal care, safe food handling, cooking, activities and light housekeeping. Nurses, physicians, social workers, and other clinical support staff visit the home and collaborate with the Shahbaz. In this model, elders are valued, respected and able to live in a home
environment rather than an institutional environment. After completing the five-year study for CMS, Kane and colleagues used the tools developed to measure outcomes in The Green House model of care. Kane, Lum, Cutler, and Yu (2007) compared quality of life, quality of care, and elder satisfaction between elders living in a Green House home and those living in two traditional nursing homes using a longitudinal quasi-experimental study. The sample consisted of 40 elders who were scheduled to move to The Green House homes, 40 elders living at Cedars Nursing Home, and 40 elders living at Trinity Nursing Home. Elders living in The Green House homes rated quality of life higher on subscales of privacy \((p < .001)\), dignity \((p < .001)\), meaningful activity \((p < .003)\), relationship \((p < .002)\), autonomy \((p < .001)\), food enjoyment \((p < .001)\), spiritual well-being \((p < .033)\), security \((p < .038)\), and individuality \((p < .001)\) compared to ones living in traditional home using the random effects Tobit regression analysis. When compared to the second nursing home, elders living in The Green House homes reported higher quality of life in the subscales of privacy \((p < .05)\), dignity \((p < .001)\), autonomy \((p < .05)\), and food enjoyment \((p < .001)\). Additionally, the research indicated that elders living in The Green House homes self-reported experiences resulting in greater emotional well-being \((p < .01)\) and satisfaction \((p < .001)\) using regression analyses. There were minimal differences noted in quality of care between elders living in The Green House homes and those in the control groups. Overall, the research indicates The Green House home is a promising model to improve quality of life for nursing home residents. The authors suggest that generalizing to other settings should be done cautiously relative to the small sample size. While Kane’s (2007) group completed the quantitative measures, Rabig (2007) conducted a qualitative study.
Rabig (2007) completed an explorative, descriptive, qualitative study of ten elders who moved from a traditional nursing home to a Green House home using a pre post comparative case study methodology. The results suggest the environmental re-design resulted in positive changes. All the participants mentioned private rooms increased their privacy and many also mentioned the private bathroom as well. Seven participants reported having higher levels of choice in areas including food, bathing schedules, meal times, and sleep. Six participants stated they enjoy food more, citing better quality, access, smells, and quantity. Four of the participants reported improved levels of comfort and pain reduction after using the whirlpool tub. Four participants reported going outdoors was a source of increased pleasure. Four mentioned participating in activities that enhanced their spiritual lives. One elder no longer needed to use a wheel chair since distances traveled to the dining room or other areas were shorter. Another felt a greater sense of independence because she was able to operate the controls of the ceiling lift which moved her. In summary, after moving to the Green House home, participants reported physical needs were met more effectively, including better food, time outdoors, pain relief, and functional competence. Elders felt safe, secure, and perceived improved privacy, autonomy, sense of individuality and relationships (Rabig, 2007).

Summary and Conclusion

When completing the literature review on the nursing home physical environment and quality of life for elders, multiple journal articles are found, however many of them review components of the larger Kane et al. (2004) five-year study. There are few additional studies that add evidenced based knowledge in this area; however there are numerous articles that offer expert opinion. The current literature indicates the traditional
nursing home structure creates limitations for elders to maximize quality of life. Changing the culture and environmental structure of nursing homes could improve quality of life. There is evidence of improved quality of life outcomes and elder satisfaction for those living in the Tupelo, Mississippi’s Green House home. However, these studies had small sample sizes and could not be generalized to the population. Establishing a cause and effect study would be nearly impossible since to randomize elders to The Green House home intervention would not be ethically feasible. Further studies that quantify and compare the quality of care, quality of life, and elder/staff/family satisfaction outcome differences between the traditional nursing homes, Eden Alternative homes and The Green House model would add to current knowledge.
Chapter 3: Research Design Methodology

*General Perspective*

Elders experience significant disruptions in their lives when moving to a nursing home. The medically-focused model is more like a health care institution rather than a home. There are long, tiled hallways, nurses’ stations, large dining rooms, overhead announcements, flashing lights, and disturbing unfamiliar noise. The amount of personal private space decreases from what they occupied prior to the move to an average of 135 square feet per elder (Calkins & Cassella, 2007). Although 97.5% of facilities have outdoor space, only 44.3% of elders have access to the outdoors (Bowman, 2008). Large industrial kitchens are inaccessible to elders, creating an inability for elders to participate in cooking and baking or to enjoy the smell of meals being prepared (Baker, 2007). Meal times are dictated by the facility schedules, limiting the elders’ ability to choose their daily routine. Rigid routines for meals, bathing, toileting, and programmed activities provide efficiencies for staff yet minimize elder choices (Baker, 2007). Traditional medical model nursing homes were philosophically designed to support the medical needs of residents, yet, they lack emphasis on the quality of life (Rantz & Flesner, 2004; Calkins, 2007; Kane, 2003; Thomas, 2004). Calkins (2005) reports that no theoretical underpinnings of the traditional hospital design support quality of care or quality of life.

In 2001, the study nursing home began a journey to revolutionize nursing home care and improve quality of life for elders living there. The nursing home adopted the
Eden Alternative philosophy which is the most recognized and respected culture change path in the nursing home industry today. This pathway works towards eliminating loneliness, helplessness, and boredom in nursing homes. This transition is accomplished by becoming an elder-centered community committed which creates a human habitat where life revolves around close and continuing contact with plants, animals and children (Thomas, 2004). Additionally, this nursing home plans to transform care by building Green House homes. The Green House model suggests moving nursing home residents out of institutions and into residential homes (NBC Capital Impact, 2008; Thomas, 2004; Rabig, Thomas, Kane, Cutler, and McAlilly, 2006). These homes are designed to accommodate ten elders with private bedrooms and bathrooms. The homes’ architecture blends in with neighborhood homes (NBC Capital Impact). Common and accessible areas include a cozy hearth, with a large fireplace, open kitchen with breakfast bar, large family-style dining table and outdoor areas. This social model focuses on quality of life along with support of medical needs (Thomas). In this model, elders are valued, respected and able to live in a home environment rather than an institutional environment. Other nursing home providers have built several of these homes on one campus, yet this nursing home will be set apart from other providers by being the first in the nation to building these homes so they are integrated into the community neighborhoods. The Green House homes should intuitively result in a better quality of life for elders, yet only minimal evidence has been reported in the literature. In order to test this hypothesis, it is necessary to obtain quantifiable, objective, baseline quality of life data in order to compare these outcomes to those of The Green House model.
This nursing home has historically used a satisfaction survey to measure quality of life. The satisfaction survey used by the nursing home has also been used to collect data from 92,433 residents within 2,899 nursing facilities across the 50 states and the District of Columbia in 2006. The survey instrument includes subscales for quality of life, quality of care, quality of service, and global satisfaction. The nursing home in this study used this survey tool to measure Resident Satisfaction in October 2008. If the elder was unable to complete the survey, it was sent to a close family member or friend of the elder. The survey was distributed to 130 elders and 321 family members. The survey was returned by 110 elders and 96 family members resulting in a response rate of 85% and 30% respectively.

The results have provided data regarding respect, privacy, friendships, activities, spiritual support, safety, and the dining experience, yet lacks the depth of information necessary to ensure the nursing home is fulfilling its mission and vision. The satisfaction survey measures components from the lower levels of Maslow’s hierarchy of needs. The mission includes “nurturing life with vibrant, caring and life-affirming relationships”. The vision includes being the “premier long term care community that nurtures and strengthens the gifts and relationships of all, by working together and living our values” and being a “home that fosters loving companionship to ease loneliness and celebrate life with kindness, dignity and purpose.” There are other instruments that are able to measure the characteristics stated in the home’s mission and vision. The Quality of Life Scales for Nursing Home Residents survey tool used in this study measures companionship, meaningful relationships, loneliness, autonomy, dignity, and self-worth. This instrument evaluates the relationship between the elders’ quality of life with the mission, vision, and
values better than the previously used satisfaction survey and measures components from
all the levels of Maslow’s hierarchy of needs. (Appendix C)

The study collected baseline quality of life data to answer the questions:

1. How do elders living at this nursing home perceive their quality of life?

2. Is there a difference in quality of life experience for elders living in different
   neighborhoods within the home?

3. Is there a difference between quality of life experienced by those living in a
   private room versus a shared room?

A quantitative method was used in this single-organization study. A descriptive,
correlational, cross-sectional design was applied. The postpositivist philosophy is used in
the study, as this researcher desired to use empirical evidence to answer the research
questions. Postpositivists begin with a theory, develop numeric measures for studying
individuals, and collect data to either support or refute the theory (Creswell, 2009).
Quantitative research methods align well with the postpositivist philosophy.

Research Context

The study nursing home is a long-term care community located in Western New
York. The organization was established in 1899 and offers skilled nursing care, dementia
care, transitional care, rehabilitation, adult day services, and hospice care to more than
475 individuals. This nursing home embraces the Eden Alternative philosophy of caring
for elders. The elder population is 75.7% female and 24.3% male. Nearly 90% of elders
are older than 65, with 46.5% older than 85. Occupancy rates in 2008 averaged 97.7%.
In 2008 there were a total of 575 admissions, with the highest number admitted to
rehabilitation (388) followed by skilled nursing (148), dementia care (29), and comfort
The average length of stay for elders excluding those with a stay of less than 30 days is 19.5 months. The payer sources include private pay (30%), Medicare A (8%), and Medicaid (62%). The Activity of Daily Living (ADL) Index score ranges from four indicating independence or high ADL functioning to 18 representing dependent or low ADL functioning. Approximately 20% of elders living at SJH score between four and eight indicating minimal assist with ADLs, 32% score between nine and thirteen indicating moderate assist with ADLs, while 48% score greater than 14 indicating maximal assist with ADLs. The Cognitive Performance Scale (CPS) scores range from zero (cognitively intact) to six (very severe cognitive impairment). Approximately 31% of elders score between zero and two, 58% score three or four, and 11% score five or six.

The total number of rooms excluding the Restorative Rehabilitation Unit is 336. Of those, 217 (65%) are private and 119 (35%) are shared. There are 217 (48%) of elders living in private rooms and 238 (52%) living in shared rooms.

**Research Participants**

The research participants included English-speaking elders older than 65 who lived at the nursing home during the time of the study. Residents were excluded from the study if they were admitted for a short stay restorative rehabilitation program or had a Cognitive Performance Scale score of six. Patients admitted to the rehabilitation unit are expected to reside at the nursing home for a short-stay and would not consider the facility their “home” and therefore were excluded. A Cognitive Performance Scale score of six indicates very severe cognitive impairment and these elders would be unable to participate in the survey.
The total number of elders who can potentially live at the nursing home is 475. The average occupancy from January through May 2009 was 97.8% or 465 elders. Within the nursing home is a 20-bed rehabilitation unit. That unit has had an average occupancy rate of 87.3% from January through May 2009 leaving the mean number of rehabilitation patients per day of 17.4. This reduced the population of interest to 448. As of June 30th, 2009, there were 24 elders living at the nursing home whose most recent Cognitive Performance Scale score was six. This further reduces the population of interest to 424. According to the table of recommended sample sizes for populations with finite sizes found in Orcher (2007), a representative sample size for a population of 420 should be 201. A representative sample size for a population of 440 should be 205. Surveys were to be completed until 203 were finished. This represents a margin of error of +/- 5%.

A single-stage sampling procedure was used. A sequential sampling approach was used to select the sample. The researcher initially planned to stratify the sample in order to ensure the sample reflects the true proportion of gender and room type. The interviewers were given the lists of elders selected for the study and an additional list of alternates to accommodate subject loss. There were a large number of elders on the selection list who were challenged with cognitive deficits and were unable to participate in the interviews; therefore ultimately all potential elders who met the inclusion criteria were approached.

Instrumentation

In May 1998 the Centers for Medicare & Medicaid Services (CMS) awarded the University of Minnesota a 5-year contract to complete a study to 1) develop and test
measures and indicators of quality of life for nursing home residents, and 2) to study how the physical environment, including private rooms, affected resident QOL. Researchers completed the study using two major waves of large national samples (Kane et al., 2004).

The purpose of the first wave was to 1) field test psychometric properties of a measurement tool, 2) determine self-report quality of life response rates by level of cognition of residents, and 3) collect data regarding the environment. The sample included residents from 40 volunteer nursing homes from California, Florida, Minnesota, New Jersey, and New York. The sample was stratified by size and rural/urban area and oversampled for 75%+ in private rooms. There were 50 residents per facility, however after exclusions and consenting some facilities had fewer than 50 residents, resulting in a final sample of 1988. Wave one was completed in 2000 (Kane et al., 2004).

The purpose of the second wave was to confirm quality of life measures and examine correlations of quality of life including personality and length of stay. The sample of 60 nursing home facilities or 1680 residents came from California, Florida, Maryland, Minnesota, and New York. The second wave studies were completed in 2001 (Kane et al., 2004).

Measuring quality of life. In the Kane (2004) study quality of life is measured in eleven different domains which are defined in Table 1. In an effort to develop a resident self-report measure of quality of life, researchers used each one of these domains as an outcome and developed four to thirteen questions for each domain (Kane et al., 2004). In addition to these questions authors included demographics, a self-report of ten emotional states, four general satisfaction items, and 12 summary ratings. Most questions included a four-point Likert-type scale like “often, sometimes, rarely, never” or “excellent, good,
fair, poor”. If elders were unable to respond with the Likert-type scale, interviewers modified response options to the dichotomous answer “mostly yes” or “mostly no”. Elders with significant cognitive impairment, who were unable to rouse, or who gave incoherent replies to more than eight of the questions were excluded. Sixty percent of the sample or 1188 elders were able to complete the majority of the interview.

