THE SOCIAL SUPPORT NETWORKS OF OLDER ADULTS IN CONTINUING CARE
RETIREMENT COMMUNITIES

A Dissertation by

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Relationships are all there is. Everything in the universe only exists because it is in relationship to everything else. Nothing exists in isolation. We have to stop pretending we are individuals that can go it alone.

Margaret Wheatley

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ABSTRACT

The goal of the current research was to apply previously developed methods of assessing social support networks, social isolation, and perceived quality of relations with a relatively unstudied population: Independent Living residents within a continuous care retirement community (CCRC). This population was of interest because of the lack of information known about their motivations for moving into a CCRC, as well as their social support networks. Twenty-four personal interviews were carried out with residents at two CCRC campuses, one rural and one urban. Participants identified "push" and "pull" motivations for moving, and these motivations were relatively independent of pressures from friends or family. Their social convoys were measured using the Antonucci Hierarchical Mapping Technique, and they had an average of 23.92 network members ($SD = 15.23$), which was much larger than results found in previous studies. The majority of social convoy members listed were family members, followed by community friends. Residents also had generally positive quality of relations with friends, family, CCRC staff, and fellow residents, and the majority (92%) were not considered socially isolated or at risk for social isolation. Seven different network types were identified in the sample based on patterns of contact with different network groups: diverse, family-focused, non-institution, non-family, non-friend, institutional-focused, and restricted. Participant network types and isolation level were compared to determine which network type had the best outcomes. Results based on these interviews show that larger networks are moderately associated with less social isolation ($r = -.26$), and that only 8% of participants were a high risk for, or are considered, socially isolated. Implications and recommendations for further research are discussed, as well as relevance to current theory.

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LIST OF ABBREVIATIONS

CCRC   Continuing Care Retirement Community

HCBS   Home and Community-based Care

IL   Independent Living

LTC   Long term care

LSNS   Lubben Social Network Scale

PMMA   Presbyterian Manors of Mid-America

CHAPTER ONE

INTRODUCTION

Overview of the Research

Starting in 2011 and continuing until 2030, more than 10,000 Americans will turn 65 years old each day (Stone, Schwartz, Broderick, & Deaton, 2010). As this population ages, there will be more need for alternatives to traditional nursing home care. One such alternative is retirement communities created especially for older adults. Many retirees 'buy into' these retirement communities while they are still fully able to live independently, for a variety of reasons. These reasons include companionship, activities, amenities, security, and to assure the availability of assistance when future health crises arise (Adams, Saunders, & Auth, 2004). One problem with moving from a community setting, like their own home or apartment, to a long-term care setting such as a continuing care retirement community (CCRC), is that not all older adults have sufficient resources available to make the transition successfully, or are able to compensate for any losses they may experience. These resources can be more concrete, such as personal finances or adequate long-term care options available in their area; as well as psychological, such as social support or social skills. For many, their success at a long-term care facility is dependent upon many factors, many of which are modifiable if known (Burge & Street, 2010); for example, moving into a CCRC may make it difficult for residents to maintain prior relationships and structures could be put into place to help aid in this transition. This raises the questions of whether they will be able to maintain these relationships, and whether they will be able to develop new relationships with fellow residents. This dissertation sought answers to these questions by examining the social support networks of twenty-four residents of two CCRC

facilities located in Newton and Wichita Kansas. More specifically, this dissertation focused on the composition of residents' social convoys and the extent to which they included fellow residents as well as family and old friends. This dissertation also explored the extent to which residents' patterns of contact with family, friends and staff resembled the patterns or network types already established in the literature; additionally, it determined the size and composition of residents' social convoys, describing some of the structural and functional aspects of their social support networks, such as social isolation and perceived quality of relations. This dissertation sought to contribute to the knowledge and understanding of older adults' social support networks by examining a rarely studied group, Independent Living (IL) residents in CCRCs. Prior research has focused primarily on older adults living in community settings or in assisted living or nursing home settings.

Importance of Social Support Networks

Socioemotional selectivity theory provided the theoretical background for this study. Socioemotional selectivity is a theory of aging (Carstensen, Isaacowitz, & Charles, 1999), which posits that older adults typically seek fewer types of novel social stimulation and interaction than younger adults (See Figure 1). This means that even though they see a decrease in the total size
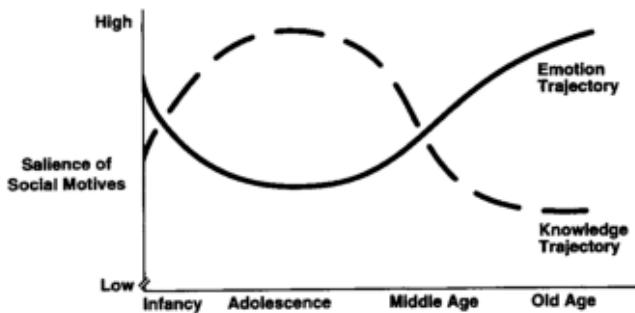
Figure 1.

Idealized Model of Socioemotional Selectivity Theory

of their social support networks as they age, older adults may not feel as alone or socially isolated in a smaller social support network as younger adults might. Another facet of this theory, however, is that older adults tend to select familiar, reliable relationships to invest in and are not motivated to form new emotional attachments as frequently as younger adults. This theory specifically applies to older adults who are nearing the end of life when time left is perceived as limited (Carstensen, Isaacowitz, & Charles, 1999). The stereotype of older adults who are withdrawn, abandoned, and socially isolated is one that has been countered with research showing that many older adults selectively chose to remain connected to informal social support networks, both benefiting from and valuing these social relationships (Hooyman & Kiyak, 2002). This could mean that disruptions in the make-up of their social support network, such as change of residence or death of close friends or family members, may lead to increased social isolation in this age group, especially if older adults are less motivated to form new social connections than younger persons. This may be a problem for those in age-segregated communities such as CCRCs where individuals have left their traditional neighborhoods in order to obtain services and amenities (Adams, Saunders, & Auth, 2004). One of the questions with which this dissertation was concerned was the extent to which IL within a CCRC form new relationships with fellow residents and the extent to which they could be considered socially isolated. In terms of Socioemotional Selectivity Theory (SES), residents may enter a CCRC with a fairly expansive sense of "time left" and they may be motivated to form new relationships.

The issues of having adequate social support and a sense of connection to others are core concerns of community psychology. This dissertation was concerned with the social support networks of older adults who are at risk for losing social ties because they have moved into a CCRC. The purpose of the present study was to explore the extent to which Independent Living

(IL) residents on two CCRC campuses operated by Presbyterian Manors of Mid-American (PMMA) were socially isolated, how they perceived the quality of their relationships, and to describe the nature of their social support networks through the use of social convoys and network types. The nature of residents' social support networks was of interest because social isolation, lowered perceived quality of relations, and certain network types are associated with negative health and mental health outcomes.

This was a small-scale study with only twenty-four participants. These adults were not typical of the general population, but were typical of the cohort of older adults who enter a CCRC in that they had rich economic and social capital, and were of interest because of their resources and how those resources related to outcomes. The study was part of a larger research project with PMMA that involved a computer training intervention, as well as measurements of physical and mental health outcomes. This dissertation was primarily descriptive and focused on the social support networks of IL residents, as well as their social isolation and perceived quality of relations. The goals of the study are described below, and summarized in Table 1.

Presbyterian Manors of Mid-America was selected as a research partner because of their

TABLE 1.
Goals of Study

Goal 1:	Identify some of the motivations as to why older adults move into a CCRC.
Goal 2:	Describe the composition of IL residents' social networks, the extent to which they are composed of family and friends, as well as the extent to which their social networks are composed of other IL residents, IL staff, and social and religious organizations
Goal 3:	Assess the extent of social isolation among the IL residents.
Goal 4:	Measure the perceived quality of relations.
Goal 5:	Explore the extent to which residents' scores on a measure of social isolation and the quality of their relationships are associated with: a) the size and composition of their social networks; and b) the types of social networks in which they appear to be embedded.

interest in research, and their previous relationships with Dr. Louis Medvene and his graduate students. They approached Dr. Medvene asking him and Dr. Carissa Coleman to present findings of Dr. Coleman's dissertation to staff throughout PMMA, and through that conversation indicated they were interested in continuing the research into how they could increase the quality of their organization. Susan Frye, Vice President for Clinical Services, and her staff at PMMA have been instrumental in the success of this dissertation.

What are Continuing Care Retirement Communities?

A CCRC is a specific type of facility aimed primarily towards older adults that is part independent living, part assisted living and part skilled nursing home. CCRCs are a continuum of care, and typically offer a three-tiered approach to the aging process that accommodates residents' changing needs as they age. Upon entering, healthy adults can reside independently in single-family homes, apartments or condominiums. When everyday activities become difficult and a higher level of care is needed, residents can move into the assisted living or nursing care facilities. Continuing care retirement communities give older adults the option to live in one location for the duration of their life with the knowledge that their futures are taken care of (AARP, 2010). Theoretically, even though they have moved into a CCRC, they might be expected to maintain their current social support networks while also forming new relationships with their fellow residents. CCRCs are among the most rapidly growing housing category in the retirement housing market but have received very little scientific analysis. CCRCs were initially designed to promote aging in place by offering a full range of on-site care options with complete medical coverage at no additional costs to residents or their family members (Sugihara & Evans, 2000); now, however, many CCRCs do not offer medical coverage due to rising health care costs. There are approximately 2,000 CCRCs currently in the United States, up from just 35 in

1988, and Kansas ranks eighth with the most facilities. The average CCRC in the United States contains just over 330 units, made up of 231 independent living units, 34 assisted living beds, and 70 skilled nursing home beds. On average, an older resident in the United States will live in the independent living facility for just over three years, the assisted living facility for one year, and the skilled nursing facility for nine months. Older adults will typically move into a CCRC while still independent and live there until the end of their life (American Seniors Housing Association, 2010).

Many retirees 'buy into' retirement communities while they are still fully able to live independently, for a variety of reasons including companionship, activities, amenities, security, and to assure the availability of assistance when future health needs arise. As the baby boomer cohort reaches retirement age, the population living in these communities, away from former homes and neighborhoods and separated from extended families, will continue to increase. While it is possible to be very socially active in age-segregated, congregate living environments, it is also possible for some residents to become socially isolated (Adams, Saunders, & Auth, 2004). The development of socially supportive relationships has been found to be a determining factor in successful CCRC placement (Sugihara & Evans, 2000). Given the nature of CCRCs, and IL in particular, there is little in the literature regarding why people chose to move into to these settings, the extent to which CCRCs fulfill the expectation of enabling residents to build and maintain their existing social convoys, as well as the overall nature of their existing social support networks. This dissertation contributes to the literature on aging by addressing each of these issues. The first goal of this dissertation is to identify residents' reasons for moving into a CCRC.

Goal 1: Identifying Residents' Reasons for Moving into a CCRC

There are many losses that could be experienced by older adults when they move to a CCRC, one of which is the loss of relationships with significant others. They are not typically abandoned, but the change in their living circumstances could significantly change their social support network. Their caretakers may no longer be able to take care of their loved ones, or may have passed away, and this can lead to long term care (LTC) placement. Friends may also have died, have been placed in LTC themselves, or are physically unable to visit, and this may also impact social relationships. Also, relationships with some friends and neighbors are usually proximity-based, and do not typically last when a person is placed in an institution such as LTC (Bitzan & Kruzich, 1990). These social support network changes that occur as people age could affect their motivations regarding moving into a CCRC. Additional negative reasons for moving into a CRRC include fear of burdening family by remaining in their own home, the burden of home and yard maintenance, their own or spouse's failing health, or the identified need for LTC in the future. These reasons would be considered "push" factors, as they tend to push people into moving into a LTC setting (Groger & Kinney, 2007).

Even with all these potential losses, there are also positive reasons older adults choose to move to LTC settings such as CCRCs. These reasons can be more positive ones, or "pull" factors, such as the desire to plan while still able to do so or being ready for a change, having the goal of forming an attachment to the CCRC community, choosing a location close to family, and the amenities of the CCRC. These reasons do not necessarily occur because of social support network changes (Groger & Kinney, 2007).

The first goal of this dissertation was to identify the reasons participating residents chose to move into a CCRC categorizing their motives in terms of "push" and "pull" factors. Push

factors were those that tended to be more negative in nature, and that propelled older adults into a CCRC; and pull factors tended to be more positive reasons that enticed them to move in (Groger & Kinney, 2007).

Goal 2: Describing the Composition of Residents' Social Convoys

Once older adults enter a CCRC, what kinds of relationships and social support networks do they develop? Given that social support networks are so vital, it is important to conceptualize and measure the extent of their social convoys. Social convoys have been formally defined as "the array of social contacts that give access to social, emotional, and practical support" (Litwin & Shiovitz-Ezra, 2010). Antonucci's Hierarchical Mapping Technique has frequently been used to determine participants' social convoys. According to the social convoy model, a person's social convoy is made up of the people by whom they are surrounded, and the Hierarchical Mapping Technique is a simple and efficient way to obtain this information. The terms "social convoy model" and "Hierarchical Mapping Technique" are used interchangeably in the literature, but it was called the Hierarchical Mapping Technique for purposes of this research. This technique has previously been used successfully in multiple studies over the last few decades with all age groups, more specifically with older adults both in community settings and nursing home settings, and is particularly useful as a tool for providing an unbiased, respondent generated account of the size and composition of the respondent's social convoy (Antonucci, 1986; Antonucci & Akiyama, 1995; Fiori, Antonucci, & Cortina, 2006). The Hierarchical Mapping Technique was also used in a prior study (Medvene, Nilsen, Smith, Ofei-Dodoo, DiLollo, Webster, Graham, & Nance, 2015) to look at the social support networks of another relatively unstudied population of home and community-based care (HCBS) recipients. These

are frail, elderly adults who are eligible for nursing home care, but chose to live in their own homes and receive care through paid in-home caregivers.

By using the Hierarchical Mapping Technique in this dissertation, it will be possible to compare the results of the present study with the social support network research that has been carried out with community dwelling adults, nursing home residents, and with HCBS recipients. By using Antonucci's conceptualization and methodology, it will also be possible to conduct comparisons across different populations. This dissertation will contribute to the literature by providing one of the first descriptions of the social convoys of Independent Living residents who are residing in continuous care retirement communities. For these reasons, the Hierarchical Mapping Technique was selected for use.

The term "Hierarchical Mapping" refers to the layered model of social relationships depicted in Figure 2. The innermost circle contains the word "YOU" and participants are then
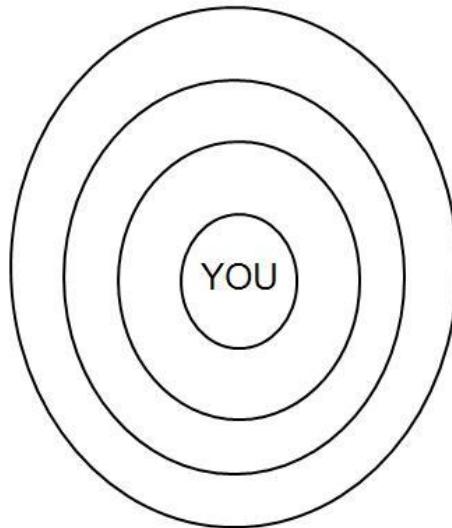
Figure 2.

Antonucci's Hierarchical Mapping Technique

asked to place individuals with whom they have contact and who are important to them into one of the other three circles: an inner circle, or people they "cannot imagine life without" and who constitute their attachment relationships; a middle circle, which is composed of people who are "not as close, but still important" as the inner circle; or an outer circle, which contains people "who have not been mentioned, but are still important enough to be part of the social network."

Demographic and structural characteristics, such as gender and relation to participant, are then collected for each convoy member named by participants. The number of persons named by each participant determines their total convoy size, while the relationship and circle placement of the members are used to develop overall convoy composition (Antonucci & Akiyama, 1995).

Antonucci's Hierarchical Mapping Technique is very effective at creating a visual description of the social convoys and was used in the present study to map IL residents' social convoys. Social convoy size and composition can vary from person to person, and so the present study was intended to describe the composition of IL residents' social convoys, such as the extent to which they were composed of family and friends. Especially important was the extent to which residents' social convoys were composed of other IL residents and staff, as well as the extent of their contact with social and religious organizations.

Antonucci's Hierarchical Mapping Technique was part of the larger conceptual
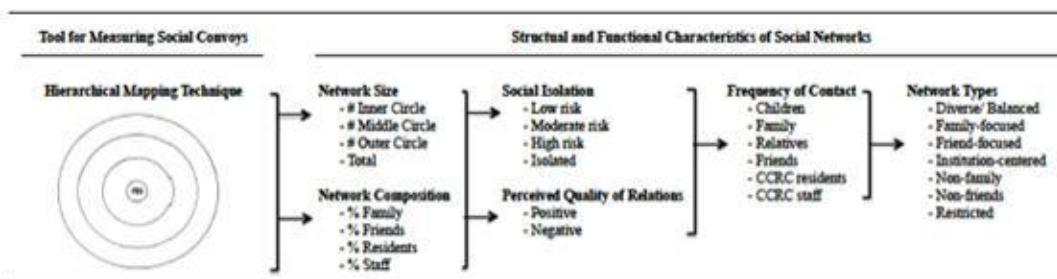
Figure 3

Theoretical Model Framework

framework that was guiding this study, as sketched in Figure 3. Of interest was how social convoy size, composition, frequency of contact, and network type were related to measures of social isolation and perceived quality of relations. Therefore, the second goal of this study was to describe the composition of residents' social support networks by counting the number of people in each resident's network and the resident's relationship to each person, such as a family member or friend.

Goal 3: Measuring Residents' Social Isolation Scores

The third goal of this study was to assess the extent of residents' social isolation. Studies have determined that older adults who live alone are at greater risk for institutionalization (Steinbach, 1992). People who live alone and have few social contacts are viewed by the outside world as being socially isolated. However, research by Shankar, McMunn, Banks, and Steptoe (2011) has shown that social isolation can be measured by expectations of and satisfaction with social contacts, regardless of their total number of contacts. Even though residents' relationships may suffer as a result, being able to maintain relationships and social support networks are very important to older adults after placement in a LTC facility (Bitzan & Kruzich, 1990). Social isolation is believed to impact health behaviors through social cues and support, or lack of it. Research has shown that social isolation has been related to a greater likelihood of inactivity, smoking, having high blood pressure, and cardiovascular disease (Shankar, et. al, 2011; Steptoe, Shankar, Demakakos, & Wardle, 2013).

Research has also shown that social relationships are important influences on quality of life and life satisfaction, as well as emotional and psychological well-being. Older people have identified contact with family and friends as important for their quality of life. Relationships with friends are seen as important to the aging process, especially in institutional settings (Hubbard,

Tester, & Downs, 2003), and research has shown that social relationships for older people are important (Powers, 1992). Previous literature shows that social isolation is a risk factor for poor physical and mental health outcomes, and this study will focus on social isolation and whether it is related to the composition and size of residents' social convoys and the quality of their relationships, and the type of network in which they seem to be embedded.

The Lubben Social Network Scale (LSNS) was used in the present study to assess the social isolation of IL residents. The LSNS was developed to measure social isolation, and has been empirically validated in clinical trials (Rubenstein, Lubben, & Mintzer, 1994). The ten questions LSNS used in the current study were tailored specifically for use among older adult populations (Lubben, 1988) and the LSNS has been widely used with this population in both research and clinical settings (e.g., Luggen & Rini, 1995; Martire, Schulz, Mittelmark, & Newsom, 1999; Steiner, Raube, Stuck, Aronow, Draper, Rubenstein, et al., 1996). The LSNS has been associated with a wide array of health indicators. Low scores on the LSNS, which indicate high social isolation, have been correlated with mortality, hospitalizations, physical health problems, depression and other mental health problems, and lack of adherence to good health practices (Lubben, Blozik, Gillmann, Iliffe, von Renteln Kruse, Beck, & Stuck, 2006). The third goal of the present study was to assess the extent of social isolation among the IL residents on the two CCRC campuses.

Goal 4: Assessing the Perceived Quality of Residents' Relationships

Perceived quality of relations may be one of the most important aspects of social support networks. Antonucci's social convoy model has four basic ideas: that social support networks are subjective and objective, they change over time because of developmental processes, they vary by personal and situational factors, and they influence a person's well-being. The functional

qualities of social support networks include the extent of social isolation and the perceived quality of support (Antonucci, Fiori, Birditt, & Jackey, 2010). Perceived quality has been shown to have a mediating effect on the association between social network type and well-being (Fiori, Antonucci, & Cortina, 2006). Perceived quality is a subjective measure that looks at the support given by a person's social support network, and not just the size of the social convoy. It is also suggested that perceived quality varies depending on the type of network each person has (House, 2010). This study used a measure the perceived quality of support that has been used in previous studies employing Antonucci's methods. The fourth goal of this study was to assess the perceived quality of residents' relationships with selected members of their social networks.

Goal 5: Exploring Connections Between Social Support Network Structure and Function

Due to this being an exploratory study, it was of interest to determine if social convoy composition and size were related to social isolation and perceived quality of relations, and to see how these variables were related to network type. Goal 5a was to explore the associations between the size and composition of residents' social convoys and both social isolation and perceived quality of relations. Regarding social isolation, of interest was whether residents' levels of social isolation varied as a function of whether their social convoys were composed predominantly of staff, or whether they were composed of friends and family as well as staff. This has not been explored in past research, and this is one of the first studies to examine the size and composition of residents' social convoys and their social isolation. Regarding quality of relationships, of interest was whether the positive and/or negative qualities of residents' relationships were associated with the composition of their social convoys. For example, would relationship quality higher if their social convoy were composed of a mixture of family, friends

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and staff, rather than just family? This is one of the first studies to explore how size and composition of residents' social convoys is related to the quality of their relationships

The second part of the fifth goal (Goal 5b) was to explore the associations between the types of social networks in which residents appear to be embedded, and their social isolation and perceived quality of relations. Network types are defined independently of whether residents list family, relatives, friends and/or staff in their social convoys. Network types are based on residents' reports of the frequency of their contact with family, relatives, friends, and staff.