In wave one the researchers tested different ways of interpolating the binary responses into the Likert-type scale responses (Kane et al., 2004). Most items resulted in 3.8 corresponding to “mostly yes” and 1.5 with “mostly no”. Some questions called for a dichotomous answer from the beginning (e.g. having any elder as a close friend). In this case “mostly yes” was coded as “4” and “mostly no” was coded as “1”. Scale reliability using Cronbach’s alpha ranged from .53 to .77 on all but one scale. Researchers looked at inter-correlations and independence of scales, eliminated items and tested concurrent validity. They conducted confirmatory factor analysis and reduced the scales to a shorter version with slightly decreased alpha reliability level. Only one domain scale fell below 0.63.

Researchers’ field tested a revised, shorter instrument in the wave two study (Kane, et al. 2004). A randomly selected sample of 1680 elders completed the questionnaires. Of those, 78.5% had a cognitive performance score of 3-5 indicating moderate to severe cognitive impairment. Instrument testing followed the same procedure as in wave one. When researchers applied confirmatory factor analysis, they established the modified scale had adequate scale properties and concurrent validity (Kane et al., 2004).
Quality of life tool transferability study. After the researchers developed the tool, researchers were asked to determine the extent that facility staff and surveyors could use the interview tool with similar results as researchers (Kane et al., 2004). Additionally, CMS asked if there would be a difference in results when interviews were completed by nursing staff or psychosocial staff. Kane’s research staff also looked at differences in interviewer performance between those prepared with two-day in-person training and those who were given training materials to review.

The staff transferability study was completed in eight Minnesota nursing homes (Kane et al., 2004). In each home two nurses and two social workers or activity personnel participated. Four of the nursing homes were provided with in-person training and the others received manual and audio-tape instructions, and a phone number for questions. The interview time ranged from 40 to 90 minutes per interview. The facility staff member and researcher conducted interviews two to five days apart. The researcher-staff member congruence at the scale level was as good as the test-retest congruence when both interviewers were completed by researchers. The professional discipline of the staff members did not affect the outcomes. Staff members who attended in-person training had less missing data and used the binary option less than those who did not experience in-person training. The difference in training had no identifiable effect on congruence.

The instrument is public domain and therefore there was no need to request permission to use the tool. However, Dr. Kane and her colleagues were aware of this research study and supportive of the use of the instrument in this study.
Procedures for data collection

After receiving approval for the study from the nursing home’s Research Ethics/Safety Committee, St. John Fisher College Dissertation Committee, and St. John Fisher Institutional Review Board (IRB), letters were sent to potential participants (Appendix D) and their primary contact person (Appendix E) regarding the purpose of the study and requesting their participation. The letter also included information regarding the right of refusal and contact information for questions regarding the study.

The researcher requested interviewer assistance from five local college professors. The college professors recommended five students who majored in human service fields like social work and nursing. These students received college credit for participating in this study. The remaining four interviewers were volunteers at the nursing home recommended by the volunteer coordinator. Each of the interviewers completed the National Institutes of Health (NIH) Office of Human Subjects Research training course.

Interview training was completed by the principal investigator and included information about the purpose of the study, history of the nursing home, population served, an overview of the stages of transition elders experience when moving to a nursing home, institutional barriers that might affect quality of life, introduction to the culture change, Eden Alternative and The Green House model, sample information, risks and benefits of participation of the elders, discussion of the grieving process, the process for the survey (Appendix F), how to use the survey tool, confidentiality, and minimizing bias.

The training culminated in interviewers completing two practice interviews. Interviewers completed two practice interviews with staff volunteers who work closely
with elders. In the first practice interview, the interviewee was a staff member who had worked for the nursing home for eight years as a Certified Nursing Assistant and a Unit Clerk and is also studying to become a Registered Nurse. This staff played the role of an elder with mild cognitive loss. One of the nine volunteers completed the practice interview and entered the answers on the survey instrument, while the remaining eight volunteers and principal investigator observed and completed the survey tool simultaneously. The survey tools were compared for consistency resulting in a 99.7% inter-rater reliability score.

The second interviewee was played by a Nurse Manager who has worked at the nursing home for 31 years. She played the role of an elder with a moderate level of cognitive loss who became easily distracted and responses were tangential. One of the nine volunteers completed the practice interview and entered the answers on the survey instrument, while the remaining eight volunteers and principal investigator observed and completed the survey tool simultaneously. The survey tools were compared for consistency resulting in a 99.2% inter-rater reliability score. The combined inter-rater reliability score was 99.5%.

The interviewers conducted the interviews. Consent was implied by virtue of the subject answering the interviewer’s questions. If an elder or their family members requested not to participate in the survey, they were not approached. Approached potential participants who were not interested in participating were thanked for their time and the contact respectfully terminated. During interviews the interviewer marked the participants answer directly on the survey tool.
Elders are considered potentially vulnerable subjects. Researchers should ensure populations served are not harmed. In this study, participating in the interviews provided an opportunity for interactions with others they would otherwise not have. The interview may have been therapeutic for some subjects as they may experience relief at being able to discuss quality of life concerns. Additionally, it was explained to the elders that the information shared would be used to improve practice. It was anticipated that some elders may experience grieving while reflecting on the losses they may have experienced therefore interviewers completed education in the grief process, types of grief, stages of grief, grief assessment, and interventions during the training session. Interviewers were told to notify the principal investigator if any participant conveyed feelings of grief. The nursing home social workers had been requested to be available to visit any participant evidencing grief in order to assess any need for further interventions.

Data Analysis

All but three questions were answered in a four-point Likert-type format including often, sometimes, rarely, never. Each of these responses was assigned a numerical value between one and four with the optimal score being more positive. If the elder is unable to answer the question using the four-point scale an alternative binary response of “mostly yes” or “mostly no” was offered. The numerical value of 3.8 was assigned to the more positive response while a value of 1.5 was allocated to the less positive response. Participants had to complete at least 75% of the questions on each scale with either a Likert-type or dichotomous response to produce a valid scale score. If missing answers existed (refused to answer, did not know, or no answer present) and 75% or more of the items on the scale were completed the mean score for items completed was
inputted. If less than 75% of the items on each scale were completed, the scale score was not considered valid and therefore it was excluded from the study. The Statistical Package for Social Science (SPSS), Version 16.0 for Windows was used for data analysis. After all the data were entered in the software the data were screened for data that were not within the range of possible scores. Four errors were corrected. Subsequently two reviewers verified the data entry of 20% of the valid survey tools and determined a 99.5% accuracy rate.

The procedure to answer question number one “How do elders living at the nursing home perceive their quality of life”? included calculating a domain score for each of the 11 categories of quality of life (physical comfort, functional competence, privacy, autonomy, dignity, meaningful activity, food enjoyment, individuality, relationship, safety, and spiritual well-being). The domain score was calculated by dividing the total item scores by the number of survey questions in the category. The analyses consisted of descriptive statistics to summarize what elders perceive their quality of life to be. Each domain was summarized using the mean, standard deviation, graphing scores on a box plot, and it was determined whether or not the responses were normally distributed. The data were explored for correlations between gender, age, length of stay, cognitive performance, and level of assistance needed with activities of daily living by using the Spearman’s rho correlation statistical test.

Question two “Is there a difference in the quality of life experienced by elders living in different neighborhoods within the home”? was answered by pooling the data of individual participants from all of the neighborhoods to generate frequencies, and determine an overall mean and standard deviation for each domain. The inferential
statistical Kruskal-Wallis test was used to compare differences between the neighborhood means (Pallant, 2007). This test is used to compare non-parametric scale data with more than three groups of categorical variables. This test converts scores to ranks, and then compares the mean rank for each group. The 11 domain scores represent the scale data while each of the fourteen neighborhoods represents the categorical variables. The null hypothesis was all neighborhoods have the same mean score in each quality of life domain. The alternative hypothesis was the neighborhoods do not have the same mean score in each quality of life domain. The independent variable was the neighborhoods while each domain score represented the dependent variable. The Kruskal-Wallis test output reported a p value. If the p value was less than .05 the null hypothesis was to be rejected. This outcome represents a statistically significant difference which nursing home leaders may examine further. If the p value was greater than .05 the null hypothesis would not be rejected. That value would indicate there is not a statistical difference between the neighborhoods. The test was used to identify exactly where any differences were. This work was done so that the nursing home would be able to identify neighborhoods in the home that had higher levels of performance than other neighborhoods across the scales. This information would help leaders identify best practices that could be disseminated to other neighborhoods in the home. This action by leaders should result in greater quality of life for elders.

Finally, the answer to question number three “Is there a difference between quality of life experienced by those living in a private room versus a shared room”? was answered by reporting the number of participants living in a private room and shared room. The data of individual participants for each room type were pooled to generate
frequencies, data range, and an overall mean and standard deviation for each domain. The Spearman’s rho test was used to determine if one room type correlates with higher levels of quality of life. This test explores the relationships between non-parametric categorical groups and scale variables (Pallant, 2007). The categorical groups included the private and shared rooms. The mean rank for each quality of life domain represents the scale score. The results range from -1 to +1. Negative correlations indicate as one variable increases, the other decreases, while positive correlations indicate as one variable increases, the other increases as well. The size of the value indicates the strength of the relationship. Different authors suggest different interpretations of the correlation. Cohen (1988) suggests a value from .10 to .29 indicates a small relationship, a value from .30 to .49 indicates a moderate relationship and a value of .50 to 1.0 indicates a large relationship.

The null hypothesis was there is no difference between quality of life and room type. The alternative hypothesis was there is a difference between quality of life and room type. The independent variable was the room type while each scale score represents the dependent variable. If the p value was less than .05 the null hypothesis was be rejected. This means there was a statistically significant difference in the quality of life experienced by elders living in private versus shared rooms. If the p value was greater than .05 the null hypothesis would not be rejected. The represents there was not a statistical difference between quality of life experienced by elders living in a private room versus a shared room.
Summary

Elders experience significant disruptions in their lives when moving into an institutional medical-model nursing home. Since 2001, this nursing home in Rochester, New York has embarked on a journey to revolutionize nursing home care and improve quality of life for elders by adopting the Eden Alternative philosophy. The organization plans to further transform nursing home care by being the first organization in the nation to move elders into Green House homes in a community setting. These activities should intuitively result in better quality of life for elders, yet there is minimal empirical evidence to support that belief. This quantitative study collected baseline information that quantifies how elders living at the nursing home perceive their quality-of-life, identifies differences in quality of life among neighborhoods, and differences experienced by those living in private rooms compared to shared rooms. A descriptive, correlational, and cross-sectional design was applied. The Quality of Life Scales for Nursing Home Residents survey tool was used to guide structured interviews with elders. Data collected provided information on eleven domains of quality of life including safety, physical comfort, food enjoyment, meaningful activities, relationships, functional competence, dignity, privacy, individuality, autonomy, and spiritual well-being.
Chapter 4: Results

Research Questions

As stated in Chapter 1, the purposes of this study were to examine the quality of life experienced by elders living in the nursing home, identify opportunities for improvement, and highlight areas of best practice that can be disseminated to other neighborhoods within the home. Finally, the study was completed to understand if elders living in a shared or private room experience differences in quality of life. The chapter is organized in terms of the three specific research questions posed in Chapter 1. The first question is “How do elders living at the nursing home perceive their quality of life”? The second question is “Is there a difference in quality of life experienced for elders living in different neighborhoods within the home”? and third, “Is there a difference between quality of life experienced by those living in a private room versus a shared room”?

Data Analysis and Findings

The total census of the nursing home on the sample selection day was 463 elders. Fifty-six elders were disqualified from the study because of the exclusion criteria. Twenty two were participating in a short stay restorative rehabilitation program, 20 had very severe cognitive impairment, 13 were less than 65 years of age, and one was unable to speak English. A letter describing the purpose of the study, confidentiality, right of refusal, and contact information was sent to each elder and their primary contact person two weeks prior to the study’s start date. Twenty-nine elders and/or their primary contact person declined participation. The most common reasons for not participating were
severe cognitive impairment, limited communication skills, fear the interruption by a stranger would cause agitation, and limiting visitors to friends and family.

The remaining sample of 378 was stratified for gender and room type (private vs. shared). Each stratum was sorted by medical record number, then a sequential sampling approach was used to select the sample. The interviewers were given the lists of elders selected for the study and an additional list of alternates to accommodate subject loss. There were a large number of elders on the selection list whose cognitive status prevented them from participating in the interviews; therefore all potential elders who met the inclusion criteria were approached.

There were 82 males (12.7%) and 296 females (78.3%) in the 378 elders approached for interviews. The sample included 183 (48.4%) elders living in private rooms and 195 (51.6%) living in shared rooms. The payer source for the potential sample included 17 (4.5%) hospice, Medicare six (1.6%), Medicaid 211 (55.8%), and private pay 144 (38.1%). There was representation from thirteen neighborhoods within the nursing home. One neighborhood was excluded from the study because it serves short stay patients for rehabilitation services. These individuals are not the focus of this study. The neighborhoods in the nursing home vary in size. Five of the neighborhoods serve 25 elders each, three neighborhoods serve 40 each, while the remaining five neighborhoods serve 42 elders each. The percentage of elders in the potential sample from each of the smaller 25-bed neighborhoods ranged from 3.7 - 6.1%. The percentage of elders in the potential sample from the larger neighborhoods ranged from 8.2-10.6%.