Previous large-scale studies of the social networks of community dwelling older adults, almost all of which have used Antonucci's hierarchical mapping method, have identified several different network typologies; diverse, friends, neighbors, family, and restricted (e.g. Fiori et al., 2006). A distinctive pattern of contact with the different possible sources of social support is characteristic of each network type. "Diverse" networks tend to be the most prevalent network type among higher functioning community dwelling adults. People embedded in diverse networks have above average amount of contacts with each potential source of support: children and other family members, friends, neighbors, and they attend social activities such as social organizations and religious services at a higher than average rate.

The "friend" network is similar to diverse, but members report having the most contact with friends over any other group. The "neighbor" network is slightly less prevalent, and the members tend to have more contact with their neighbors than those identified as friends or family. The "family" network is the least prevalent of all the networks among older adults living in community settings, with members having little contact with friends and neighbors, but very frequent contact with family members. Little to no contact with friends, family, and neighbors characterizes the "restricted" network. These five network typologies were identified in terms of

their size, the clustering of social ties, and the interactional characteristics of the network (Litwin, 2001). These relationship typologies have also been found in subsequent studies with older adults (e.g. Fiori, Antonucci, & Cortina, 2006).

Previous research on the social networks of persons in LTC facilities such as assisted living and nursing homes have identified several other types of network cluster typologies: resident/nonresident or kin-centered, resident/resident or small cluster, and resident/caretaker or institution-centered (Bitzan & Kruzich, 1990; Powers, 1992). There is also a fourth type, called balanced, that can incorporate the other types of relationships, such as friends from outside the facility. These four network typologies were identified in terms of size, clustering of ties, and interactional characteristics (Powers, 1992).

The methodology involved in the larger studies cited above involved calculating standardized scores of participants' frequency of contact with each different potential source of support. These standardized scores were used as criteria variables for carrying out cluster analyses. In these studies participants were considered to be embedded in distinctive network types because, for example, all of the participants with above average amount of contact with each potential source of support clustered together in what was called a "diverse" network. In the present study it was not appropriate to carry out a cluster analysis because the number of participants was too small. Instead a methodology was used that was as comparable as possible to the methodology used in the larger studies cited above. This methodology is explained in more detail in the methods section.

By using this methodology the goal was to see if residents' patterns of contact with the different possible sources of support matched the network types identified in the literature. Once residents were matched with a network type, to the extent that it was possible to match them, an

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examination was carried out to determine whether different levels of social isolation and quality of relationships were related to the different types of networks in which residents were considered to be embedded. This made it possible to compare the results of the present study to those of previous studies. Especially relevant was the study by Medvene and colleagues (2015) which found that older adults who were receiving HCBS waivers, and who were embedded in "restricted" networks, had higher levels of social isolation than HCBS clients embedded in "diverse" networks; and that HCBS clients embedded in "family" networks had more positive quality relationships than residents embedded in "restricted" networks.

Purpose of Research

In summary, this dissertation was intended to answer the following research questions regarding the residents in the Independent Living facility at Newton Presbyterian Manors, and the residents in the Independent Living facility at Wichita Presbyterian Manors.

Research Questions:

1. Why do IL residents decide to move into CCRCs in independent living status? Of interest was to determine whether residents' decisions were motivated primarily by "push" or "pull" factors.

2. What was the size and composition of IL residents' social convoys? This question also asked the extent to which residents' social convoys was composed of family and friends, fellow IL residents, and staff. Of interest was the extent to which other residents were included in residents' social convoys.

3. What was the extent of social isolation of IL residents?

4. What was the perceived positive and negative quality of IL residents' relationships with the persons with whom they had most the most contact?

5. How were residents' scores on a measure of social isolation and the quality of their relationships associated with: a) the size and composition of their social convoys; and b) the types of social networks in which they appeared to be embedded?

CHAPTER TWO

METHOD

Overview of the Method

Data were collected over a two-month period of time, from June to July 2014. There were two groups of participants from two different independent living (IL) facilities. One had nine participants and the other had 15, giving a total N of 24. Individual interviews were scheduled for each resident. At the beginning of the interview, participants were given informed consent forms to fill out, and then they were asked to complete the "PMMA Social Support Network Survey". The information for this study was asked at the beginning of the interview process, followed by the questions for the other two components of the larger study. Interviews took approximately one hour for each participant, and were conducted by one of three trained lead interviewers, as well recorded by an assistant.

Participants

There were two separate sites included in this study, both of which were continuous care retirement communities (CCRCs) owned and operated by Presbyterian Manors of Mid-America (PMMA). PMMA is a religious-based non-profit that owns and operates eighteen such facilities in the states of Kansas and Missouri. The two sites in this study included older adults in the IL component of CCRCs located in Newton and Wichita, Kansas. Fifteen participants from Newton PMMA and nine residents from Wichita PMMA were included in the study. Demographic information for the whole sample is shown in Table 2.

Participants' ages at Newton PMMA ranged from 65 to 98 ($M = 84.0$, $SD = 8.94$). There were ten females and five males. All of the participants were Caucasian. The highest educational

levels achieved by the participants were: eight had a high school diploma, two had some college, three had a Bachelor's or technical degree, and two had graduate degrees. The participants had been living at Newton PMMA anywhere from three months to fourteen years ($M = 3.4$, $SD = 4.2$). Newton PMMA demographic information is shown in Table 3.

Participants' ages at Wichita PMMA ranged from 71 to 92 ($M = 86.11$, $SD = 6.75$). There were eight females and one male. All of the participants were Caucasian. The highest educational levels achieved by the participants were: one had a high school diploma, two had some college,

TABLE 2.

Socio-demographic Characteristics of the Sample[1]

Variable and category	Measure	Variable and category	Measure
Age (years):		**Education Level (%):**	
Mean	84.8	High School Diploma	37.5
Standard deviation	8.1	Some College	16.7
Range	65 - 98	Undergraduate Degree	25.0
		Post-graduate Degree	20.8
Age Category (%):			
Young old	4.1	**Caucasian (%)**	100.0
Middle old	16.6		
Old old	79.3	**Childless (%)**	8.3
		Living Arrangements (%)	
Gender (%):			
Female	75.0	Alone	70.8
Male	25.0	Spouse/Relative	29.2
Marital Status (%):		**Length of Residence**	
Widowed	62.5	Mean	3.3
Married	25.0	Standard deviation	3.5
Divorced or other	12.5	Range	.2 - 14

Note[1] $N = 24$

three had a Bachelor's or technical degree, and three had graduate degrees. The participants had

been living at Wichita PMMA anywhere from three months to seven years ($M = 2.9$, $SD = 2.13$).

Wichita PMMA demographic information is shown in Table 4.

Recruiting residents. All participants were older adults aged 65 and better, spoke

English as their primary language, and were relatively high functioning and medically stable.

They did not have many, if any, issues with Activities of Daily Living or Instrumental Activities

of Daily Living, and required a very low level of care. They were required to have resided at the

facility for at least one month prior to beginning the study, as well as required to have had little

TABLE 3.

Socio-demographic Characteristics of Newton PMMA[1]

Variable and category	Measure	Variable and category	Measure
Age (years):		**Education Level (%):**	
Mean	84	High School Diploma	53.4
Standard deviation	8.9	Some College	13.3
Range	65-98	Undergraduate Degree	20.0
		Post-graduate Degree	13.3
Age Category (%):			
Young old	6.7	**Caucasian (%)**	100.0
Middle old	20.0		
Old old	73.3	**Childless (%)**	6.7
		Living Arrangements (%)	
Gender (%):			
Female	66.0	Alone	53.4
Male	34.0	Spouse/Relative	46.6
Marital Status (%):		**Length of Residence**	
Widowed	62.5	Mean	3.4
Married	25.0	Standard deviation	4.2
Divorced or other	12.5	Range	.2 - 14

Note.[1] $N = 15$

to no computer experience at the beginning of the study. Staff members of both PMMA sites gave a prescreening survey to determine residents' previous computer skills and eligibility for the study. The non-use of computers was not instrumental for this specific study, but was part of the larger quasi-experimental wait-list control design study that involved a computer training intervention. Initially this study was intended to include 15 residents from each facility, for a total participant number of 30. Due to circumstances described below the Activities Director at the Wichita site was only able to recruit nine residents.

Participants were recruited from each site by contacting all of the residents who met study criteria. Participants were recruited at their facilities during the months of May and June

TABLE 4.

Socio-demographic Characteristics of Wichita PMMA[1]

Variable and category	Measure	Variable and category	Measure
Age (years):		**Education Level (%):**	
Mean	84	High School Diploma	11.1
Standard deviation	8.9	Some College	22.3
Range	71 - 92	Undergraduate Degree	33.3
		Post-graduate Degree	33.3
Age Category (%):			
Young old	0.0	**Caucasian (%)**	100.0
Middle old	11.1		
Old old	88.9	**Childless (%)**	0.0
Gender (%):		**Living Arrangements (%)**	
Female	88.9	Alone	53.4
Male	11.1	Spouse/Relative	46.6
Marital Status (%):		**Length of Residence**	
Widowed	62.5	Mean	2.9
Married	25.0	Standard deviation	2.1
Divorced or other	12.5	Range	.2 - 7

Note. [1] $N = 9$

2014 after being informed of the study by the use of fliers, word of mouth, and in-person discussions. One staff member was identified as a contact and recruitment person at both Wichita (Head of Marketing) and Newton (Activities Director) PMMA campuses. This staff member then recruited participants by approaching them individually and asking whether or not they would be interested in participating. Participants who agreed then indicated a time they would be available for a one-and–a-half-hour interview, which took place during the months of June and July 2014.

At Newton PMMA, a total of 44 residents were asked to participate. Of those 44 residents, fifteen said yes and 29 said no. The response rate was 34%. Those that said no chose not to participate for various reasons. These reasons included no interest, no time to participate, no desire to learn something new, being scared of computers, and not wanting to be "part of a study".

At Wichita PMMA, a total of 31 residents were asked to participate. Of those who were asked to participate, 22 chose not to for various reasons, yielding a response rate of 29%. Wichita PMMA was building a new building and remodeling other buildings during the recruitment period, so the residents were hesitant to become engaged in another project. They also chose not to participate due to lack of interest in the computer portion of the larger study,

A recruitment procedure that protected study participants' rights to confidentiality and guaranteed the voluntary nature of their participation was utilized. Participants were given a two-digit descriptor to ensure their responses were kept private and confidential. Approval for the study was received from Wichita State University's Institutional Review Board, and informed consent was also obtained from each participant prior to any interviews.

Description of Settings

      Newton. The campus of Newton PMMA is comprised of one large main building, one apartment building and several duplexes. Within the large main building, there are several wings. One contains the skilled nursing facilities, one has the assisted living rooms, and the other has congregate IL rooms. There is also a communal dining room and a daycare center for children in the community. In the main building, they also have a library, a workout room, and a sitting room. In the apartment building, which is called "Broadway Apartments" and is also congregate living, there are three floors of one and two bedroom apartments, as well as a communal dining room with a sitting area. The residents in the IL portion, regardless of which building they live in, can eat in the building dining room up to twice a day depending on their meal plan. They are also actively involved in activities that are coordinated by their Wellness Director, which includes arts and crafts, shopping trips, day trips, and games.

      At the time of the study there were 66 residents in IL at Newton PMMA. Twenty-two of the residents lived in non-congregate villas on the PMMA campus grounds, and 44 lived in the main building and Broadway Apartments. Congregate IL residents were chosen for this study due to their proximity to the public computers at PMMA, as well as due to the nature of their housing set-up.

      Wichita. The campus of Wichita PMMA is comprised of two large main buildings and several duplexes. There is a brand new building which houses the assisted living and skilled nursing residents. The IL residents reside within the older main building. There is also a communal dining room, as well as a library, a workout room, and a sitting room. The residents in the IL portion, regardless of which part of the campus they live in, could eat in the building dining room up to twice a day depending on their meal plan. They were also actively involved in

activities that were coordinated by their Wellness Director, which included arts and crafts, shopping trips, day trips, and games.

At the time of the study there were 37 residents in IL at Wichita PMMA. They lived in a combination of places, but the majority lived in the main building. Congregate as well as non-congregate residents were chosen because of the smaller population from which to select participants, but all had access to the computers needed for the larger study.

Procedure

Participants' social support networks were measured using self-report surveys and responses to the interviewer's questions. These questions were both quantitative and qualitative in nature. Doctoral students from the WSU Community Psychology department carried out the research, along with two psychology undergraduate students. The study involved a one-hour in-person interview with each participant. Responses were recorded through pen and paper by a lead interviewer and an assistant.

Materials

A survey entitled the "PMMA Social Support Network Survey" included questions about network structure and functional characteristics, as well as basic demographic items (See Appendices). The bulk of the survey involved the use of several instruments developed in past research: Antonucci's Hierarchical Mapping Technique to determine social convoys (Appendix B; Antonucci, 1986; Antonucci & Akiyama, 1995), Lubben's Social Network Scale (LSNS) to measure social isolation (Appendix C; Lubben, 1988), and questions regarding perceived quality of relations (Appendix D; Fiori, Antonucci, & Cortina, 2006). This survey was a modified version of the "Social Support Network" survey used in prior research with a population of home

and community based care recipients (Medvene, Nilsen, Smith, Ofei-Dodoo, DiLollo, Webster, Graham, & Nance, 2015).

Open-ended questions. The survey began by asking the question of how long each resident has resided at the IL facility (Appendix A). Open-ended questions regarding their decision to move to a CCRC, as well as the roles of family and friends in making the decision to move to a CCRC were asked, along with a question regarding their perception of how the move has affected those relationships. Probes were developed for each question to help guide responses if needed. Responses to these open-ended questions were coded and described in order to gain an understanding of some of the goals and motivations, as well the potential losses or gains experienced by participants as a result of their moving into a CCRC. These questions were used to answer the first research question regarding residents' motivations for moving into a CCRC.

Social convoys. Using Antonucci's Hierarchical Mapping Technique, participants were shown a board with four concentric circles (See Appendix B; Figure 2; Antonucci, 1986; Antonucci & Akiyama, 1995). The innermost circle had the word "YOU" written in it, and participants were asked to place individuals they had contact with into one of the other three circle categories: an inner circle, or people they "cannot imagine life without"; a middle circle, or people who are "not as close, but still important"; or an outer circle, which contains people "who have not been mentioned, but are still important enough to be part of the social network." Demographic and structural characteristics such as gender and relation to participant were collected for each social convoy member named by participants, as well as the number of people in each of the three concentric convoy circles. These questions answered the second research question that concerned the size and composition of residents' social convoys, and were used to

develop a visual representation of the size and composition of participants' social support networks.

Social isolation. Lubben's Social Network Scale (LSNS) is a validated measure of social isolation. It includes ten questions that ask about the frequency and nature of contact with friends and family, confidant relationships, and helping others (See Appendix C; Lubben, 1988). Each item was answered with reference to a five-point Likert-type scale of one to five, giving a total maximum score for the LSNS of fifty. Questions that were asked are those such as "How many relatives do you see or hear from at least once a month?" and "When you have an important decision to make, do you have someone you can talk to about it?" Based on their responses to Lubben's Social Network Scale, older adults can be categorized as "Socially Isolated" (scores above 31), at "High Risk for Social Isolation" (26 to 30), at "Moderate Risk for Social Isolation" (21 to 25), and at "Low Risk for Social Isolation" (scores less than 20). The original Lubben scale was reverse-scored so that a higher score indicated a higher level of social isolation, instead of a lower score indicating a higher level of social isolation. This was done for ease of reporting results. The LSNS has been shown to provide a composite measure of social isolation and it has demonstrated adequate internal consistency for research purposes (Cronbach alpha = .70), and has correlated significantly with physical and mental health variables. Each participant received a total social isolation score. This part of the survey was used to answer the third research question, regarding the extent of social isolation among IL residents.

Perceived quality of relations. Perceived quality of relations was measured using items found in previous research done by Fiori, Antonucci, and Cortina (2006). These items have been shown to be related to well-being for different social network types. The perceived quality of relations scale yields two different subscales: positive perceived quality of relations and negative

perceived quality of relations. Participants were asked about six different relationship types: a child, their spouse/partner, a family member, a staff member, a fellow resident, and a friend outside the facility (Appendix D). The answers to these questions were used to calculate a positive and negative perceived quality of relations score for each participant.

The positive perceived quality of relations subscale was made up of five items, such as "I feel that [this person] believes in me" and "When [this person] is having a hard time, I want to help them." These items were calculated on a scale of one to five, with one being "agree" and five being "disagree," giving a total maximum score for each relationship type (spouse, child, friend, etc.) of thirty. Their answers were reversed coded, so that the higher the score, the more perceived support the participant feels from their relationships. Participant's responses for each relationship was summed, and then divided by six to give an average positive perceived quality of relations score for each relationship type. In order to compute a composite positive perceived quality of relations score, their average scores for each relationship type was summed, and then divided by the number of relationship types they responded to. The total number of relationship types responded to will vary by each participant as not all will have children or a spouse/partner, for example.

The negative perceived quality of relations subscale is made up of two items, such as "[This person] gets on my nerves." These items were calculated on a scale of one to five, with one being "agree" and five being "disagree," giving a total maximum score for each relationship group (spouse, child, caregiver, etc.) of ten. Their answers will then be reversed coded, so that the higher the score, the more demanding or critical the participant considers their relationships. Participant's responses for each relationship type were summed, and then divided by two to give an average negative perceived quality of relations score for each relationship type. This part of

the survey was used to answer the fourth research question, as well give a description of the functional aspect of participants' social support networks.

Patterns of contact with network members: Network types. In large-scale studies of older adults, researchers have used cluster analysis to identify network types (Fiori, Antonucci & Cortina, 2006; Litwin & Shiovitz-Ezra, 2010). This has generally been done by asking participants how frequently they have contact with a small number of key network members, such as children, friends, family members and religious organizations. Standardized contact scores are used as criteria variables to carry out a cluster analysis. For example, participants embedded in "diverse" networks have a pattern of contact characterized by an above average amount of contact with each different possible source of support, and participants embedded in "restricted" networks have below average amounts of contact with possible source of support.

Because the present study involved a small sample of residents a cluster analysis was not carried out. The procedure followed here was based on the first step of the procedures used to carry out a cluster analysis in larger studies. First the frequency scores of residents' contacts with each of the following sources of social support were standardized: family, children, friends within PMMA, friends outside of PMMA, staff, meeting attendance, and religious service attendance (See Appendix E). Next, each resident's pattern of contact with the seven different sources of support were examined to see if the pattern of contacts matched the network types described in studies of older adults living independently in community settings, as well as in studies of older adults living in congregate care settings.

Previous large-scale studies of the social networks of community dwelling older adults have identified several different network typologies; diverse, friends, neighbors, family, and restricted. Previous research on the social networks of persons in LTC facilities has led to several

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types of network cluster typologies: kin-centered, small cluster, and institution-centered, as well as non-family, non-friends, family, diverse, and friends. Once the frequency of residents' contacts with each source of support was standardized, the pattern of residents' standardized scores was examined to see if it matched any of those reported in the literature. For example, the pattern of a "diverse" network would be an above average amount of contact with friends, family, CCRC staff, religious organizations, and meeting attendance. The pattern of a "restricted" network would be below average amount of contact with those different groups. Litwin's (2001) previously developed network typologies (diverse, friends, family, neighbors, and restricted) were utilized as guidelines for labeling the emergent network patterns.

If it was possible to match residents with a network type, the LSNS scores of all of the residents matched with that type were averaged to see if there was an association between network types and participants' scores on the LSNS. For example, would the average of the LSNS scores of residents matched in a diverse network be lower than the average of the LSNS scores of residents matched with a restricted network? The network patterns were used to answer research question 5b.

Demographic information. Information regarding basic demographic characteristics of the participants was collected (Appendix F). Questions such as age, gender, race/ethnicity, marital status, education level, and number of children, grandchildren, and siblings were asked. These questions were used to develop a demographic profile of the study participants. Results for the demographics are shown in Tables 2, 3, and 4.

CHAPTER THREE

RESULTS

Overview of the Results

Results will be presented in three different ways and will be used to answer the research

questions and hypotheses. The results of Newton Presbyterian Manors of Mid-America (PMMA)

will be presented first in each section, followed by Wichita PMMA results, and then the results

for the complete sample.

**Research Question #1: What were Residents' Motivations for Moving into a Continuous

Care Retirement Community (CCRC)?**

The reasons that older adults chose to move into a CCRC, and especially the independent

living area of a CCRC, tended to be varied. The literature does not discuss reasons adults chose

to move into a CCRC, or their motivations, in much detail, and so it was of interest to the

researchers to find out why many of the residents chose to move into independent living (IL) at

Presbyterian Manors. Residents were asked the question "What lead you to choose to move to

Independent Living at PMMA?" They were allowed to answer this question however they chose,

but researchers did provide probes if needed (See Appendix A). The responses were written

down and themes were identified in the answers. Following previous research by Groger and

Kinney in 2007, the themes identified followed their "push" and "pull" factors. Push factors were

those that tended to be more negative in nature, and pull factors tended to be more positive. Four

push and four pull themes were identified in the responses given by residents in this study.

Results are shown in Table 5.

There were twenty-two push answers given by participants, 14 at Newton and 8 at Wichita. Push factors were those that propelled the residents into an IL setting. These twenty-two answers fell into one of four themes: their own or spouse's failing health, pressure from family, the burden of home and yard maintenance, and the recognized need for long-term care in the future. The theme that was identified most frequently was their or their spouse's failing health. Eight of the twenty-four participants identified their health or their spouse's health issues as a primary motivation for moving into the IL facility. Pressure from family members to move into a CCRC was the second theme identified, and seven residents indicated that this was a motivating reason to move into PMMA. The third most identified theme was home and yard maintenance. Six residents expressed that they were no longer able or willing to maintain their homes correctly, and so that influenced their decision to move into the facility. Last was the recognized need for long-term care in the future. One resident identified this as a motivation to move into

TABLE 5.

Motivations for Choosing Independent Living

Push Factors	Newton	Wichita	Total
Pressure from family	5	2	7
Burden of home/yard maintenance	5	1	6
Own or spouse's failing health	4	4	8
Recognized need for LTC in the future	0	1	1
Total	**14**	**8**	**22**
Pull Factors			
Amenities of the facility	9	5	14
Desire to plan while still able to do so	4	2	6
Proximity to family	3	1	4
Wanting to join friends/neighbors	1	3	4
Total	**17**	**11**	**28**

PMMA because she was showing early signs of Alzheimer's disease and did not want to have to make the decline alone in her home.