The interviewers were assigned to one or more neighborhoods for the interviews. This structure was chosen to minimize the number of unfamiliar people in the
neighborhoods, limit disruption, and facilitate relationship building for the interviewers, staff, and elders. The interviewer with the largest number of interviews was assigned to three 25-bed neighborhoods that primarily serve elders with advanced dementia and subsequently lower cognitive performance scale scores. The elders living in these neighborhoods were less likely to be able to complete the interviews than those with less severe cognitive impairment.

The structured survey interviews were completed between 1/11/10 and 3/5/10. The interviewers were scheduled to complete the interviews prior to 2/28/10. After completion of the interviews, the nurse manager from each neighborhood reviewed the list of elders considered unable to complete the survey and were asked if they thought any one of those would be able to answer “yes” or “no” questions. Their responses created a list of an additional 28 elders to re-visit. A team of three interviewers re-visited or attempted to revisit each of those elders on 3/5/10. Of the 28 elders an additional eight interviews were completed. The remaining elders were unavailable or unable to complete the interview.

There were 155 (41%) of the interviews completed, 164 (43.4 %) were cognitively unable to complete the interview, 23 (6.1%) declined the opportunity, three (.8%) were discharges prior to the interview, 24 (6.3%) died, and seven (1.9%) were classified as other. Of the completed interviews 14 (9%) of elders finished between two and eight of the scales while 141 (91%) finished nine to eleven of the scales. Each scale was considered complete if at least 75% of the questions had a valid answer. The length of the interviews ranged from 5-60 minutes, with a mean of 25 minutes and a standard deviation of nine minutes. Seven of the elders completed the interview over two sessions,
while the remaining finished in one session. The nine interviewers each finished six (3.9%) to 26 (16.8%) of the completed interviews.

The demographic information for the elders who actually completed the interviews is summarized in Table 4.1. The age of the respondents ranged from 65 to 102 years, with a mean of 87 and standard deviation of 8.58. There were 36 males (23.2%) and 119 females (76.8%). The sample included 70 (45.2%) elders living in private rooms and 85 (54.8%) living in shared rooms. The payer source for the actual sample included six (3.9%) hospice, Medicare two (1.2%), Medicaid 87 (56.1%), and private pay 60 (38.7%). The length of stay for the participants ranged from 19 to 2733 days, with a median of 591 days, a mean of 765 days and standard deviation of 628 days. Four length of stay outliers were removed in order to report a more accurate representation of the participants’ residence time, however the responses of the outliers to interview questions were retained in the analysis.

The Cognitive Performance Scale scores ranged from 0-5, with a mean of 2.14 and standard deviation of 1.159. Seventy-seven (49%) of participants were cognitively intact or had a mild loss. Seventy-five (48%) had a moderate cognitive impairment while three (1.9%) had a severe impairment. The Activity of Daily Living Score ranged from 4 - 18, with the mean of 10.87, and the standard deviation 4.30. Forty-eight (30.9%) of participants required minimal assist, 62 (40%) required moderate assist, and 45 (29.1%) required maximal assist with activities such as eating, dressing, bathing, transferring, or repositioning in the bed.
Table 4.1

Age, gender, room type, payer source, length of stay, cognitive performance, activities of daily living characteristics for actual study sample, the total population of the nursing home studied, and the population of nursing home residents in the United States.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Study Sample of 155 Elders</th>
<th>Nursing Home Studied</th>
<th>National Study&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range</td>
<td>n(%)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Age</td>
<td>65-102</td>
<td>155 (100%)</td>
<td>87 (8.58)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>36 (23.2%)</td>
<td>96 (20.8%)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>119 (76.8%)</td>
<td>365 (79.2%)</td>
<td></td>
</tr>
<tr>
<td>Room Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>70 (45.2%)</td>
<td>217 (47%)</td>
<td></td>
</tr>
<tr>
<td>Shared</td>
<td>85 (54.8%)</td>
<td>244 (53%)</td>
<td></td>
</tr>
<tr>
<td>Payer&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>6 (3.9%)</td>
<td>20 (4.3%)</td>
<td></td>
</tr>
<tr>
<td>Medicare</td>
<td>2 (1.2%)</td>
<td>27 (5.8%)</td>
<td></td>
</tr>
<tr>
<td>Medicaid</td>
<td>87 (56.1%)</td>
<td>241 (52.3%)</td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>60 (38.7%)</td>
<td>173 (37.5%)</td>
<td></td>
</tr>
<tr>
<td>Length of Stay in days&lt;sup&gt;c&lt;/sup&gt;</td>
<td>19-2733</td>
<td>151 (97.4%)</td>
<td>Median 591</td>
</tr>
<tr>
<td>Cognitive Performance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intact to Mild Impairment (0-2)</td>
<td>77 (49.7%)</td>
<td>143 (31%)</td>
<td></td>
</tr>
<tr>
<td>Moderate Impairment</td>
<td>75 (48.4%)</td>
<td>267 (58%)</td>
<td></td>
</tr>
<tr>
<td>Severe Impairment</td>
<td>3 (1.9%)</td>
<td>51 (11%)</td>
<td></td>
</tr>
<tr>
<td>Activities of Daily Living Score</td>
<td>Overall</td>
<td>4-18</td>
<td>155 (100%)</td>
</tr>
<tr>
<td>Minimal Assist (4-8)</td>
<td>48 (30.9%)</td>
<td>92 (20%)</td>
<td></td>
</tr>
<tr>
<td>Moderate Assist (9-13)</td>
<td>62 (40%)</td>
<td>148 (32%)</td>
<td></td>
</tr>
<tr>
<td>Maximal Assist (14-18)</td>
<td>45 (29.1%)</td>
<td>221 (48%)</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Data from the National Nursing Home Survey 2004.<sup>b</sup>Some elders have more than one payer source resulting in totals >100%.<sup>c</sup>Four outliers removed
The first research question was “how do elders living at this nursing home perceive their quality of life”? The answer was obtained by calculating a scale score for each participant for each of the quality of life scales (physical comfort, functional competence, privacy, autonomy, dignity, meaningful activity, food enjoyment, relationship, safety and security, spiritual well-being and individuality). The scale score was determined by dividing the sum of the item scores by the number of items in that scale. If the participant answered less than 75% of the questions in the scale, the data were excluded from the analysis. The individual scale scores were pooled to generate an overall mean and standard deviation for each domain.

The number of respondents for each scale ranged from 127 on the Individuality scale to 154 on the Comfort scale. All eleven scales had a mean over 3.00 with the lowest mean (3.06) for the Meaningful Activity scale and the highest mean (3.77) for the Dignity scale. The Cronbach’s alpha values ranged from .40 on the Safety & Security scale to .85 on the Functional Competence scale. The mean inter-item correlation ranged from .123 on the Safety and Security Scale to .527 on the Functional Competence scale. The mean scale scores and reliability measures for each scale are summarized on Table 4.2.

The data were explored for correlations among gender, age, length of stay, activities of daily living and cognitive performance with each scale using the Spearman’s rho correlation procedure. The results are summarized on Table 4.3. The results range from -1 to +1. Negative correlations indicate as one variable increases, the other decreases, while positive correlations indicate as one variable increases, the other
Table 4.2

Mean scale scores and reliability measures for Quality of Life Scales for Nursing Homes Instrument

<table>
<thead>
<tr>
<th>Quality of Life Scale</th>
<th>Items Per Scale</th>
<th>N</th>
<th>Mean (SD)</th>
<th>Cronbach’s Alpha</th>
<th>Mean inter-item correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comfort</td>
<td>6</td>
<td>154</td>
<td>3.13 (.57)</td>
<td>.67</td>
<td>.245</td>
</tr>
<tr>
<td>Functional Competence</td>
<td>5</td>
<td>152</td>
<td>3.25 (.73)</td>
<td>.85</td>
<td>.527</td>
</tr>
<tr>
<td>Privacy</td>
<td>5</td>
<td>143</td>
<td>3.57 (.41)</td>
<td>.53</td>
<td>.185</td>
</tr>
<tr>
<td>Dignity</td>
<td>5</td>
<td>146</td>
<td>3.77 (.30)</td>
<td>.57</td>
<td>.223</td>
</tr>
<tr>
<td>Meaningful Activity</td>
<td>6</td>
<td>143</td>
<td>3.06 (.52)</td>
<td>.42</td>
<td>.133</td>
</tr>
<tr>
<td>Relationship</td>
<td>5</td>
<td>143</td>
<td>3.20 (.58)</td>
<td>.57</td>
<td>.208</td>
</tr>
<tr>
<td>Autonomy</td>
<td>4</td>
<td>144</td>
<td>3.41 (.58)</td>
<td>.66</td>
<td>.331</td>
</tr>
<tr>
<td>Food Enjoyment</td>
<td>3</td>
<td>139</td>
<td>3.36 (.62)</td>
<td>.72</td>
<td>.471</td>
</tr>
<tr>
<td>Spiritual Well-Being</td>
<td>4</td>
<td>144</td>
<td>3.45 (.49)</td>
<td>.58</td>
<td>.256</td>
</tr>
<tr>
<td>Safety &amp; Security</td>
<td>5</td>
<td>144</td>
<td>3.57 (.41)</td>
<td>.40</td>
<td>.123</td>
</tr>
<tr>
<td>Individuality</td>
<td>6</td>
<td>127</td>
<td>3.51 (.46)</td>
<td>.72</td>
<td>.310</td>
</tr>
</tbody>
</table>
increases as well. The size of the value indicates the strength of the relationship.

Different authors suggest different interpretations of the correlation. Cohen (1988) suggests a value from .10 to .29 indicates a small relationship, a value from .30 to .49 indicates a moderate relationship and a value of .50 to 1.0 indicates a large relationship.

The relationship between age and each of the scales ranged from -.172 to .155 indicating a small relationship. There was a statistically significant, weak, negative correlation between age and relationship scale, (r = -.172, n=143, p<.05). This indicates that younger participants experience more engaging and meaningful social interactions with others than older participants. The relationship between length of stay and each of the scales ranged from -.167 to .174 indicating small relationships, however two of these relationships were statistically significant. Respondents who have lived at the nursing home longer reported higher levels of dignity (r = .174, n = 147, p <.05), but lower levels of spiritual well-being (r = -.167, n = 144, p <.05). The relationship between activities of daily living and each of the scales were small and ranged between -.173 to .084 with the exception of the Functional Competence scale which was -.478 which indicates a moderate negative correlation. Three of these resulted in a statistically significant finding. As participants’ need for assistance increased they experienced lower levels of physical comfort (r = -.173, n = 154, p <.05), less independence (r = -.478, n = 152, p <.05), and engaged in fewer meaningful activities (r = -.169, n = 143, p <.05). The relationship between cognitive performance and each scale ranged from -.154 to .194 indicating small relationships, however two of these were statistically significant. Respondents who have greater cognitive impairment report higher levels of physical comfort (r = .161, n = 154, p <.05) and personal safety (r = .194, n = 144, p <.05).
Table 4.3

*Spearman rho correlations among gender, age, length of stay, room type, activities of daily living, and cognitive performance with the Quality of Life Scales on the Quality of Life Scales for Nursing Homes Instrument*

<table>
<thead>
<tr>
<th></th>
<th>Gender</th>
<th>Age</th>
<th>LOS</th>
<th>Room Type</th>
<th>ADL\textsuperscript{a}</th>
<th>CPS\textsuperscript{b}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comfort</td>
<td>-.137</td>
<td>.155</td>
<td>.046</td>
<td>-.127</td>
<td>-.173*</td>
<td>.161*</td>
</tr>
<tr>
<td>Functional Competence</td>
<td>-.008</td>
<td>.037</td>
<td>-.082</td>
<td>.048</td>
<td>-.478*</td>
<td>.150</td>
</tr>
<tr>
<td>Privacy</td>
<td>.031</td>
<td>.010</td>
<td>-.012</td>
<td>-.170*</td>
<td>.014</td>
<td>-.112</td>
</tr>
<tr>
<td>Dignity</td>
<td>.061</td>
<td>-.022</td>
<td>.174*</td>
<td>-.140</td>
<td>-.085</td>
<td>-.054</td>
</tr>
<tr>
<td>Meaningful Activity</td>
<td>-.002</td>
<td>-.105</td>
<td>.032</td>
<td>.138</td>
<td>-.169*</td>
<td>-.102</td>
</tr>
<tr>
<td>Relationship</td>
<td>.100</td>
<td>-.172*</td>
<td>.050</td>
<td>.051</td>
<td>.084</td>
<td>-.154</td>
</tr>
<tr>
<td>Autonomy</td>
<td>-.012</td>
<td>-.093</td>
<td>-.014</td>
<td>-.099</td>
<td>-.143</td>
<td>.016</td>
</tr>
<tr>
<td>Food Enjoyment</td>
<td>.033</td>
<td>-.054</td>
<td>.043</td>
<td>.024</td>
<td>.018</td>
<td>.066</td>
</tr>
<tr>
<td>Spiritual Well-Being</td>
<td>.121</td>
<td>.078</td>
<td>-.167*</td>
<td>-.058</td>
<td>-.024</td>
<td>-.071</td>
</tr>
<tr>
<td>Security</td>
<td>-.063</td>
<td>.076</td>
<td>.027</td>
<td>-.098</td>
<td>.052</td>
<td>.194*</td>
</tr>
<tr>
<td>Individuality</td>
<td>.065</td>
<td>-.023</td>
<td>.148</td>
<td>-.033</td>
<td>.066</td>
<td>-.118</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed), \textsuperscript{a} Activities of Daily Living, \textsuperscript{b} Cognitive Performance Scale
Question two was “Is there a difference in the quality of life experience by elders living in different neighborhoods within the home”? The data of individual participants on each unit was be pooled to generate frequencies, obtain an overall mean and standard deviation for each domain. As expected, some neighborhoods had a lower number of respondents, particularly the small neighborhoods and those serving elders with dementia. The three 25-bed neighborhoods that serve elders with advanced dementia (S4, 5 & 6) had a total of 13 (8.4%) elders completing interviews. These three neighborhoods were pooled in the analysis. The two remaining 25-bed neighborhoods had 6 (3.9%) and 7 (4.5%) respondents, therefore these two neighborhoods were combined for the analysis as well. Combining these smaller neighborhoods for the analysis resulted in a consistent number of respondents across the neighborhood groups. The Reservoir Building, which has five 42-bed neighborhoods, ranged from 11 (7.1%) to 23 (14.8%) respondents each. The Hastings Building, which has three 40-bed neighborhoods, ranged from 10 (6.5%) to 22 (14.2%) respondents each. The mean scores for each neighborhood are summarized on Table 4.4.