There were also twenty-eight pull answers given by residents regarding their motivation to move in to Independent Living, 17 at Newton and 11 at Wichita. Pull factors were specific things that appealed to the residents and drew them into the facility. These answers also fell into one of four themes: the amenities of the facility, the desire to plan while still able to do so or being ready for a change, proximity to family, and wanting to join friends or neighbors. The pull theme that was identified most often was the amenities of PMMA. Fourteen of the residents identified the specific services or appeal of PMMA as a motivating reason as to why they moved in. These reasons included meal availability, privacy, ability to still maintain independence, and the pleasant atmosphere and staff of the facility. The second most identified pull theme was the desire to plan while still able or being ready for a change. Six of the residents identified this as a major motivator for making the decision to move into an IL facility. They indicated that they wanted to have control and make the decision for themselves instead of anyone else having to make it for them, as well as wanting to decide exactly which long term care (LTC) facility they moved to. The third most identified pull theme was proximity to family. Four residents indicated that they moved to PMMA to be closer to children or grandchildren. The last theme identified was joining family or friends who were also moving, and four residents answered that they were moving to join friends who were also living at PMMA.

Each participant gave at least one answer regarding his or her reasons for choosing to move into IL at PMMA. The majority of participants responded with more pull than push answers, indicating that the motivations for moving in IL were mostly positive. Two of the residents, one from Newton and one from Wichita, gave more push answers than pull answers

indicating that their motivations were more negative in nature than the rest of the participants.

Individual push and pull answers are shown in Table 6.

Research Question #2: What is the Nature of Residents' Social Convoys?

The average number of social convoy members included in the hierarchical map

TABLE 6.
Individuals' Motivations for Choosing Independent Living

"Pulls" outnumber "Pushes" (*N = 9*)	Push	Pull
N-01	1	2
N-02	1	2
N-04	0	1
N-05	0	1
N-09	1	2
N-11	1	2
W-01	0	1
W-02	0	2
W-07	0	2
Total	**4**	**15**
"Pulls" and "Pushes" Even (*N = 11*)	**Push**	**Pull**
N-03	1	1
N-06	1	1
N-08	1	1
N-10	1	1
N-13	1	1
N-15	1	1
W-03	1	1
W-04	1	1
W-06	1	1
W-08	1	1
W-09	1	1
Total	**11**	**11**
"Pushes" outnumber "Pulls" (*N = 4*)	**Push**	**Pull**
N-07	2	1
N-12	1	0
N-14	1	0
W-05	3	1
Total	**7**	**2**

(composed of three concentric circles; Figure 2) by participants at Newton PMMA was 23.4
(SD= 14.07). The largest circle overall was the middle circle (M = 9.13, SD = 4.9), followed by
the inner circle (M = 8.8, SD = 4.9), and then the outer circle (M = 5.46, SD = 4.55). The average
number of social convoy members included in the hierarchical map by participants at Wichita
PMMA was 24.78 (SD= 17.87). The largest circle overall was the inner circle (M = 11.33, SD =
6.5), followed by the middle circle (M = 8.11, SD = 9.25), and then the outer (M = 5.33, SD =
5.15). The average number of social convoy members included in the hierarchical map for the
whole sample was 23.92 (SD = 15.23). The largest circle overall was the inner circle (M = 9.75,
SD = 5.56), followed by the middle circle (M = 8.75, SD = 8.75), and then the outer (M = 5.42,
SD = 4.67). Descriptive statistics of the average size of social convoys by circle placement for
the whole sample, as well as each PMMA site, is shown in Table 7.

TABLE 7.
Average Size of Social convoy by Circle

	Inner	Middle	Outer	Total
Newton (N = 15)				
Mean	8.8	9.13	5.46	23.4
SD	4.9	8.74	4.55	14.07
Range	1 - 22	0 - 26	0 - 14	2 - 53
Wichita (N = 9)				
Mean	11.33	8.11	5.33	24.78
SD	6.5	9.25	5.15	17.87
Range	6 - 26	1 - 31	0 - 14	8 - 61
Combined (N = 24)				
Mean	9.75	8.75	5.42	23.92
SD	5.56	8.75	4.67	15.23
Range	1 - 26	0 - 31	0 - 14	2 - 61

The social convoy composition by relationship type for Newton PMMA is shown in Table 8. The largest relationship type named was family (32.76%), followed by community friends (28.21%), PMMA friends (19.37%), and relatives (15.67%). The smallest relationship types were neighbors (1.71%), other relationships such as pastors (1.42%), and PMMA staff (.85%).

The social convoy composition by relationship type for Wichita PMMA is shown in Table 9. The largest relationship type named was family (36.77%), followed by community friends (26.91%), relatives (15.7%), and PMMA friends (13%). The smallest relationship types were other relationships such as pastors (4.04%), PMMA staff (3.59%) and neighbors (0%).

The social convoy composition by relationship type for the whole sample is shown in Table 10. The largest relationship type named was family (34.32%), followed by community friends (27.7%), PMMA friends (16.9%), and relatives (15.68%). The smallest relationship types were other relationships such as pastors (2.44%), PMMA staff (1.92%) and neighbors (1.05%).

Research Question #3: What is the Extent of Residents' Social Isolation?

Social isolation scores for Newton PMMA varied (M = 19.73, SD = 7.6), and ranged from a low of 8 to a high of 38, with a lower score indicating less social isolation. Fifty-three point three percent of the participants from Newton PMMA were found to be at low risk (M = 14.5, SD = 3.9) and 33.3% at moderate risk (M = 22.4, SD = 1.5) for social isolation using reversed Lubben Social Network Scale (LSNS) scores, with a lower score indicating less social isolation. One person (6.7%) was at high risk for social isolation (M = 30, SD = 0) and one person (6.7%) was rated as socially isolated (M = 38, SD = 0). The result of residents' social isolation is shown in Table 11.

TABLE 8.
Newton PMMA Social Convoy Composition by Relationship Type

Network circle	Family		Relatives		Community Friends		PMMA Friends		Staff		Other		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Inner	92	69.70%	21	15.91%	14	10.61%	5	3.79%	0	0.00%	0	0.00%	132	100%
Middle	20	14.60%	18	13.14%	56	40.88%	41	29.93%	2	1.46%	0	0.00%	137	100%
Outer	3	3.66%	16	19.51%	29	35.37%	22	26.83%	1	1.22%	11	13.41%	82	100%
Whole network	115	32.76%	55	15.67%	99	28.21%	68	19.37%	3	0.85%	11	3.13%	351	100%

TABLE 9.
Wichita PMMA Social Convoy Composition by Relationship Type

Network circle	Family		Relatives		Community Friends		PMMA Friends		Staff		Other		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Inner	67	65.69%	20	19.61%	9	8.82%	5	4.90%	0	0.00%	1	0.98%	102	100%
Middle	12	16.44%	12	16.44%	28	38.36%	14	19.18%	4	5.48%	3	4.11%	73	100%
Outer	3	6.25%	3	6.25%	23	47.92%	10	20.83%	4	8.33%	5	10.42%	48	100%
Whole network	82	36.77%	35	15.70%	60	26.91%	29	13.00%	8	3.59%	9	4.04%	223	100%

TABLE 10.
Social Convoy Composition by Relationship Type of Whole Sample

Network circle	Family		Relatives		Community Friends		PMMA Friends		Neighbors		Staff		Other		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Inner	159	67.95%	41	17.52%	23	9.83%	10	4.27%	0	0.00%	0	0.00%	1	0.43%	234	100%
Middle	32	15.24%	30	14.29%	84	40.00%	55	26.19%	0	0.00%	6	2.86%	3	1.43%	210	100%
Outer	6	4.62%	19	14.62%	52	40.00%	32	24.62%	6	4.62%	5	3.85%	10	7.69%	130	100%
Whole network	197	34.32%	90	15.68%	159	27.70%	97	16.90%	6	1.05%	11	1.92%	14	2.44%	574	100%

Social isolation scores for Wichita PMMA varied ($M = 19.56$, $SD = 2.74$), and ranged from a low of 15 to a high of 24. Fifty-five point six percent of the participants from Wichita PMMA were found to be at low risk ($M = 17.6$, $SD = 1.67$) and 44.4% at moderate risk ($M = 22$, $SD = 1.4$) for social isolation using reversed LSNS scores, with a lower score indicating less social isolation. There were no participants who were at high risk for social isolation or who were socially isolated at the Wichita PMMA campus. These results are shown in Table 12.

TABLE 11.
Social Isolation Descriptive Statistics of Newton PMMA[1]

	%	Mean	*SD*	Range
Social Isolation				
Low risk	53.3	14.5	3.9	8 - 18
Moderate risk	33.3	22.4	1.5	21 - 24
High risk	6.7	30	0	30 - 30
Isolated	6.7	38	0	38- 38

Note[1] $N = 15$

TABLE 12.
Social Isolation Descriptive Statistics of Wichita PMMA[1]

	%	Mean	*SD*	Range
Social Isolation				
Low risk	55.6	17.6	1.67	15 - 19
Moderate risk	44.4	22	1.4	21 - 24
High risk	0	---	---	---
Isolated	0	---	---	---

Note[1] $N = 9$

The average social isolation score for the sample was 19.67 (*SD* = 6.15), with a range of 8 to 38. Fifty-four point two percent of the sample was found to be at low risk for social isolation (*M* = 15.69, *SD* = 3.5) and 37.5% at moderate risk (*M* = 22.22, *SD* = 1.4). One person (4.2%) was at high risk for social isolation (*M* = 30, *SD* = 0) and one person (4.2%) was rated as socially isolated (*M* = 38, *SD* = 0). These results are shown in Table 13.

Residents at PMMA had resided at the facility for various amounts of time (*M* = 3.25, *SD* = 3.5), and their length of residency ranged from three months to fourteen years. A Pearson product-moment correlation coefficient was also computed to assess the relationship between length of residence at PMMA, social isolation, and the total number of fellow residents identified as friends (Table 14). There were no significant correlations found; however, *r* = .39 is a moderate sized correlation between length of residence at PMMA and total number of PMMA friends and would have been significant with a larger sample size.

Residents at PMMA did list fellow residents as friends in their social convoy (*M* = 4.04, *SD* = 3.84), and the amount listed ranged from zero to sixteen. A Pearson product-moment correlation coefficient was computed to assess the relationship between number of push motivations, number of pull motivation, social isolation, and the total number of fellow residents

TABLE 13.
Social Isolation Descriptive Statistics of the Whole Sample[1]

	%	Mean	SD	Range
Social Isolation				
Low risk	54.2	15.69	3.5	8 - 19
Moderate risk	37.5	22.22	1.4	21 - 24
High risk	4.2	30.0	0	30 - 30
Isolated	4.2	38	0	38 - 38

Note: [1] *N* = 24

38

identified as friends. There were no significant correlations found.

Research Question #4: What are Residents' Perceived Quality of Relations?

Perceived quality of relations was divided into two subscales, positive perceived quality of relations and negative perceived quality of relations, and descriptive statistics for the whole sample were calculated for each relationship type (a child, spouse/partner, a family member, a PMMA staff member, a fellow resident, and a friend outside PMMA). All of the six relationship types scored highly on the positive quality of relations subscale at Newton PMMA. Children had an average positive quality score of 5 (*SD* = .0); spouse/partner had an average of 4.9 (*SD* = .16); family members also had an average of 4.87 (*SD* = .27); staff members were the lowest with a 4.62 (*SD* = .51); fellow residents had an average of 4.66 (*SD* = .37); and outside friends had an average of 4.96 (*SD* = .13). On the negative perceived quality of relations subscale, the scores ranged from one to five, with the higher score indicating more negative perceived quality of relations. A score closer to one on this scale means little negativity, while a score closer to five

TABLE 14.
Correlations between Length of Residence, Social Isolation, and Number of PMMA Friends

	1	2	3
1. Length of residence	---	0.082	0.388
2. Social Isolation		---	0.019
3. # of Friends within PMMA			---
M	3.25	19.67	4.04
SD	3.5	6.15	3.84
Range	.2 - 14	8 - 38	0 - 16

means higher perceived negative quality of the relationship. Children had an average negative quality score of 1.7 (*SD* = .82); spouse/partner had an average of 2.25 (*SD* = 1.13); family members also had an average of 1.46 (*SD* = .77); staff members were the lowest with a 1.0 (*SD* =.0); fellow residents had an average of 1.53 (*SD* = .92); and outside friends had an average of 1.36 (*SD* = .71). These results are shown in Table 15.

All five possible relationship types scored highly on the positive perceived quality of relations subscale at Wichita PMMA. No participants had a spouse to answer questions about. Children had an average positive quality score of 4.76 (*SD* = .43); family members also had an average of 4.95 (*SD* = .14); staff members were the lowest with a 4.77 (*SD* = .4); fellow residents had an average of 4.8 (*SD* = .2); and outside friends had an average of 4.52 (*SD* = .58). On the negative perceived quality of relations subscale, the scores ranged from one to two, with the higher score indicating more negative perceived quality of relations. A score closer to one on this scale means little negativity, while a score closer to five means higher perceived negative quality of the relationship. Children had an average negative quality score of 1.67 (*SD* = .71); family members had an average of 1.44 (*SD* = .68); staff members were the lowest with a 1.22 (*SD* = .67); fellow residents had an average of 1.56 (*SD* = .98); and outside friends had an average of 1.62 (*SD* = 1.18). These results are shown in Table 16.

On the positive perceived quality of relations subscale for the whole sample, the scores ranged from one to five, with the higher score indicating high positive perceived quality of support. All of the six relationship types scored highly on this subscale. Children had an average positive quality score of 4.9 (*SD* = .29); spouse/partner had an average of 4.9 (*SD* = .16); family members also had an average of 4.9 (*SD* = .23); staff members were the lowest with a 4.68 (*SD* = .47); fellow residents had an average of 4.71 (*SD* = .32); and outside friends had an average of

4.8 (SD = .41). On the negative perceived quality of relations subscale, the scores ranged from

one to two, with the higher score indicating more negative perceived quality of relations. A score

closer to one on this scale means little negativity, while a score closer to five means higher

perceived negative quality of the relationship. Children had an average negative quality score of

1.7 (SD = .76); spouse/partner had an average of 2.25 (SD = 1.13); family members also had an

average of 1.45 (SD = .72); staff members were the lowest with a 1.09 (SD = .42); fellow

residents had an average of 1.54 (SD = .86); and outside friends had an average of 1.45 (SD =

.77). These results are shown in Table 17.

Research Question #5: Are Social Convoy Composition and Network Type Related to

Social Isolation and Perceived Quality of Relations?

      Research Question #5a: Social convoy composition, social isolation, and perceived

quality of relations. A Pearson product-moment correlation coefficient was computed to assess

the relationship between total social convoy size, social isolation, and perceived quality of

relations (Table 18). There were no significant correlations found; however, the correlation of

r = .26 between social convoy size and negative perceived quality of relations, as well as the

correlation of r = -.251 between social convoy size and positive perceived quality of relations,

are moderate sized correlations and would have been significant with a larger sample size. These

indicated that perhaps as the social convoy size gets larger, the less positive and more negative

the residents perceived their relationships to be. A Pearson product-moment correlation

coefficient was also computed to assess the relationship between the percentage of family

members and relatives in the social convoy, social isolation, and perceived quality of relations

(Table 19). There were no significant correlations found.

TABLE 15.
Perceived Quality of Relations Descriptive Statistics at Newton PMMA

Scale	Child (N=13)		Spouse/Partner (N=6)		Family Member (N=14)		Staff Member (N=14)		Fellow Resident (N=15)		Outside Friend (N=14)		Total (N=15)	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Positive	5	0	4.9	0.16	4.87	0.27	4.62	0.51	4.66	0.37	4.96	0.13	4.83	0.17
Negative	1.7	0.82	2.25	1.13	1.46	0.77	1	0	1.53	0.81	1.36	0.72	1.47	0.45

TABLE 16.
Perceived Quality of Relations Descriptive Statistics at Wichita PMMA

Scale	Child (N=9)		Spouse/Partner (N=0)		Family Member (N=8)		Staff Member (N=9)		Fellow Resident (N=9)		Outside Friend (N=8)		Total (N=9)	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Positive	4.76	0.43	---	---	4.95	0.14	4.77	0.4	4.8	0.2	4.52	0.58	4.75	0.23
Negative	1.67	0.71	---	---	1.44	0.68	1.22	0.67	1.56	0.98	1.62	0.88	1.49	0.39

TABLE 17.
Perceived Quality of Relations Descriptive Statistics for Whole Sample

Scale	Child (N=22)		Spouse/Partner (N=6)		Family Member (N=22)		Staff Member (N=23)		Fellow Resident (N=24)		Outside Friend (N=22)		Total (N=24)	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Positive	4.9	0.29	4.9	0.16	4.9	0.23	4.68	0.47	4.71	0.32	4.8	0.41	4.8	0.19
Negative	1.7	0.76	2.25	1.13	1.45	0.72	1.09	0.42	1.54	0.86	1.45	0.77	1.48	0.42

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TABLE 18.

Correlations between Social Convoy Size, Social Isolation, and Perceived Quality of Relations

	1	2	3	4
1. Social Convoy Size	---	-.18	-.251	.267
2. Social Isolation		---	-.054	-.048
3. Perceived Positive Quality of Relations			---	-.343
4. Perceived Negative Quality of Relations				---
M	23.9	19.67	4.81	1.48
SD	15.23	6.15	0.19	0.42
Range	2 - 61	8 - 38	4.48 - 5	1 - 2.25

TABLE 19.

Correlations between Percentage of Family/Relatives in Social Convoy, Social Isolation, and Perceived Quality of Relations

	1	2	3	4
1. Percentage of Family/Relatives in Social Convoy	---	-.027	0.186	-.15
2. Social Isolation		---	-.054	-.048
3. Perceived Positive Quality of Relations			---	-.343
4. Perceived Negative Quality of Relations				---
M	0.55	19.67	4.81	1.48
SD	0.21	6.15	0.19	0.42
Range	.18 - 1.0	8 - 38	4.48 - 5	1 - 2.25

Question 5b: Network type, social isolation, and perceived quality of relations.

Network types were defined independently of whether residents listed family, relatives, friends and/or staff in their social convoys. Based on previous research by Fiori, Antonucci, and Cortina (2006) the criterion variables that were used to develop these patterns were frequency of contact with children and family, friends, staff, and fellow residents. Once all study participants reported on the frequency of contact with family, relatives, friends and staff, their frequency scores were standardized. Once the standardized scores were computed, it was possible to sort the participants into groups based on whether or not they resembled the different network types identified in the prior literature. For example, residents whose amount of contact with each source of support, such as family, relatives, and staff, was above average were categorized into a "diverse network". Residents whose amount of contact with each sources of support was below average were categorized into a "restricted" network. Previous large-scale studies of the social networks of community dwelling older adults have identified several different network typologies; diverse, friends, neighbors, family, and restricted. Previous research on the social networks of persons in LTC facilities has led to several types of network cluster typologies: kin-centered, small cluster, and institution-centered, as well as non-family, non-friends, family, diverse, and friends.

Frequency of contact with religious organizations and social meeting attendance were removed because residents could not be easily matched with specific network types if their contacts with religious and social organizations were included in the analysis. These questions just asked about their frequency of contact with these groups as a whole, and did not differentiate between religious services and meetings within and outside of the CCRC. This meant that there was not a clear picture of these two types of contact. Once information about residents' contacts

with religious and social organizations was removed, it became much easier to match a resident with a specific network type. Information about residents' frequency of contact with fellow residents was also removed because there was no variance in the amount of contact each of the residents reported with their fellow residents. Each resident reported the maximum contact with fellow residents; so taking this variable into account was not helpful in matching residents with a network type. By determining the amount of contact with each potential source of support, network patterns were developed for each resident. For example, the pattern of a "diverse" network would be an above average amount of contact with friends, family, and CCRC staff. The pattern of a "restricted" network would be below average amount of contact with those different groups.

Based on the logic described above, residents were matched with a network type that fit their pattern of contact with the different potential sources of support. The largest number of residents matched the "institution" type of social network ($N = 5$), which meant they had above average amounts of contact with staff in the facility, and low average levels of contact with all other sources of support. The next largest network type was "diverse" with four residents matching the pattern of this group with above average frequency of contact with all -other potential sources of support; followed by the "non-friend" network type with four residents fitting the patterns of this group. A "non-friend" network type means that the resident has low levels of contact with friends, but high frequency of contact with all other sources of support (family and staff). The "family" network type came next with four residents also, meaning that these residents had high levels of contact with family only, while 3 participants had below average frequency of contact with family, and could also be considered a "non-family" network. Two participants had below average frequency of contact with all network members, and could

be categorized as being embedded in a "restricted" network. In contrast, two participants had below average frequency of contact with staff and high frequency of contact with family and friends, and could be considered embedded in a "non-institution" network. Due to the number of clusters found ($N = 7$), it is hard to conclusively categorize each participant into a specific network type, but patterns of contact did begin to emerge after data analysis was conducted.

Similar to previous research (Medvene et. al, 2015*)*, the pattern of social isolation scores also fit the patterns of the network types. Those in more restrictive networks, such as "institution-centered" and "restricted", tended to have higher levels of social isolation scores. Those in more diverse networks, such as non-institution and diverse networks, tended to have lower social isolation scores (See Table 20). There did not appear to be any pattern of differences in the perceived positive or negative quality of relations with respect to the type of network in which the residents were embedded (See Table 21).

Case Studies

Due to the relatively unknown nature of IL residents in a CCRC, it was of interest to look more in-depth at those residents who exhibited characteristics that were being studied in this

TABLE 20.
Social Isolation Scores by Network Type

	N	Mean	*SD*
Network Type			
Restricted	2	27.0	4.25
Institution	5	24.0	7.97
Non-family	3	21.0	3.61
Non-friend	4	19.3	2.36
Diverse	4	16.8	5.44
Family	4	15.5	5.1
Non-Institution	2	14.5	4.95

dissertation. Six participants were selected out of 24 based on their social convoy, social isolation scores, and network type. It is important to note that not everyone fits our stereotype of an older adult who lives in an institution, nor do they always fit our idea of someone who is considered socially isolated.