There was minimal variation among the mean neighborhood scores on the comfort scale (2.83 to 3.25), privacy scale (3.36 to 3.83), dignity scale (3.63 to 3.93), autonomy scale (3.16 to 3.65), food enjoyment scale (3.23 to 3.68), spiritual well-being scale (3.23 to 3.57), safety and security scale (3.42 – 3.91) and individuality scale (3.20 to 3.60). While larger ranges occurred in the functional competence scale (2.94 to 3.74), meaningful activity scale (2.69 to 3.43), and relationship scale (2.90 to 3.60).

The inferential Kruskal-Wallis test was used to compare differences between the neighborhood means (Pallant, 2007). This test is used to compare non-parametric scale
Table 4.4

The nursing home mean scores by neighborhood on the Quality of Life Scales for Nursing Homes Instrument

<table>
<thead>
<tr>
<th>QOL Scale</th>
<th>S2 &amp; 3</th>
<th>S 4-6</th>
<th>H1</th>
<th>H2</th>
<th>H3</th>
<th>R2</th>
<th>R3</th>
<th>R4</th>
<th>R5</th>
<th>R6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comfort</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.20</td>
<td>.50</td>
<td>3.64*</td>
<td>.36</td>
<td>3.05</td>
<td>.46</td>
<td>2.83</td>
<td>.64</td>
<td>2.97</td>
<td>.66</td>
</tr>
<tr>
<td>Functional Competence</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.40</td>
<td>.83</td>
<td>3.72</td>
<td>.23</td>
<td>3.24</td>
<td>.71</td>
<td>3.46</td>
<td>.43</td>
<td>3.21</td>
<td>.90</td>
</tr>
<tr>
<td>Privacy</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.50</td>
<td>.42</td>
<td>3.36</td>
<td>.67</td>
<td>3.66</td>
<td>.35</td>
<td>3.55</td>
<td>.43</td>
<td>3.72</td>
<td>.25</td>
</tr>
<tr>
<td>Dignity</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.79</td>
<td>.22</td>
<td>3.78</td>
<td>.18</td>
<td>3.71</td>
<td>.37</td>
<td>3.63</td>
<td>.43</td>
<td>3.83</td>
<td>.24</td>
</tr>
<tr>
<td>Meaningful Activity</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.43*</td>
<td>.57</td>
<td>3.12</td>
<td>.55</td>
<td>3.12</td>
<td>.51</td>
<td>3.32</td>
<td>.42</td>
<td>3.26</td>
<td>.37</td>
</tr>
<tr>
<td>Relationship</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.12</td>
<td>.59</td>
<td>2.96</td>
<td>.73</td>
<td>3.36</td>
<td>.65</td>
<td>3.16</td>
<td>.56</td>
<td>3.24</td>
<td>.63</td>
</tr>
<tr>
<td>Autonomy</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.30</td>
<td>.70</td>
<td>3.49</td>
<td>.72</td>
<td>3.32</td>
<td>.63</td>
<td>3.38</td>
<td>.52</td>
<td>3.62</td>
<td>.19</td>
</tr>
<tr>
<td>Food Enjoyment</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.23</td>
<td>.88</td>
<td>3.68</td>
<td>.37</td>
<td>3.40</td>
<td>.61</td>
<td>3.26</td>
<td>.49</td>
<td>3.47</td>
<td>.49</td>
</tr>
<tr>
<td>Spiritual Well-Being</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.54</td>
<td>.46</td>
<td>3.42</td>
<td>.56</td>
<td>3.52</td>
<td>.44</td>
<td>3.55</td>
<td>.37</td>
<td>3.23</td>
<td>.55</td>
</tr>
<tr>
<td>Safety &amp; Security</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.61</td>
<td>.34</td>
<td>3.52</td>
<td>.38</td>
<td>3.50</td>
<td>.37</td>
<td>3.60</td>
<td>.27</td>
<td>3.63</td>
<td>.30</td>
</tr>
<tr>
<td>Individuality</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.56</td>
<td>.39</td>
<td>3.60</td>
<td>.34</td>
<td>3.47</td>
<td>.48</td>
<td>3.56</td>
<td>.48</td>
<td>3.52</td>
<td>.41</td>
</tr>
</tbody>
</table>

* p < .05 using the Kruskal-Wallis Test, a-j indicate specific neighborhoods within the nursing home studied
data with more than three groups of categorical variables. This test converts scores to ranks, and then compares the mean rank for each group. The Kruskal-Wallis test revealed a statistically significant difference in Comfort ($H(9) = 18.896, p < 0.5$), Meaningful Activity ($H(9) = 29.216, p < .01$), Relationship ($H(9) = 20.639, p < .05$), and the Safety and Security Scales ($H(9) = 21.354, p < .05$). This indicates that the participants from the South four, five, & six neighborhoods rated their physical comfort higher than the remaining neighborhoods. Participants from South Two and Three rated meaningful activity highest, while elders who live on the Reservoir Two neighborhood rate the relationship scale highest. The elders who lived in the Reservoir Six neighborhood rate the highest on the safety and security scale. The summary of significant findings is in Table 4.5.

Table 4.5

*Summary of significant findings by neighborhood*

<table>
<thead>
<tr>
<th>QOL Scale</th>
<th>Neighborhood</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comfort</td>
<td>South 4, 5, &amp; 6</td>
<td>3.64 (.36)*</td>
</tr>
<tr>
<td>Meaningful Activity</td>
<td>South 2 &amp; 3</td>
<td>3.42 (.57)*</td>
</tr>
<tr>
<td>Relationship</td>
<td>Reservoir 2</td>
<td>3.60 (.34)*</td>
</tr>
<tr>
<td>Safety &amp; Security</td>
<td>Reservoir 6</td>
<td>3.91 (.16)*</td>
</tr>
</tbody>
</table>

*p < .05 using the Kruskal-Wallis Test

Question number three was “Is there a relationship between quality of life experienced by those living in a private room versus a shared room”? The data of
individual participants for each room type were pooled to generate frequencies, data range, an overall mean and standard deviation for each domain. The Spearman’s rho test was used to determine if one room type correlates with higher levels of quality of life. The summary of findings for this correlation is found on Table 4.3. The relationship between room type and each of the scales ranged from -.170 to .128 indicating small relationships, however one of these relationships was statistically significant. Respondents who live in private rooms rate privacy higher than those living in shared rooms ($r = -.170, n = 143, p < .05$).

**Summary of Results**

Overall the elders completing the survey rated each quality of life scale (comfort, functional competence, privacy, dignity, meaningful activity, relationship, autonomy, food enjoyment, spiritual well-being, safety and security, and individuality) between 3.06 and 3.77 on a scale of one (low) to four (high). Younger participants experience more engaging and meaningful social interactions with others than older participants. Respondents who have lived at the nursing home longer report higher levels of dignity, but lower levels of spiritual well-being. As participants need for assistance increased they experience lower levels of physical comfort, independence, and engaged in fewer meaningful activities. Respondents who have greater cognitive impairment report higher levels of physical comfort and personal safety. Four of the neighborhood had statistically significant findings on one of the quality of life scales including Comfort, Meaningful Activity, Relationships, and Safety and Security. Elders who live in private rooms rate privacy higher than those living in shared rooms.
Chapter 5: Discussion

Introduction

This chapter provides discussion and interpretation of the results presented in chapter four. The chapter is divided into sections including implications of findings, limitations, recommendations, and conclusion.

Implications of Findings

The first research question was “how do elders living at this nursing home perceive their quality of life”? Overall the elders completing the survey rated each quality of life scale (comfort, functional competence, privacy, dignity, meaningful activity, relationship, autonomy, food enjoyment, spiritual well-being, safety and security, and individuality) between 3.06 and 3.77 on a scale of one (low) to four (high). When comparing these values to the Kane et al., (2004) study, the nursing home scored higher than the national mean on nine of the eleven scales. On these nine scales, the nursing home scored between .10 and .37 higher than the national mean. This nursing home and the national mean were equivalent on one scale. The principle investigator was unable to locate the mean score for the individuality scale in the literature. Table 5.1 summarizes the mean scale scores and reliability measures for this study and the national study.

This nursing home has been on a culture change journey since 2001. Understanding the differences in outcomes between a traditional nursing home and
Table 5.1 *Mean scale score and reliability measures comparing the Kane study with this study*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Means (SD)</th>
<th>Cronbach’s Alpha</th>
<th>Mean Inter-Item</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Study Home</td>
<td>Kane</td>
<td>Study Home</td>
</tr>
<tr>
<td>Comfort</td>
<td>3.13 (.57)</td>
<td>3.02 (.15)</td>
<td>.67</td>
</tr>
<tr>
<td>Functional Competence</td>
<td>3.25 (.73)</td>
<td>3.25 (.16)</td>
<td>.85</td>
</tr>
<tr>
<td>Privacy</td>
<td>3.57 (.41)</td>
<td>3.34 (.17)</td>
<td>.53</td>
</tr>
<tr>
<td>Dignity</td>
<td>3.77 (.30)</td>
<td>3.67 (.10)</td>
<td>.57</td>
</tr>
<tr>
<td>Meaningful Activity</td>
<td>3.06 (.52)</td>
<td>2.69 (.18)</td>
<td>.42</td>
</tr>
<tr>
<td>Relationship</td>
<td>3.20 (.58)</td>
<td>3.06 (.19)</td>
<td>.57</td>
</tr>
<tr>
<td>Autonomy</td>
<td>3.41 (.58)</td>
<td>3.30 (.15)</td>
<td>.66</td>
</tr>
<tr>
<td>Food Enjoyment</td>
<td>3.36 (.62)</td>
<td>3.22 (.19)</td>
<td>.72</td>
</tr>
<tr>
<td>Spiritual Well-Being</td>
<td>3.45 (.62)</td>
<td>3.15 (.21)</td>
<td>.58</td>
</tr>
<tr>
<td>Safety &amp; Security</td>
<td>3.57 (.41)</td>
<td>3.40 (.14)</td>
<td>.40</td>
</tr>
<tr>
<td>Individuality</td>
<td>3.51 (.46)</td>
<td>Unable to locate</td>
<td>.72</td>
</tr>
</tbody>
</table>
homes involved in culture change would be beneficial. Unfortunately, comparing this nursing home to the results found in the national study will not provide that information. Although the national study identifies differences in the physical environments of each of the 40 homes in the sample, there is a lack of information on the culture change activities of these homes. Therefore, it is difficult to understand if we are comparing quality of life to traditional nursing homes, homes that are in process of changing culture, or a mixture of both.

This nursing home’s mean score for the comfort scale was 3.13 while the national mean was 3.02. This scale asks questions about environmental temperature, physical pain, noise levels, and sleep. The nursing home studied has thermostats in each bedroom area so temperatures can be adjusted according to the elders’ preference. This nursing home has created a pain team that reviews policy on procedures for pain assessment for the residents of varying levels of cognitive impairment. Staff development has provided multiple opportunities for improving pain management skills for staff. Additionally, the Nursing Staff and Wound Care Nurse evaluate elders for need for adaptive equipment to facilitate comfortable seating. Additionally, the nursing home implemented a wireless call bell system. This system eliminates overhead alarms and bells, and sends text messages of call bells silently to a pager carried by direct care staff.

The nursing home and the national mean score for the functional competence scale was 3.25. This scale asks questions regarding the elders’ ability to be as independent as they wish to be within the limits of their physical and cognitive abilities. Collaboratively the Nursing, Social Work, Medical, Therapy, and Therapeutic Recreation Departments communicate regarding elders' abilities and needs in order to maintain
safety as well as functional independence. Staff from Therapy, Nursing and Therapeutic Recreation provide maintenance programs to sustain elders' range of motion and strength upon discharge from Therapy services. Therapy staffs review quality indicator reports which identify elders who have experienced falls, movement decline, pressure ulcers, ADL decline, and discuss the potential benefit of therapy. Finally, the Therapy staff complete annual reviews for each elder by screening charts and communicating with the nursing staff.

The nursing home’s mean on the privacy scale was 3.57 while the national scale was 3.34 representing a variance of .23. The privacy scale asks question about the elders’ ability to have bodily privacy, keep personal information confidential, be alone as desired, and be with others in private. The nursing home has 52% shared bedrooms and 48% private bedrooms. Each bedroom is equipped with a telephone jack, so each elder has a private phone for calls. As the organization moves forward, plans are in place to renovate the current structure into private rooms and build Green House homes which include private rooms as well. Upon asking nursing staff members how they help elders perceive their privacy is maintained they report “we knock on the door” and “address any concerns in private areas.”

The nursing home’s mean on the dignity scale was 3.77 while the national scale mean was 3.67. The dignity scale focuses on the elders perceptions of being treated with respect and maintaining dignity. When asking staff what they do to treat people with dignity they report they “treat elders with respect”, “treat them the way you want to be treated”, and “talk to them like adults”. The staff also commented on how important it is to listen and respect what is being said by the elder.
The nursing home’s mean on the meaningful activity scale was 3.06 while the national mean was 2.69. The meaningful activity scale centers on the elders engagement in leisure activities that are personally meaningful. The nursing home in this study assesses each elder’s ability to engage in meaningful activity. In this study elders reported how often they are able to go outdoors 14 (10.4%) report they went out daily, 30 (22.4%) went out several times weekly, 24 (17.9%) went out about once per week, 37 (27.6%) went out less than once a week, and 29 (21.6%) went out less than once per month.

The nursing home’s mean on the relationship scale was 3.20 while the national study was 3.07. The relationship scale focuses on engaging and meaningful 1:1 social interactions. Nursing staff share the “give lots of love” and “try to provide lots of 1:1 time”.

The nursing home’s mean score on the autonomy scale was 3.41 while the national mean was 3.30. The autonomy scale examines how elder are able to take initiative and make choices for their lives and care. When asking nursing staff members what the do to encourage autonomy they report providing options and choices.

The nursing home’s mean score on the food enjoyment scale was 3.36 while the national mean was 3.22. The food enjoyment scales focuses on the elders satisfaction with the food quality and dining experience. The nursing home offers monthly cocktail parties, weekly wine and cheese gatherings, welcomes elders to dine in the neighborhood dining rooms or the café, provides catering for special events, and cooks outdoor for picnics. Additionally the Dining Services Department works with the neighborhood teams for special celebrations, including going out to the local grocery and helping elders cook their own meals.
The nursing home’s score on the spiritual well-being scale was 3.45 while the national mean was 3.15. The spiritual well-being scale measures the elder’s contentment regarding needs and concerns for religion, prayer, spirituality, and moral values. The nursing home has three full-time equivalents (FTE’s) for chaplain staff. The chaplain staff meets with each elder individually to understand what provides them with spiritual well-being and provide support. Additionally, the chaplain meets with groups of elders to share stories and to celebrate faith traditions.

The nursing home’s score on the safety and security scale was 3.57 while the national mean was 3.40. The safety and security scale measures the elders’ feelings of personal safety. Protective Service staff at the nursing home patrol the interior and exterior campus 24 hours per day, provide quarterly safety education such as securing valuables and how to avoid telephone scans, and meet with each person who moves in. Elders who are at risk for personal injury when leaving the campus unassisted are provided a watch that monitors their location via GPS. Elders wearing the watch are able to walk around without constraint, yet if he or she moves through an exit or entrance path, the door closes and is disabled until the elder leaves the area.

The nursing home studied score for the individuality scale was 3.51 while the national mean was unreported. The individuality scale measures how elders express their preferences, pursue their past and current interest, maintain a sense of their own identity, and perceive they are known as individuals.

There were some interesting relationships between demographic variables and the quality of life scales. Younger participants experience more engaging and meaningful social interactions with others than older participants. Respondents who have lived at the
nursing home longer report higher levels of dignity, but lower levels of spiritual well-being. As participants need for assistance with activities of daily living increase they experience lower levels of physical comfort, independence, and engaged in fewer meaningful activities. Respondents who have greater cognitive impairment report higher levels of physical comfort and personal safety. This nursing home will provide staff members orientation and time for discussion regarding the importance of the quality of life domains and how they are reflective of the organization’s mission and vision. Additionally, education to staff on the correlations can equip them to target opportunities for improvement. These correlations indicate opportunities to educate staff, make operational changes, and adapt quality assurance tracking. The education opportunities extend beyond the nursing home studied. Other nursing home providers can be educated on the importance of measuring quality of life and the process to measure it. The overall results of the study and these correlations will be communicated to staff. Staff should understand the quality of life domains, the importance of the domains to elders, and how the mission and vision of the organization aligns with quality of life domains. This raises the awareness for staff members to be mindful of the elders’ quality of life perceptions during the workday. Some of the findings indicate the need for operational shifts such as 1) have neighborhood teams target older adults and evaluate if any of these elders would benefit from any added social interactions and plan accordingly, 2) ask spiritual care staff to reassess the spiritual needs of elders throughout the individuals’ lives, 3) have neighborhood teams identify elders who have higher activity of daily living scores and develop individualized plans to engage them in more meaningful activities, and 4) ask the clinical care teams to assess the effectiveness of the pain assessment tools and methods
used to assess for discomfort. Discomfort may be caused by bowel and bladder incontinence, pressure sores, or a myriad of other problems. Finally the Quality Assurance Committee monitors both health care and experience outcomes. When selecting samples of elders to review, the committee can allocate higher weights for older individuals, those with longer lengths of stay and those with greater need for assistance with activities of daily living.

Length of stay. As described in chapter one, elders transition to nursing home life in three phases including overwhelmed, adjustment and initial acceptance (Wilson, 1997). The overwhelmed phase is the initial response to the nursing home which includes feelings of loneliness, sadness, crying, fear, and a sense of loss. The adjustment phase is characterized by elders beginning to focus on the future and their daily lives. The initial acceptance phase occurs when elders become more self-confident and believe they will adjust to the new environment. The time spent in each phase varies individually. This author expected to see variation in the perception of quality of life when comparing groups of participants that had lived at the nursing home for less than 90 days would differ than those living at the nursing home for longer periods of time. Yet when comparing the mean scores for each quality of life for groups of elders who have lived at the nursing home less than three months, four to six months, six to 12 months, 12-24 months, and greater than 24 months, no significant differences were noted. This finding was consistent with the finding in Kane’s national study. The literature clearly indicates that transition is difficult, yet the results on the quality of life study do not reflect fluctuations with time spent living in a nursing home for the 155 participating elders. The questions in the quality of life study may not address the specific area of transitions.
Further research such as 1) individual interviews, 2) focus groups, and 3) interaction with resident councils within nursing homes could provide greater insight into the needs of elders moving through the transition to nursing home life.

**Staffing turnover.** The 2004 National Nursing Home Study reports the turnover rate is found to be the highest among certified nursing assistants at 74.5%, followed by registered nurses at 56.1%, and licensed practical nurses at 51.0%. The nursing home in this study eliminated temporary agency staff and the $3.5 million budgeted for that expense in 2002. Full-time staff turnover has decreased from over 30% a decade ago to 8.5% in 2009. The staff turnover for the nursing department in 2009 was 13%. Consistent staffing may contribute to higher perceptions of quality of life.

The second research question was “Is there a difference in quality of life experienced for elders living in different neighborhoods within the home”? Each neighborhood is made up of different elders, staff members, and family members; therefore each neighborhood has different character and qualities. In this study, the data of individual participants on each unit were pooled to determine an overall mean and standard deviation for each neighborhood. There was minimal variation among most of the scales however there were four statistically significant findings. This indicates that the participants from the South Four, Five, & Six neighborhoods rated their physical comfort higher than the remaining neighborhoods. Participants from South Two and Three rated meaningful activity highest, while elders who live on the Reservoir Two neighborhood rate the relationship scale highest. The elders who lived in the Reservoir Six neighborhood rate the highest on the safety and security scale.
The mean scores for each neighborhood will be provided to the neighborhood team facilitators (team leaders). The teams can discuss the results and identify areas for quality improvement. The neighborhoods with statistically significant findings will be involved in interviews, focus groups, and observation to identify best practices that can be disseminated to other neighborhoods in the home. This activity should result in greater quality of life for elders. For example, if neighborhoods that have staff members engaging in collecting elder stories are related to higher meaningful activity and relationships scales, other neighborhoods may incorporate that activity on their neighborhood as well.

The third research question was “Is there a difference between quality of life experienced by those living in a private room versus a shared room”? The data of individual participants for each room type (private versus shared rooms) were pooled to generate frequencies, data range and overall mean and standard deviation for each domain. The summary of findings is found in Table 4.3. The only statistically significant finding was that individuals living in private rooms rate privacy higher than those living in shared rooms. This author expected elders living in private room to have statistically significant findings across multiple scales rather than one. The national study found elders living in private room were associated with higher levels of functional competence, privacy, and meaningful activities. The difference in sample size may contribute to the inconsistent results of the studies.

As discussed in chapter 2, the population of persons 85 years and older in the United States has grown from just over 100,000 in 1900 to 5.3 million in 2006. The U.S. Census Bureau (2008) reports this group will triple by the year 2050. The Baby Boomer
population, born between 1946 and 1964, is one of the largest generations in U.S. history. This represents individuals who are between 46 and 64 years of age in 2010. This group is made up of 78 million individuals or 26.1% of the total US population. This generation was born as the world grew out of the economic depression. This group is seen as a reactive generation driven to change much of what the previous generations had created (Chesse, 2008). This age cohort is the next generation to use services offered by nursing homes. Will there be a difference in the perception of private rooms from the silent generation versus the baby boomer generation? The nursing home communities should understand the changing characteristics, needs, and desires of future generations.

This study has implications for the greater nursing home community. Nursing homes typically measure customer satisfaction which may incorporate some questions focused on quality of life, yet these tools lack the ability to measure companionship, meaningful relationships, loneliness, autonomy, dignity, and self-worth. A survey instrument, like the one used in this study, which incorporates these culture change indicators would better serve the nursing home community. Satisfaction surveys typically capture the perceptions of elders with highest level of cognitive abilities, yet the survey instrument used in this study offers the respondent to use simple “yes” and “no” answers which increases the response rate and therefore provides more accurate feedback to organizational planners. The nursing home in this study had a 10% higher response rate on The Quality of Life Scales for Nursing Homes survey than the annual satisfaction survey. Measuring with the instrument used in this study gives voice to elders that may not have been previously heard.
Maslow’s hierarchy of needs is a psychology theory that describes stages of growth in humans. The first needs are physiological which are required for human survival like breathing, food, clothing, and shelter. The second level of needs include safety and security needs like personal and financial security, health, well-being. Nursing homes provide elders both of these levels of needs. Yet, these are likely not the only levels most individuals would want for themselves or their parent to have met. The Quality of Life Scales for Nursing Home measures these levels with the comfort scale, functional competence, food enjoyment scale, and safety and security scale.

The third level of Maslow’s hierarchy is love and belonging, which involves emotionally-based relationships like friendship, family, and intimacy. The fourth level is esteem, meaning the need to be respected and to have self Esteem and self-respect. The final level is self-actualization meaning the person is able to grow into their full potential. The Quality of Life Scales for Nursing Homes measures these higher levels with the privacy, dignity, meaningful activity, relationship, autonomy, spiritual well-being, and individuality scales. As consumers of nursing homes, individuals want the best environment, culture, and life for their loved ones; an environment where each person served feels safe, a sense of belonging, respected, and is given the opportunity to grow. Nursing home leaders must create this change. Every nursing home should monitor the quality of life elders experience, and plan organizational improvement. Do nursing home leaders develop the strategic or operational plans without understanding the strengths, weaknesses, opportunities, threats and financial picture of the organization? Prudent leaders cannot plan a successful future, if they are unaware of the current situation. Groups championing the nursing home culture change movement have been criticized for
failure to measure outcomes. Nursing home leaders should collaborate, measure culture change efforts, share best practices and create the Eden Alternative culture change vision.

Limitations

Ability to generalize these findings to the general population must be done cautiously. The actual sample demographics were similar to the entire population of the nursing home for age, gender, room type, and payer source. There were variations between the actual sample and the nursing home’s total population for length of stay, cognitive performance, and level of assistance needed with activities of daily living. The actual sample varies from the national nursing home population for gender, payer source, and length of stay. This study provides this nursing home a baseline for future study regarding quality of life. Identifying these baseline values provides metrics that can be used to quantify the impact of the Green House model and other culture change efforts on quality of life at this nursing home. Replicating this study with a larger sample size that is representative of the larger nursing home population and compares traditional homes with those engaged in culture change would add to current knowledge.

One bias found in survey research is that results vary by the type of interviewer. This potential problem was minimized by ensuring all interviewers participated in training concurrently and completed practice interviews with a high level of inter-rater reliability. The interviewers were taught to remain neutral both verbally and non-verbally. A number of the interviewers were college students while others had been volunteers at the home. There was the potential that elders may have recognized volunteers as familiar faces within the nursing home. The majority of the students were generally younger than the volunteers. The volunteers were assigned to neighborhoods
that they had spent less time visiting. A Kruskal-Wallis test was completed to determine if there were differences in the results obtained between the student and the volunteer interviewers. On nine of the eleven scales there were no significant differences between the students and the volunteers. The interviews completed by the volunteers had statistically significant higher scores on the relationship scale ($H(1)=7.948, p<.05$) and the interviews completed by the students had statistically significant higher scores on the safety and security scale ($H(1)=5.199, p<.05$). In future studies with adequate resources, interviewers who have not previously interacted with the participants would be preferred to minimize potential bias.