Participant N-01. This participant was a female who lived alone in the Garden apartments at Newton PMMA. At 98 years old, she was the oldest participant in the study. She had lived at Newton PMMA for fourteen years, which was the longest of all the participants, and was described as a "social butterfly" by the staff. She had a social convoy of 23 members, and included people in each of the three rings. She included mostly friends who were fellow residents or in her quilting and book clubs. She only included four family members: her son, daughter, and two nieces. She did not name any of her grandchildren or great-grandchildren in her social network, or her remaining sibling. In terms of her patterns of contact, she was considered to be in a "restricted" network given her below average levels of contact with each of her network members. She reported very positive perceived quality with her closest relationships, and low

TABLE 21.
Perceived Quality of Relations by Network Type

Network Type	N	Positive Perceived Quality		Negative Perceived Quality	
		Mean	SD	Mean	SD
Restricted	2	5.0	0.00	1.56	0.79
Institution	5	4.8	0.15	1.4	0.55
Non-family	3	4.69	0.27	1.8	0.39
Non-friend	4	4.8	0.24	1.47	0.59
Diverse	4	4.7	0.23	1.31	0.24
Family	4	4.83	0.17	1.5	0.24
Non-Institution	2	4.92	0.12	1.4	0.14

negative perceived quality. When asked about confidant relationships, she did say that she had two close relatives, as well as two close friends, whom she felt close to and who she could talk to about private matters. Even though she appears to be highly social, due to her answers on the LSNS, she was rated as a high risk for social isolation with a reversed score of 30. It is highly possible that she was "at high risk" not because of her personality, but because most of her friends had died and she was not especially close to her family. However, she did have some close relationships and this potentially helped her to remain socially engaged.

Participant N-04. This participant was a male who lived alone in the Garden apartments at Newton PMMA. He was 81 years old and had lived at Newton PMMA for six months. He had a social convoy of 11 members, and only included a few family members and staff in the first two rings. In terms of his patterns of contact he was considered to be in an "institution" network given his below average levels of contact with each of his network members except PMMA staff. He reported very positive perceived quality with his closest relationships, and low negative perceived quality. When asked about confidant relationships, he said he only had one relative that he felt close to and who he could talk to about private matters. He did not have any close friendships. Due to his answers on the LSNS he was rated as socially isolated with a reversed score of 38. Even though he has high frequency of contact with staff, this does not mean those relationships were meaningful. The resident did not have many family members nearby and was confined to a motorized wheelchair, and was not as able as other residents to get out and participate in the activities offered at PMMA. With no close friends, and only one close family member, he fit the image of someone who is socially isolated.

Participant N-05. This participant was a male who lived alone in the Broadway apartments at Newton PMMA. He was 93 years old and has lived at Newton PMMA for six

months. He has a social convoy of 17 members, and this included family members, friends, and staff in all three rings. In terms of his patterns of contact he was considered to be in a "diverse" network given his above average levels of contact with each of his network members. He reported very positive perceived quality with his closest relationships, and low negative perceived quality. When asked about confidant relationships, he said he has between five and eight relatives or friends that he felt close to and who he could talk to about private matters. Due to his answers on the LSNS, he was rated as a low risk for social isolation with a reversed score of 24. His family members live close by, and he actually decided to move into PMMA in order for his granddaughter to live in his house. He also had a friend move into PMMA three days before he did, so he felt like he had ties prior to moving in. This participant fit the stereotype of a highly engaged resident.

Participant N-12. This participant was a female who resided with her mother in the Broadway Apartments at Newton PMMA. She has a social convoy of six members, and included people only in the first ring. These six were all family members or relatives. In terms of her patterns of contact she was also considered to be in an "institutional" network given her below average levels of contact with network members other than PMMA staff. She reported very positive perceived quality with her closest relationships, and low negative perceived quality. She reported only having one or two people who she felt close enough to talk about confidant matters, and only one person she felt like she helped. Even though she appeared to not be very social, due to her answers on the LSNS, she would be rated as a low risk for social isolation with a reversed score of 17. This was interesting, as she did not appear to fit the pattern of someone in an "institutional" network.

At 65 years old, she was the youngest participant in the study. She had lived at Newton

PMMA for six months, and was the only one who lived with a parent. She had never been married and did not have any children. She moved into the manor to help care for her mother after being her primary caregiver in the community. N-12 work full-time and needed a little bit more help with her mom, so moving into PMMA allowed for that. They chose to move into PMMA because her mother had friends that lived there. She reported that her mother did get on her nerves at times, but otherwise seemed very devoted to providing her with quality care. In the interview, it sounded as if, between working full-time and the move from the community, she had very little contact with friends outside of work, and it seemed as if the move to PMMA had caused some relationship changes for her. She did stay engaged at PMMA by volunteering and helping out with activities and the other residents when she can. This resident did not quite fit the stereotype of a resident embedded in an institutional network due to the overall nature of her social support network. It may be that she matched with that network simply because her role as a caregiver for her mother did not allow her much time outside of the IL facility.

Participant W-04. This participant was a male who lived alone at Wichita PMMA. He was 90 years old and had lived at Wichita PMMA for four years. He had a social convoy of 47 members, and this included family members, friends, and staff in all three rings. In terms of his patterns of contact he was considered to be in a "family" network given his above average levels of contact with family members, and low levels of contact with other network members. He reported very positive perceived quality with his closest relationships, and low negative perceived quality. When asked about confidant relationships, he said he has between eight or more relatives that he felt close to and who he could talk to about private matters, but only one friend. He was reported to be very friendly and talkative, and is very close to his grandchildren. Even though he misses his wife, he did not seem lonely. Due to his answers on the LSNS, he was

rated as a low risk for social isolation with a reversed score of 18. He fit the stereotype of a resident who is embedded in a family network and who is very socially engaged.

Participant W-05. This participant was a female who lived alone at Wichita PMMA. She was 71 years old and had lived at Wichita PMMA for two months. She had the largest social convoy of all participants with 61 members, and included people in each of the three rings. She included mostly friends who were fellow residents or friends she goes to church with. She did not report a good relationship with her son or daughter, and felt like they were not very supportive of her. In terms of her patterns of contact she was considered to be in a "non-family" network given her below average levels of contact with family members. She reported very positive perceived quality with her closest relationships, and low negative perceived quality. When asked about confidant relationships, she did say that she has eight or more close friends that she felt close to and who she could talk to about private matters, but not very many family members that she can confide in. This participant stayed connected to her friends through Facebook and by attending church, and really felt like these relationships saved her from ending up in a bad situation. Due to her answers on the LSNS, she was rated as a low risk for social isolation with a reversed score of 22. It may be possible that this resident was able to use her social interaction with those around her and at PMMA to buffer any potential negative effects not having close relationships her family could cause.

CHAPTER FOUR

DISCUSSION

Overview of the Research

The purpose of the present study was to map out the social convoys of 24 Independent

Living (IL) residents within two continuous care retirement center (CCRCs) campuses owned

and operated by Presbyterian Manors of Mid-America (PMMA), as well as to assess the

functional and structural aspects of their social support networks (SSNs). More broadly, the

purpose was to determine the extent to which the social convoys of IL residents were composed

of family and friends as opposed to fellow residents and staff; as well as to determine their social

isolation levels, positive and negative perceived quality of relations, and their network types.

This dissertation was a small-scale, exploratory study in which 24 IL residents from two

different CCRC campuses were interviewed to develop preliminary answers to these questions,

as well as to determine motivations for moving into an IL facility within a CCRC.

Independent Living residents represent a somewhat unique population because they are

not "aging in place" by staying in their own homes and neighborhoods; rather, they are moving

out of their communities and into a new community. A better term could instead be called "aging

in community", and there are several options available for older adults even if they chose to age

in a new community. Termed "intentional", these options for older adults are a relatively new

type of community being utilized with the growing older adult population in the United States

(Stone, 2013). Continuous care retirement communities tend to be quite expensive, and not

everyone has the option to retire to a CCRC, but they have many positive aspects that could be

used in other types of "intentional communities" such as shared housing and affordable

subsidized senior housing, as well as naturally occurring retirement communities or areas inhabited entirely by older adults. Many older adults want to live in a place where they feel comfortable, and these communities designed entirely for older adults may give them that option.

Older adults residing in IL are a relatively unstudied population, and it was of interest to be able to compare them to other populations of older adults, such as assisted living residents, nursing home residents, community-dwelling older adults, and home and community based care (HCBS) recipients. Given that the residents in this study are not "aging in place", but rather are choosing to age in an intentional community, it was important to determine the extent to which their experiences resembled those of other populations.

The approach used offered a way to examine social networks in their natural state, and to determine how social isolation and perceived quality of relations were related to participants' social convoys and SSNs. Social isolation was of interest because of its relation to health and mental health outcomes (Lubben et. al, 2006; Steptoe, Shankar, Demakakos, & Wardle, 2013; Hubbard, Tester, & Downs, 2003). Perceived quality of relations was also measured because it has been shown to have a mediating effect on the association between well-being and social network type (Fiori et. al, 2006).

Residents

All participants were older adults aged 65 and better, spoke English as their primary language, and were relatively high functioning and medically stable. They did not have many, if any, issues with Activities of Daily Living or Instrumental Activities of Daily Living, and required a very low level of care. Fifteen participants from Newton PMMA and nine residents from Wichita PMMA were included in the study. Their ages ranged from 65 to 98, they were predominantly female (75%) and they all had at least a high school diploma. Eleven had a post-

graduate degree. Due to the nature of the sites, they were all Caucasian. They tended to have higher socioeconomic status than the average American, and this may be reflected in the CCRC they reside in as they represent a segment of the population who are able to afford CCRCs. Not all facilities are the same, and income definitely plays a role in the facility people are able to afford.

The quality of care and satisfaction of the residents, however, is definitely something that could be replicated in other CCRCs around the nation with further study into the success of PMMA facilities. While the study did not include measures of satisfaction with PMMA, anecdotally residents' comments indicated they were very satisfied. The residents in this study resided in congregate settings, and not in independent houses, and there may be differences within congregate and non-congregate residents that could be explored in further studies. While there were many similarities between the Newton and Wichita sites, it is important to note that Newton PMMA was more rural, had a less educated sample, and was a much older campus than Wichita PMMA, which was an urban setting that was undergoing major expansion and renovation. The extent of the differences between the sites will be discussed, but it is important to note that even with their differences, they were much more similar than not.

Motivations

The first question that was of interest was the various reasons as to why residents chose to move into PMMA. This was of interest because sometimes there is a stigma associated with moving into an IL facility within a CCRC. Older adults who chose to move into a facility may be seen as less independent than those who continue to live in the community (Dobbs, Eckert, Rubinstein, Keimig, Clark, Frankowski, & Zimmerman 2008). There may also be the perception

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that their families have encouraged them to move into a CCRC, or "placed" them in the institution.

The reasons identified in this study were both positive and slightly negative, with only three of the Wichita campus residents identifying more negative push reasons than positive pulls. While seven of the participants (29%) in this study did feel slight pressure from family, overwhelmingly they felt that they made the choice to move out of their own homes and into IL on their own, or with their spouse. There were some motivations that were more "push" factors, such as not wanting to do home or lawn maintenance, or recognizing the need for long-term care (LTC) in the future due to early warning signs of Alzheimer's disease or other health issues. However, there were more "pull" factors that enticed them to move out of their homes and into PMMA. One of these was the amenities of the facility. PMMA offers many different amenities that people were attracted to, such as the friendliness of the staff and the aesthetics of the environment. They also offer many activities to keep residents busy and offer meal and apartment packages that fit their consumer's needs. Other pull factors included the desire to plan while still about to do so. For nine of the residents the pull factors outweighed the push, and for 12 there were an equal number of push and pull factors.