After completing all the interviews, the interviewers were invited back to share their experience. The interviewers shared that some elders were challenged by the length of the survey tool. Some elders asked “How much longer”? or “How many more questions do we have”? The number of elders that complete the first 10 scales on the instrument ranged from 139 to 154, while the 11th scale the number of respondents dropped to 127. The sharp decline of respondents on the last scale may be related to participants feeling the survey length was burdensome. In the future research with this population it may be beneficial to divide the tool into two parts and administer the survey on separate days.

The volunteers reported a number of barriers to completing the interviews. One interviewer reported staff telling them certain individuals would not be able to participate in the survey, however when the volunteer actually approached the elder, the interview was completed. This provides one reason why there is a difference in the percentage of respondents with higher levels of cognitive impairment in this study (3.8%) compared to
the national study (44.8%). The volunteers also experienced challenges in communicating with elders with severe hearing deficits. Additionally, some elders had difficulty understanding some of the questions such as “Do you get outdoors as much as you want, too much, or not enough”? and “Despite your health condition, do you give help to others such as other residents, your family, people at this nursing home, or the outside community”? Generally, the interviewers enjoyed the process and engaged in conversations with elders regarding their personal transitions and life memories. One interviewer stated “The more I did it (interviewed elders), the more I wanted to do it.” Another interviewer reported, “It is unfortunate you are limited to analyzing a bunch of numbers. The elders are sharing such rich and meaningful stories that are lost.”

The mean scale scores and reliability measures for each scale are summarized on Table 4.2. The Cronbach’s alpha coefficient is the most frequently used indicator of internal consistency. Ideally the Cronbach’s alpha coefficient of a scale should be above .7. In the original study the Cronbach’s alpha was greater than .7 on four of the 11 scales, while in this study it was greater than .7 on three of the 11 scales. In this study, the Cronbach’s alpha values ranged from .40 on the Safety & Security scale to .85 on the Functional Competence scale. It is common to find lower Cronbach’s alpha coefficient scores for scales with less than ten items; therefore it is appropriate to report the mean inter-item correlation. Briggs and Cheek (1986) recommend an optimal range of .2 to .4 for the mean inter-item correlation. In this study six of the 11 scales (54.5%) fall within the optimal range for the mean inter-item correlation. The mean inter-item correlation ranged from .123 on the Safety and Security Scale to .527 on the Functional Competence scale. There is variation in the coefficient and mean inter-item correlation across samples.
There is an opportunity for future research to refine the tool and improve the psychometric properties of the meaningful activity and safety and security scales.

Recommendations

The following section summarizes the recommendation for educational opportunities and operational changes for this nursing home, suggestions for the nursing home providers, and areas for future research.

As consumers of nursing homes, individuals want the best environment, culture, and life for their loved ones; an environment where each person served feels safe, a sense of belonging, respected, and is given the opportunity to grow. Nursing home leaders must create this change. Every nursing home should monitor the quality of life elders experience, and plan organizational improvement. Do nursing home leaders develop the strategic or operational plans without understanding the strengths, weaknesses, opportunities, threats and financial picture of the organization? Prudent leaders cannot plan a successful future, if they are unaware of the current situation. Groups championing the nursing home culture change movement have been criticized for failure to measure outcomes. Nursing home leaders should collaborate, measure culture change efforts, share best practices and create the Eden Alternative culture change vision.

Conclusion

Elders experience significant disruptions in their lives when moving to a nursing home. The medically-focused model is more like a medical institution than a home. There are long, tiled hallways, nurses’ stations, large dining rooms, overhead announcements, flashing lights, and disturbing unfamiliar noise. The amount of personal private space decreases from what they occupied prior to the move to an average of 135
square feet per elder (Calkins & Cassella, 2007). Although 97.5% of facilities have outdoor space, only 44.3 % of elders have access to the outdoors (Bowman, 2008). Large industrial kitchens are inaccessible to elders, creating an inability for elders to participate in cooking, baking or to enjoy the smell of meals being prepared (Baker, 2007). Meal times are dictated by the facility schedules, limiting the elders’ ability to choose their daily routine. Rigid routines for meals, bathing, toileting, and programmed activities provide efficiencies for staff yet minimize elder choices (Baker, 2007). Traditional nursing homes were philosophically designed to support the medical needs of residents, yet, they lack emphasis on the quality of life (Rantz & Flesner, 2004; Calkins, 2007; Kane, 2003; Thomas, 2004).

In 2001, an urban, western New York nursing home began a journey to revolutionize nursing home care and improve quality of life for elders living there. The home adopted the Eden Alternative philosophy which is the most recognized and respected culture change path in the nursing home industry. This pathway works towards eliminating loneliness, helplessness, and boredom within homes by creating an elder-centered community committed to creating a human habitat where life revolves around close and continuing contact with plants, animals and children (Thomas, 2004). Additionally, the home plans to transform nursing home care by building The Green House model homes. The Green House model suggests moving nursing home residents out of institutions and into residential homes (NBC Capital Impact, 2008; Thomas, 2004; Rabig, Thomas, Kane, Cutler, and McAlilly, 2006). The Green House homes should intuitively result in a better quality of life for elders, yet only minimal evidence has been reported in the literature. In order to test this hypothesis, this organization will need to
obtain quantifiable, objective, baseline quality of life data to compare to quality of life outcome data for those who ultimately move into The Green House model homes.

The purpose of this study was to understand the quality of life experienced by elders living in the nursing home, identify opportunities for improvement, and highlight areas of best practice that can be disseminated to other areas. Finally, the study was completed to understand if elders living in a shared or private room experience differences in quality of life. This study was done to answer the research questions 1) How do elders living at the nursing home perceive their quality of life?, 2) Is there a difference in quality of life experience for elders living in different neighborhoods within the home?, and 3) Is there a difference between quality of life experienced by those living in a private room versus a shared room?

The nursing home in this study was established in 1899 and offers skilled nursing care, dementia care, transitional care, rehabilitation, adult day services, and hospice care to more than 475 individuals. The elder population is 75.7% female and 24.3% male. Nearly 90% of elders are older than 65, with 46.5% older than 85. The average length of stay for elders excluding those with a stay of less than 30 days is 19.5 months. The research participants included English-speaking elders older than 65 who lived at the nursing home during the time of the study. Residents were excluded from the study if they were admitted for a short stay restorative rehabilitation program or had a Cognitive Performance Scale score of six.

The Quality of Life Scales for Nursing Homes structured survey instrument was used. The instrument is made up of eleven scales that measure comfort, privacy, dignity, meaningful activity, relationships, autonomy, food enjoyment, spiritual well-being, safety
& security, and individuality. Most questions included a four-point Likert-type scale like “often, sometimes, rarely, never”. If elders were unable to respond with the Likert-type scale, interviewers modified response options to the dichotomous answer “mostly yes” or “mostly no”. The previous scale reliability using Cronbach’s alpha ranged from .53 to .77 on all but one scale.

The interviewers completed interview training that culminated in two practice interviews which resulted in a 99.5% inter-rater reliability score. The interviewers approached all the elders who met the inclusion criteria and recorded responses onto the survey instrument. There were 155 (41%) of the interviews completed, 164 (43.4%) were cognitively unable to complete the interview, 23 (6.1%) declined the opportunity, three (.8%) were discharged prior to the interview, 24 (6.3%) died, and seven (1.9%) did not complete the interview for other reasons.

The Statistical Package for Social Science (SPSS), Version 16.0 for Windows was used for data analysis. After all the data were entered, then two reviewers verified the data entry of 20% of the valid survey tools and determined a 99.5% accuracy rate.

Overall the elders completing the survey rated each quality of life scale between 3.06 and 3.77 on a scale of one (low) to four (high). Younger participants experience more engaging and meaningful social interactions with others than older participants. Respondents who have lived at the nursing home longer report higher levels of dignity, but lower levels of spiritual well-being. As participants’ need for assistance increased they experience lower levels of physical comfort, independence, and engaged in fewer meaningful activities. Respondents who have greater cognitive impairment report higher levels of physical comfort and personal safety. Four of the neighborhoods had
statistically significant findings on one of the quality of life scales including comfort, meaningful activity, relationships, and safety and security. Elders who live in private rooms rate privacy higher than those living in shared rooms.

Elders transition to nursing home life in three phases including overwhelmed, adjustment and initial acceptance (Wilson, 1997). The time spent in each phase varies individually. This researcher expected to see lower quality of life scale scores with individuals who had recently moved into the nursing home, yet when comparing the mean scores for each quality of life for groups of elders who have lived at the nursing home less than three months, four to six months, six to 12 months, 12-24 months, and greater than 24 months, there were no differences.

The staffing turnover rate in the nursing home studies may have contributed to the high scores. The 2004 National Nursing Home Study reports the turnover rate is found to be the highest among certified nursing assistants at 74.5%, followed by registered nurses at 56.1%, and licensed practical nurses at 51.0%. The nursing home in this study eliminated agency staff in 2002. Full-time staff turnover has decreased from over 30% a decade ago to 8.5% in 2009. The staff turnover for the nursing department in 2009 was 13%.

Limitations for this study include the inability to generalize these findings beyond the specific nursing home where the study was conducted, potential Hawthorne effect, length of survey instrument, and lower reliability scores for some scales on the survey instrument.

The nursing home staff should receive education regarding the results of the study including the correlations between demographic variables and the scale scores. This
should raise the awareness of elders’ perceptions of quality of life and potentially encourage positive behavior change. Some recommendations for operational shifts at the nursing home include 1) having neighborhood teams target older adults and evaluate if any of these elders would benefit from any added social interactions and plan accordingly, 2) asking spiritual care staff to review the spiritual needs of elders throughout the individuals’ lives, 3) having neighborhood teams identify elders who have higher activity of daily living scores and develop individualized plans to engage them in more meaningful activities, 4) asking the clinical care teams to assess the effectiveness of the pain assessment tools and methods used to assess for discomfort, 5) sharing information regarding the mean scores with each neighborhood team, so members can identify areas for quality improvement, and 6) having the Quality Assurance Committee monitoring health care and experience outcomes select sample of elders with higher weights for older individuals, those with longer lengths of stay and those with greater need for assistance with activities of daily living.

Recommendations for future research at the nursing home studied could include a qualitative study to define the best practices found on neighborhoods with statistically significant quality of life findings. Recommendations for the nursing home field include refining the survey instrument to improve the psychometric properties particularly on the meaningful activity and safety and security scales. After refining the instrument the study could be replicated with a larger sample size that is representative of the larger nursing home population and compares traditional homes with those engaged in culture change. This study could be done with interviewers who have not previously interacted with the participants. The interview could be divided into two parts and administered on separate
days to minimize survey burden. Additional research could be done to gain insight into activities that facilitate an easier transition for elders moving into a nursing home.
References


Calkins, M. P., & Marsden, J. P. (2000). Home is where the heart is: designing to recreate home. *Alzheimer's Care Quarterly, 1*(1), 8-16


Appendix A

Federal Quality of Life Regulations

A facility must care for its residents in a manner and in an environment that promotes maintenance or enhancement of each resident’s quality of life.

(a) Dignity. The facility must promote care for residents in a manner and in an environment that maintains or enhances each resident’s dignity and respect in full recognition of his or her individuality.

(b) Self-determination and participation. The resident has the right to –

(1) Choose activities, schedules, and health care consistent with his or her interests, assessments, and plans of care;

(2) Interact with members of the community both inside and outside the facility; and

(3) Make choices about aspects of his or her life in the facility that are significant to the resident.

(c) Participation in resident and family groups.

(1) A resident has the right to organize and participate in resident groups in the facility;

(2) A resident’s family has the right to meet in the facility with the families of other residents in the facility;

(3) The facility must provide a resident of family group, if one exists, with private space;

(4) Staff or visitors may attend meetings at the group’s invitation;
(5) The facility must provide a designated staff person responsible for providing assistance and responding to written requests that result from group meetings;

(6) When a resident or family group exists, the facility must listen to the views and act upon the grievances and recommendations of residents and families concerning proposed policy and operational decisions affecting resident care and life in the facility.

(d) Participation in other activities. A resident has the right to participate in social religious, and community activities that do not interfere with the rights of other residents in the facility.

(e) Accommodation of needs. A resident has the right to-

(1) Reside and receive services in the facility with reasonable accommodation of individual needs and preferences, except when the health or safety of the individual or other residents would be endangered; and

(2) Receive notice before the resident’s room or roommate in the facility is changed.

(f) Activities.

(1) The facility must provide for an ongoing program of activities designed to meet, in accordance with the comprehensive assessment, the interests and the physical, mental, and psychosocial well-being of each resident.

(2) The activities program must be directed by a qualified professional who –

(i) Is a qualified therapeutic recreation specialist or an activities professional who-

(A) Is licensed or registered, if applicable, by the State in which practicing; and
(B) Is eligible for certification as a therapeutic recreation specialist or as an activities professional by a recognized accrediting body on or after October 1, 1990; or

(ii) Has 2 years of experience in a social or recreational program within the last 5 years, 1 of which was full-time in a patient activities program in a health care setting; or

(iii) Is a qualified occupational therapist or occupational therapy assistant; or

(iv) Has completed a training course approved by the State.

(g) Social Services.

(1) The facility must provide medically-related social services to attain or maintain the highest practicable physical, mental, and psychosocial well-being of each resident.

(2) A facility with more than 120 beds must employ a qualified social worker on a full-time basis.

(3) Qualifications of social worker. A qualified social worker is an individual with
– (i) A bachelor’s degree in social work or a bachelor’s degree in a human services field including but not limited to sociology, special education, rehabilitation counseling, and psychology; and

(ii) One year of supervised social work experience in a health care setting working directly with individuals.

(h) Environment. The facility must provide –

(1) A safe, clean, comfortable, and homelike environment, allowing the resident to use his or her personal belongings to the extent possible;

(2) Housekeeping and maintenance services necessary to maintain a sanitary, orderly, and comfortable interior;

(3) Clean bed and bath linens that are in good condition;
(4) Private closet space in each resident room, as specified in § 483.70 (d)(2)(iv) of this part;

(5) Adequate and comfortable lighting levels in all areas;

(6) Comfortable and safe temperature levels. Facilities initially certified after October 1, 1990 must maintain a temperature range of 71-81°F; and

(7) For the maintenance of comfortable sound levels.
Appendix B

State Quality of Life Regulations

Effective Date: 04/17/96

Title: Section 415.5 – Quality of life

415.5 Quality of life. The facility shall care for its residents in a manner and in an environment that promotes maintenance or enhancement of each resident’s quality of life.

(a) Dignity. The facility shall promote care for residents in a manner and in an environment that maintains or enhances each resident’s dignity and respect in full recognition of his or her individuality.

(b) Self-determination and participation. The resident has the right to –

   (1) Choose activities, schedules, and health care consistent with his or her interests, assessments, and plans of care;

   (2) Interact with members of the community both inside and outside the facility; and

   (3) make choices about aspects of his or her life in the facility that is significant to the resident.

(c) Participation in resident and family groups

   (1) A resident has the right to organize and participate in resident groups in the facility;

   (2) A resident’s family has the right to meet in the facility with the families of other residents in the facility;

   (3) The facility must provide a resident of family group, if one exists, with private space;
(4) Staff or visitors shall be allowed to attend meetings at the group’s invitation;

(5) The facility must provide a designated staff person responsible for providing assistance and responding to written requests that result from group meetings;

(6) When a resident or family group exists, the facility must listen to the views and act upon the grievances and recommendations of residents and families concerning proposed policy and operational decisions affecting resident care and life in the facility.

(d) Participation in other activities.

(1) A resident has the right to participate in social religious, and community activities that do not interfere with the rights of other residents in the facility.

(2) receive notice before the resident’s room or roommate in the facility is changed.

(e) Accommodation of needs. A resident has the right to-

(1) Reside and receive services in the facility with reasonable accommodation of individual needs and preferences, except when the health or safety of the individual or other residents would be endangered; and

(2) Receive notice before the resident’s room or roommate in the facility is changed.

(f) Activities.

(1) The facility must provide for an ongoing program of activities designed to meet, in accordance with the comprehensive resident assessment, the interests and the physical, mental, and psychosocial well-being of each resident. The activities program shall:

(i) encourage the resident’s voluntary choice of activities and participation; and

(ii) promote and maintain the resident’s sense of usefulness to self and others, make his or her life more meaningful, stimulate and support the desire to use his or her
physical and mental capabilities to the fullest extent and enable the resident to maintain a sense of usefulness and self-respect.

(2) The activities program shall be directed by a qualified professional who –

(i) Is a qualified therapeutic recreation specialist who is eligible for certification as a therapeutic recreation specialist by a recognized accrediting body on or after August 1, 1989; or

(ii) has 2 years of experience in an age-appropriate social or recreational program within the last 5 years, 1 of which was full-time in a patient or resident activities program in a health care setting; or

(iii) Is a qualified occupational therapist or occupational therapy assistant.

(3) The activities program director shall be responsible to the administrator or his or her designee for administration and organization of the activities program and shall:

(i) assist in the selection and evaluation of activities program staff and volunteers;

(ii) assign duties and supervise all activities staff and assigned volunteers;

(iii) ascertain, initially from the resident’s attending physician, and on an ongoing basis from other appropriate professional staff, which residents are not permitted for specific documented medical reasons, to participate in certain activities;

(iv) develop and prepare with the resident and designated representative, as appropriate, a written plan for individual, group and independent activities in accordance with his or her needs, interests and capabilities, and in recognition of his or her mental and physical needs and interests, as well as education and experiences.

(v) incorporate the activities into the resident’s interdisciplinary care plan;
(vi) periodically, and at least quarterly, review with the resident, designated representative and staff, as appropriate his or her activities program participation and revise the plan as necessary;

(vii) coordinate and incorporate the activities program with the resident’s schedule of other services through discussions with the interdisciplinary care team;

(viii) develop a monthly activities schedule based upon individual and group needs, interests and capabilities considering the special needs of residents including but not limited to dementias, physical handicaps, visual hearing and speech deficiencies and wheelchair or bed restrictions;

(ix) post the current monthly activities schedule where it is accessible to residents and staff and can be easily read and provide a copy to residents upon request; and

(x) include in the resident’s clinical record a quarterly assessment of the resident’s degree of participation in, response to and benefit from the activities program.

(4) The facility shall:

(i) employ such additional qualified personnel responsible to the activities director, as are needed;

(ii) provide a planned program to include individual, group and independent programs for all residents at various times of the day and evening seven days of the week;

(iii) provide safe and adequate space and an adequate number and variety of equipment and supplies for the conduct of the on-going program; and

(iv) develop, facilitate access and implement programs to encourage residents to establish and maintain community contacts.
(g) Social Services.

(1) The facility must provide for a social service program to meet the psychosocial needs of the individual resident which will provide services, based upon a comprehensive assessment, which will assure the maximum attainable quality of life for the residents, the residents’ emotional and physical well-being, self-determination, self respect and dignity. Such services shall include;

(i) conducting an initial admissions assessment and interview with the resident and family to evaluate the appropriateness of placement and identify the need for special services;

(ii) interpreting the resident’s rights to family and staff;

(iii) advocating for the resident with personal and social problems and problems involved with institutionalization;

(iv) facilitating needed communication with other disciplines on behalf of the residents, including medical, nursing, dietary, rehabilitation and psychiatric services;

(v) coordinating and monitoring needed available services for individual residents to assure optimum level of emotional, physical and psychological well-being and independence based upon educational background;

(vi) involving the resident, other disciplines and administration as appropriate regarding matters such as bed retention, room change, transfer and discharge;

(vii) interpreting residents’ needs and behaviors and extending professional intervention to all levels of staff suggesting positive approaches, such as alternatives to the use of restraints and psychotropic drugs
(viii) initiating and facilitating small group meetings of residents, family and staff directed at a fuller understanding of the institutionalized resident and fuller joint participation in improving the residents’ emotional and physical well-being;

(ix) initiating and participating in interdisciplinary meetings and team conferences;

(x) providing assistance and support to residents’ family members;

(xi) arranging for residents and families to meet with Department of Health surveillance staff as necessary;

(xii) participating, if requested by residents, in the organization and on-going functioning of the resident and family councils;

(xiii) making available social work staff at varying schedules, including weekends and evenings;

(xiv) coordinating and facilitating the referral of residents for needed and requested services and outside resources not available in the facility; and

(xv) organizing bereavement counseling for roommates, families and other affected individuals.

(2) A facility shall employ a qualified social worker. Facilities with more than 120 beds shall employ such individual on a full time basis; facilities with 120 beds or fewer shall employ such individual on a full or part time basis. A qualified social worker for purposes of the Part is an individual who:

(i) holds a masters degree in social work or is a Certified Social Worker, and has pertinent experience in a health care setting;
(ii) holds a bachelor’s degree in social work, or in a related field, and has regular access through a contract which meets the provisions of subdivision (e) of section 415.26 of the Part with a person who meets the requirement of subparagraph (i) of this paragraph: or

(iii) had for years of social work experience in a nursing home in New York State prior to October 1, 1990, as a social work assistant or case aide and had regular access through a contract which meets the provisions of subdivision (e) of section 415.26 of the Part with a person who meets the requirement of subparagraph (i) of this paragraph, (h) Environment. The facility shall provide:

(1) A safe, clean, comfortable, and homelike environment, allowing the resident to use his or her personal belongings to the extent possible;

(2) Housekeeping and maintenance services necessary to maintain a sanitary, orderly, and comfortable interior;

(3) Clean bed and bath linens that are in good condition;

(4) Private closet space in each resident room, as specified in § 483.70 (d)(2)(iv) of this part;

(5) Adequate and comfortable lighting levels in all areas;

(6) Comfortable and safe temperature levels. Facilities initially certified after October 1, 1990 must maintain a temperature range of 71-81°F; and

(7) For the maintenance of comfortable sound levels.
<table>
<thead>
<tr>
<th>Appendix C</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Quality of Life Scales for Nursing Home Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residen Name: _____________</td>
</tr>
<tr>
<td>Room Number________</td>
</tr>
</tbody>
</table>

The first questions are about how comfortable you are and the help you get to make you more comfortable.

**Comfort Scale**

1. How often are you too cold here?

2. How often are you so long in the same position that it hurts?

3. How often are you in physical pain?

4. How often are you bothered by noise when you are in your room?

5. How often are you bothered by noise in other parts of St. John's, for example the dining room?

6. Do you get a good night's sleep here?

The next questions are about how easy it is for you to do things for yourself as much as you want.

**Functional Competence Scale**

1. Is it easy for you to get around in your room by yourself?

2. Can you easily reach the things that you need?

3. If you are anywhere in St. John's and need a bathroom, can you get to one quickly?

4. Can you easily reach your toilet articles and things you want to use in your bathroom?

5. Do you do as much to take care of your own things and your room as you can and want?

The next questions are about privacy or lack of privacy.

**Privacy Scale**

1. Can you find a place to be alone when you wish?

2. Can you make a private phone call?

3. When you have a visitor, can you find a place to visit in private?

4. Can you be together in private with another resident (other than your roommate)?

5. Do the people who work here knock and wait for a reply before entering your room?

The next questions concern respect for your dignity.

**Dignity Scale**

1. Do staff here treat you politely?

2. Do you feel that you are treated with respect here?

3. Do staff here handle you gently while giving your care?

4. Do staff here respect your modesty?

5. Do staff take time to listen to you when you have something you want to say?

Now we have some questions about how you spend your time.

**Meaningful Activity Scale**
1. Do you get outdoors as much as you want, too much, or not enough? Responses are (1) As much as you want, (2) too much, (3) Not Enough, or (4) Never

2. About how often do you get outdoors? Responses are (1) every day, (2) several times a week, (3) about once a week, (4) less than once a week, (5) less than once a month

3. Do you enjoy the organized activities at St. John’s?

4. Outside of religious activities, do you have enjoyable things to do at the nursing home during the weekend?

5. Despite your health condition, do you give help to others, such as other residents, your family, people at St. John’s, or the outside community?

6. Do the days here seem too long to you?

The next questions are about your relationships here at St. John’s

**Relationship Scale**

1. Is it easy to make friends at St. John’s?

2. Do you consider that any other resident is your close friend? Responses are (1) yes or (2) no

3. In the last month, have people who worked here stopped just to have a friendly conversation with you?

4. Do you consider any staff member here to be your friend?

5. Do you think St. John’s tries to make this an easy and pleasant place for families and friends of residents to visit?

The next questions are about the choice and control that you have.

**Autonomy Scale**

1. Can you go to bed at the time you want?

2. Can you get up in the morning at the time you want?

3. Can you decide what clothes to wear?

4. Have you been successful in making changes in things you do not like?

The next 3 questions are about your eating experiences at St. John’s.

**Food Enjoyment Scale**

1. Do you like the food at St. John’s?

2. Do you enjoy mealtimes at St. John’s?

3. Can you get your favorite foods at St. John’s?

The next questions ask about your spiritual life here at St. John’s.

**Spiritual Well-Being**

1. Do you participate in religious activities here?

2. Do the religious observances here have personal meaning for you?

3. Do you feel your life as a whole has meaning?

4. Do you feel at peace?

The next questions asks about how safe and secure you feel at St. John’s.
### Security Scale

1. Do you feel that your possessions are safe at St. John’s?  
2. Do your clothes get lost or damaged in the laundry?  
3. Do you feel confident that you can get help when you need it?  
4. If you do not feel well, can you get a nurse or doctor quickly?  
5. Do you ever feel afraid because of the way you or some other resident is treated?

### The next questions are about your individual preferences for your life.

### Individuality Scale

1. Taking all staff together, noises aides and others, does the staff know about your interests and what you like?  
2. Do staff members know you as a person?  
3. Are people working here interested in your experiences and the things you have done in your life?  
4. Do staff here take your preferences seriously?  
5. Do residents here know you as a person?  
6. Are your personal wishes and interests respected here?

Date completed:________  
Total minutes:________  
Number of sessions:________

Completion  
- Yes, interview completed  
- No, resident cognitively unable to complete  
- No, resident refused to complete  
- No, resident hospitalized before completing  
- No, resident discharged before completing  
- No, resident died before completing  
- No, other
Appendix D

Letter to Elders

Date

< Insert resident name>
< Insert building and room number>
150 Highland Avenue
Rochester, NY 14620

Dear Resident Name:

As a resident of St. John’s, I am requesting your participation in a research study which I am conducting at St. John’s Home as a doctoral student at St. John Fisher College. The focus of my study is quality of life provided in nursing homes.

If you agree to participate in this study, an interviewer may be visiting you in the next 6 weeks. You will be asked about the quality of life your experience at St. John’s Home. The interview will take about an hour. In an effort to respect your privacy, names will be removed from all study reports.

The study has been approved by the St. John’s Home Ethics and Safety Committee, Executive Team and by the St. John Fisher College Institutional Review Board. St. John’s Home is fortunate to be involved in this project, which has the potential to improve quality of life provided in nursing homes across the country by gaining needed information regarding your experience. We hope you will consider participating; however, requests to decline this opportunity will be honored.

Please contact me for any questions regarding the study. I can be contacted by dialing ext. 1231 within the home or 760-1231 from outside the home.

Sincerely,

Carol DuMond
Project Manager
Dear <Insert primary contact name>:

St. John’s Home will be participating in a research study which I will be conducting as a doctoral student at St. John Fisher College. It will examine quality of life provided in nursing homes.

If your relative agrees to participate, an interviewer may be visiting <Insert residents name> in the next 8 weeks. Your relative will be asked about the quality of life experienced at St. John’s Home. The interview will take about an hour. In an effort to respect privacy, names will be removed from all study reports.

The study has been approved by the St. John’s Home Ethics and Safety Committee, Executive Team, and by the St. John Fisher College Institutional Review Board. St. John’s Home is fortunate to be involved in this project, which has the potential to improve quality of life provided in nursing homes across the country. We hope you will encourage <Insert residents name> to consider participating.

Please contact me for any questions regarding the study. I can be contacted by dialing ext. 1231 within the home or 585-760-1231 from outside the home. My e-mail address is cdumond@stjohnsliving.org.

Sincerely,

Carol DuMond, RN MS
Project Manager
Appendix F

Interview Process Flow Chart

1. Tour unit, meet staff, and learn information.

2. Introduce yourself and engage in polite conversation. Does the elder participate?
   - Yes – Explain the survey and ask if they are willing to participate.
   - No – Respectfully end the conversation and mark “Resident cognitively unable to complete.”

3. No – Thank the elder for his/her time and mark the tool with “Resident refused to complete.”

4. Ask the questions in the “Comfort Scale.” Was the elder able to answer at least 4 of the questions?
   - Yes – Continue with interview
   - No – Continue the interview questions

5. At any time during the interview, if the elder becomes anxious, nervous, fidgety, restless, apprehensive, or uncomfortable – thank the elder for his/her time and tell a staff member what transpired.

6. If the elder appears fatigued, offer to stop interview and reschedule another time to complete the interview.

7. Complete interview, ensure elder is safe, record completion information.
Appendix G

To: THE GREEN HOUSE® Project Adopters, Consultants, and Friends
From: Robert Jenkens, Director
Re: The Green House Project Service Mark – Revised Usage Guidelines
Date: March 25, 2009

Our attorneys recently reviewed the guidelines for using THE GREEN HOUSE® service mark and have modified them to comply with legal requirements. This new guidance changes the way we use the registered trademark “®” symbol. The service mark that is registered with the U.S. Patent and Trademark Office includes three words, THE GREEN HOUSE, which means the trademark symbol should be used only when these three words are present. The registered trademark symbol is no longer required when using only the words “Green House.” These guidelines apply to print and web site content.

- Old Guideline: Green House® residences
- New Guideline: Green House residences

Please remember that the service mark, THE GREEN HOUSE, is used as an adjective to modify a noun and, therefore, we should not use it as a stand-alone term or pluralize it.

- Correct: “Our Green House homes” or “a Green House home”
- Incorrect: “Our Green Houses” or “a Green House”

All of us must work together to ensure the service mark is not weakened or lost entirely due to improper use. The following updated guidelines will help you and your staff to navigate through the details of correct usage. Please also share these guidelines with consultants, subcontractors, and others who work with your project.

Why is the Correct Usage of the Service Mark Important?

The Green House service mark is an important tool in The Green House movement. It should provide significant value to adopters by providing recognition and association with a well-regarded model. As The Green House Project grows, the service mark will allow NCB Capital Impact to distinguish licensed partners from other organizations interested in capitalizing on the name without adhering to the model’s principles and standards. The more successful The Green House movement becomes, the more carefully we need to protect the service mark.

Service Mark License – Correct usage of the service mark is important for organizations licensed to use the service mark or for those working closely with us (e.g., consultants, subcontractors, and media). NCB Capital Impact is committed to challenging anyone who inappropriately calls themselves a Green House project or provider, but we need your help. If we or you use the term in a manner that can be deemed “generic,” we will have a more difficult time pursuing legal challenges when necessary. To do this, we must be careful not to use “Green House” as a generic term to describe small long-term care homes. If we do, others will be able to claim that “Green House” has passed into common usage (i.e., as a generic term for small long-term care settings or homes) and is in the public domain.
Proper Use of the Service Mark – The basic rule is to use “THE GREEN HOUSE” only as a descriptor modifying a generic term (e.g., “The Green House model” or “Green House concept”). We must not use “Green House” or “Green Houses” as a stand-alone term describing the homes in writing, speech, or other media. If we or you incorrectly use “Green House” as a stand-alone term for our small-house model of long-term care (e.g., “The Green Houses at Shady Brook,” “breaking ground on our Green Houses”), an organization that is not part of The Green House Project could point to that usage to justify a claim that “Green House” has become a generic term for a model of long-term care and is, therefore, available for their use.

Protecting the Service Mark – The main protection is to use the service mark “The Green House” only in combination with a generic descriptive term. Kleenex and Xerox face this same challenge. This is why Kleenex always advertises as “Kleenex brand tissues” and Xerox as “Xerox copiers.” If they described tissues and copiers as Kleenex and Xeroxers, they would open the door for others to claim that the terms have become common descriptors in the public domain, and the registered service mark protection would be lost.

Usage Guidelines – The following guidelines should be used as you prepare internal and external communications (both are important legally) about your Green House project. Please remember that external communications targeted at large audiences should be reviewed by your Green House Project Guide. We hope these guidelines and examples are helpful and clear. If not, please contact Marilyn Ellis, Program Specialist, at mellis@ncbcapitalimpact.org or (703) 647-2313 for further assistance or consult with your Project Guide.

How to Use THE GREEN HOUSE® Service Mark

Please share these guidelines and examples with your staff, subcontractors, and others who work closely with your project. They also are posted on The Green House Forum: www.ncbcapitalimpact.org/thegreenhouseforum (click on the Policies link in the Resources section).

1. Officially-Registered Service Mark – The actual registered service mark is “THE GREEN HOUSE” (not “Green House” or “Greenhouse”). Use the registered trademark symbol “®” only with the complete, three-word service mark. Otherwise, omit the symbol (e.g., use “Green House residences” or “Green House workshops”).

   Wherever possible, the registered trademark symbol should be placed directly after the service mark. If you are unable to use the symbol due to software or other limitations, you should use the parenthetical version as follows: (R).

2. Usage in Connection with a Generic Product or Service – Use the service mark only as a descriptor for the generic product, service, or thing, such as “The Green House care services,” “The Green House model,” “The Green House team,” or “The Green House concept.” When referring the national program, the service mark always must be followed by the proper noun “Project,” (e.g., THE GREEN HOUSE® Project [or The Green House Project] is a technical assistance initiative of NCB Capital Impact.)

   It is important not to use the service mark (in writing, speech, or other media) in a way that creates a generic term for small-house long-term care residences. Thus, there should be no references, either in print or non-print material, speeches, or other media, to “a Green House or Green Houses.”
Wherever the service mark is used in connection with a product or service, the
generic descriptor following the service mark should appear in lower case (e.g., “The Green Home homes” or “Our Green House project”), unless you are using it in a title or signage, or to identify the national program (e.g., “The Green House Project”).

If using the complete, three-word registered service mark (“The Green House”) creates awkward sentence constructions, omit the “The” (e.g., “Green House residences are designed to…” or “We will forward our Green House site plan…”). Use of the registered trademark symbol “®” is not required in these instances, because you are no longer using the official service mark.

3. **First Appearance in Print** – The first time the service mark is used in print or in online web content (e.g., correspondence, web pages, presentation slides, press releases, brochures, etc.), it should be written in all upper case letters with the registered trademark symbol “®”, followed by a generic descriptor (e.g., “THE GREEN HOUSE® Annual Meeting and Celebration” or “THE GREEN HOUSE® orientation workshops are designed to…”)

If you are unable to use the symbol due to software or other limitations, you should use the parenthetical version as follows: (R).

4. **Subsequent Appearance in Print** – The service mark can be written in title case in subsequent appearances in the same document (e.g., “THE GREEN HOUSE® Project team met with our architect to… The architect’s award-winning design met all of the quality standards of The Green House model… We will break ground on our Green House homes on…”).

**Usage in Prominent Displays: Titles, Signage, Project Names, or Other Displays** – Always use the official, three-word service mark, THE GREEN HOUSE, and the registered trademark symbol “®”, when creating signage, titles, slide presentations, web site content, or other prominent displays, and when naming your Green House project (e.g., “THE GREEN HOUSE® Homes or Cottages at Lake Arbor”; see other examples below). If you wish to use the service mark in your project’s official name, please consult with your Green House Project Guide for assistance with correct usage prior to finalizing your plans.

**Examples of Correct Service Mark Usage**

Listed below are some examples used in Green House Project materials and correspondence. Most bullets illustrate initial and subsequent uses of the service mark within the same document.

- We appreciate your interest in **THE GREEN HOUSE® Project (GHP)**, a technical assistance initiative funded by the Robert Wood Johnson Foundation. The goal of GHP is to develop **Green House homes** with fifty or more organizations throughout the country…..We hope the following information will inspire you to join us for a one-day educational session about **The Green House model**.

- **THE GREEN HOUSE® home** is intended to look like a house in which the elder might have lived in the community….Regardless of the location, a home offering **The Green**
House services must be fully independent. Successful examples of Green House home plans are provided on the next three pages.

- **THE GREEN HOUSE®** designation is available for use by organizations accepted into The Green House Project based on ... In order to be considered a long-term care residence offering The Green House services, each sponsoring organization must operate in accordance with The Green House principles, staffing, model, and...

- **THE GREEN HOUSE® Orientation Workshop** (sponsored by AAHSA): This 8-hour orientation will provide participants with an in-depth understanding of The Green House model of care and the steps involved in developing Green House homes... This session is not taking place on-site at a Green House training center and will not include a visit to an operating Green House home.

- **THE GREEN HOUSE® Project Opening**: Asbury Park, located in Newton, Kansas, opened its first Green House home on October 9th, making it the 12th operating Green House campus in the country.

- **Options for Naming Your Project**: If the complete, three-word service mark, “THE GREEN HOUSE,” will be used when naming your project, it must be followed by the registered trademark symbol “®” and a generic descriptor in its first appearance in a document or web content (see examples). Afterwards, you may omit the symbol.

  - The Green House® Homes on Kent Island (or THE GREEN HOUSE® Homes on Kent Island)
  - The Green House® Residences at Northview
  - Green House Living at Sheridan South
  - The Green House® Villas by the Lake
  - The Green House® Cottages at Kingston Place
  - The Green House® Community at Frontgate

  *Note: You are not obligated to use the service mark in the name of your project.*

**Questions about THE GREEN HOUSE® Service Mark?**

Contact Marilyn Ellis, Program Specialist, at mellis@ncbcapitalimpact.org or 703-647-2313 or consult with your Project Guide.
Appendix H

*Spearman rho correlations between scales on the Quality of Life Scales for Nursing Homes*

<table>
<thead>
<tr>
<th></th>
<th>Comfort</th>
<th>Privacy</th>
<th>Dignity</th>
<th>Meaningful Activity</th>
<th>Relationship Scale</th>
<th>Autonomy Scale</th>
<th>Food Enjoyment</th>
<th>Spiritual Well-being</th>
<th>Safety &amp; Security</th>
<th>Individuality Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comfort</td>
<td>1.000</td>
<td>.175*</td>
<td>.294**</td>
<td>.027</td>
<td>-.008</td>
<td>.201**</td>
<td>.354**</td>
<td>.136</td>
<td>.311**</td>
<td>.177**</td>
</tr>
<tr>
<td>Privacy</td>
<td>1.000</td>
<td>.360**</td>
<td>.123</td>
<td>.132</td>
<td>.331**</td>
<td>.302**</td>
<td>.111</td>
<td>.236**</td>
<td>.280**</td>
<td></td>
</tr>
<tr>
<td>Dignity</td>
<td>1.000</td>
<td>.170*</td>
<td>.120</td>
<td>.269**</td>
<td>.268**</td>
<td>.053</td>
<td>.335**</td>
<td>.275**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meaningful Activity</td>
<td>1.000</td>
<td>.293**</td>
<td>.198*</td>
<td>.206**</td>
<td>.222**</td>
<td>-.052</td>
<td>1.000</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship</td>
<td>1.000</td>
<td>.235**</td>
<td>.305**</td>
<td>.162</td>
<td>.072</td>
<td>.457**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>1.000</td>
<td>.380**</td>
<td>.185*</td>
<td>.395**</td>
<td>.289**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food Enjoyment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>.157</td>
<td>.267**</td>
<td>.281**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spiritual Well-being</td>
<td>1.000</td>
<td>.217**</td>
<td></td>
<td></td>
<td>.327**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety &amp; Security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td>.289**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individuality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05, two-tailed. ** p < .01, two-tailed.