The results of the push and pull motivations strongly point to a need for continued independence. They recognize that they may need a higher level of care at some point in the future, and in order to take the burden off of others or to maintain their independence in making their own life choices, the residents decided to plan and chose the CCRC in which they wanted to live out the rest of their lives. This is vastly different than assisted living and nursing homes, for example. Many times, family or doctors place people in assisted living after they are no longer able to care for themselves. Other pull factors included wanting to move closer to family and to

live near friends, and this indicated a need to maintain existing social support networks.

There were some findings regarding motivations that were very interesting. The residents' answers all indicated a strong desire to maintain their independence, and this was seen in both the push and pull answers. Even though the "push" answers could be seen as slightly negative, the reasons behind them such as no longer wanting to maintain their homes or a need for care in the future could be seen as a way to compensate for aging related losses, but still wanting to make life decisions on their own. This could also be seen as a type of intentionality in terms of living arrangements. The residents recognized that there might have been things that they could not do in their homes, or did not want to do, or that they may need more supportive LTC as they age so they make the decision as to where they want to be before it gets to the point that they are no longer able to. While this is a relatively unstudied question, anecdotally it seems like many of these motivations would be quite generalizable to other older adults in their decisions regarding the aging process. There is definitely the potential for more research on this question in the future.

Social Convoys

It was of interest to determine social convoy size and composition in order to make comparisons with other groups of older adults, such as HCBS clients and community-dwelling older adults. As a relatively unstudied population, the information regarding the social convoys of the IL residents in the current study will add to the literature of older adults, as well as aid in potential interventions with these groups in the future.

Social convoy size. The overall social convoy size of the participants in the current study was quite large compared to other studies. The social convoy size of older adults has been assessed in several studies as ranging from about 5 to 10, according to Theo Van Tilburg (1998).

In a previous study with HCBS clients that used the same methodology, the average social network size was 14.28 (SD= 7.45; Medvene et. al, 2015). In a study by Cornwell, Laumann, and Schumm (2008), the average social convoy size for community dwelling participants aged 57 to 85 was 3.57 ($SD = 1.59$). Antonucci and Akiyama (1987) found an average of 8.9 in adults aged 50 and older. It is important to note the methodological differences, however. Cornwell limited number of people who could be listed to five confidants, and Antonucci and Akiyama had a category of "21+". While these age ranges are slightly different than the age range in the current study (65 to 98), the difference in network size is quite striking, even with the methodological differences. The current study had an average social convoy size of 23.92 ($SD = 15.23$). This is a difference of ten people or more as compared to Van Tilburg, almost ten as compared to the HCBS study, 20 people compared to the Cornwell and colleagues study, and 15 compared to the Antonucci and Akiyama study. The CCRC residents in this study may have larger social convoys for various reasons. They may have more supportive and close families than normal, they may have individual personality differences, or it may be due to the environment in which they live. It would be beneficial to try and control for individual differences in future studies.

Social convoy composition. The difference in social convoy size may be due to the nature of the samples. The nature of a CCRC allows for people to be quite social when they want to be, and they constantly have other residents and staff around for socialization or help if needed. However, even with the availability of other residents and staff, participants still listed family and relatives as the largest group in their social convoy (50%), followed by community friends (27.7%). This means that they still have strong ties to their lives outside of the facility, and outside of the family. This may be due to the fact that while they are in an "institution", they are still very active socially, cognitively, and physically. This may be related to the intentional

community idea in that they have decided to continue with the same types of activities, or even new ones, regardless of the fact that they have moved to a new home. Many of them still drive, attend church, and travel quite extensively. They may also still have strong ties to family and relatives due to the fact that they are not a burden on those family members. The percentage of family and relatives reported in this study was higher than in similar research done with a community based sample (Fiori & Antonucci, 2006), as well as higher than found in previous research with a HCBS sample (Medvene et. al, 2015). Literature discusses how LTC residents feel the need to be independent, and even if they need some amount of help, feel the need to at least be able to present themselves as independent (Ball, Perkins, Whittington, Hollingsworth, King, & Combs, 2004). By living in an IL facility, they can get help from staff if needed and they know that help is close by if they do have any health issues, and perhaps this frees them up to interact in less dependent ways with their family.

Residents did report friendships with fellow residents, however, at almost 17% of the total social convoy sample. This means that they moved into the IL facility, and made new friendships in the CCRC. This is different from findings from studies of assisted living residents (Park, 2009) who found few friendships with other residents, as well as findings with nursing home residents (Powers, 1992). This is contrary to the idea that, as people age, they are less motivated to create new friendship, and instead focus on old ones that are not replaced as people die or move away. The residents in this study were still at least somewhat motivated to make new friends, as well as maintain old friendships. It is also interesting to note that the number of fellow residents reported in the social convoy was moderately correlated with the length of time they had lived at PMMA. This suggests that even though they were moving to an institutional setting, and the assumption was that they were moving there to live out the rest of their lives,

they may not have seen their time as limited and were still motivated to make new friends. This is different than the ideas suggested by Socioemotional Selectivity Theory (SES; Carstensen, Isaacowitz, & Charles, 1999), and will be discussed later.

Social Isolation

Social isolation was also found to be different than previous literature with comparable samples. Tremethick (2001) found that older adults in community settings such as HCBS were at risk for social isolation, with 35.5% at high risk for social isolation or were socially isolated. In a previous study, 42.5% of HCBS recipients were at a high risk for social isolation or were considered socially isolated (Medvene, et. al, 2015). Tremethick (2001) also found that, in a study of assisted living residents, 48.5% of participants were high risk for social isolation or who were socially isolated. The current study had only two people (8%) who were at high risk or socially isolated, which means that the current results were much lower than those found in other samples of older adults. This is important for various reasons. First, the two participants who were at risk for social isolation or were socially isolated may eventually require nursing home placement, and their social isolation levels may continue to decline and lead to further health complications faster than residents who had lower scores on the Lubben Social Network Scale. This is also important because it means that there is something about the other 22 participants, perhaps both their environment and their social support networks, which enable them to have supportive social networks with sufficient numbers of confidant relationships. They are, of course, a highly self-selected group, but it is highly possible that they are more likely to experience better physical and mental health outcomes than older adults who are living in the community or in assisted living facilities. As evidenced by the case studies, sometimes what is found does not always tell the whole story, however. Participant N-01 in particular was seen as a

social butterfly by the staff, but was considered socially isolated. She was also 98 years old, and the scale may not take into account those people in the "old old" category who are over age 85 who tend to not have as many social contacts or confidant relationships based solely on the fact that most of their social support network members may have died. Future research would need to be done to determine the validity of the scale for those who are in this older category.

There are a variety of reasons why IL residents might be isolated. They could have excellent social skills and know a million people, but they may not feel close to any of them or they may have lost many of their close friends and family. People can have a lot of contact with others and still be considered socially isolated. While it is great that so many of the participants at both campuses in the current study are at a low risk for social isolation, this may not be the case at other CCRCs. Taking into consideration the nature of PMMA and the residents themselves, it may be possible to identify the conditions under which IL residents in CCRCs experience low levels of social isolation, and to utilize these two CCRCs as model sites with aspects that could be replicated. Those who are identified as at "moderate risk" for social isolation would need to be monitored, as well as potentially given an intervention, to make sure they do not become a high risk or worse for social isolation.

Perceived Quality of Relations

Each of our participants expressed high positive perceived quality of relations for each of the six relationship types (child, spouse/partner, community friend, family member, fellow resident, and staff member). There is empirical data that shows that total social convoy size is not as important to well-being as perceived quality of relations (Fiori, Antonucci, & Cortina, 2006), and the fact that the current sample had high levels of positive perceived quality shows that they may have much higher levels of satisfaction with their social support networks than others.

However, they did rate some relationships slightly more negatively than others, with their spouses/partners and children being perceived as the most negative relationship types. This follows trends found in previous research in which the spousal relationship tended to be more ambivalent, and the relationship with other family and friends tend to be perceived as more positive (Medvene, et. al, 2015).

Network Types

The study was able to successfully replicate the patterns of several known network types. More specifically, patterns fitting a diverse network, a family network, a friends network, an institution-centered network, and a restricted network were found, and are consistent with previous literature (e.g., Litwin, 2001; Fiori, Antonucci, & Cortina, 2006; Litwin & Shiovitz-Ezra, 2010). Both participants with a "restricted" network resided at Newton PMMA, but they also had three of the four "diverse" participants as well. Wichita tended to have more residents embedded in "family-focused" networks than Newton, and they both had "non-family" networks. Further studies should look at residents' contact with meeting attendance and religious services both within and without the facility in order to get a better idea of their frequency of contact with these groups.

Network type seems to be more closely related to social isolation and perceived quality of relations than size and composition of the social convoy. Residents could list as many people as they wanted in their Hierarchical Map, but this did not mean they actually had contact or a good relationship with those named. The findings regarding social isolation and network type in this study are similar to those found in a previous study of HCBS clients in that residents embedded in the more restricted networks tended to have higher social isolation scores than those in more diverse networks (Medvene et.al, 2015), as well as to studies with community dwelling older

adults (Fiori, Antonucci, & Cortina, 2006). While these studies have not looked at isolation, they have included measures of depression, loneliness, and physical health outcomes. Based on the results from this study, as well as the results of other studies, older adults who are embedded in more restricted network types are at a higher risk for negative outcomes than others who are in more diverse or family-focused networks.

Implications

In spite of the differences in network types, conclusions can be drawn regarding the functional implications of network membership. The "Family" network had the best outcomes in terms of social isolation and perceived quality of relations, followed by the "Diverse" network, and the "Friends" network. The "Restricted" and "Institution-centered" network had the highest levels of social isolation. This is also consistent with previous findings.

According to Lubben and colleagues (2006), social isolation has gained increased credibility as a health risk and should be a main focus of work conducted with older adults. By determining social convoys, social isolation levels, perceived quality of relations, and network types, targeted interventions could be created for older adults, more specifically those that are at a higher risk than the current population but in similar settings, or community types, to increase their overall health and well-being.

Relevance to Theory

The current research was relevant to the Socioemotional Selectivity Theory (SES) because its idea is that as people age, seeking out new sources of knowledge and replacing lost friends and family becomes less important than focusing on the emotionally salient relationships with those they care for. This applies to the current study because of the negative stigmas associated with institutional settings and older adults. When an older adult moves out of their

own home and into an institution such as a CCRC, the stereotype is that they are basically going there to live out the rest of their lives. While this may be the case, they are not necessarily going there just to wither away and die. As evidenced by this study, many older adults may actually be motivated to make new friends and to stay engaged in new activities, even while living in an institutional setting. What this means for SES is that there may be a slight upswing in the knowledge seeking portion of the graph in old age (Figure 1). While they may still be focusing the bulk of their attention on more emotionally salient relationships, they are still interested in becoming friends with new people and having new experiences, and there are fewer barriers to forming these new relationships. It is possible that there may be an expanded sense of time left once people enter a CCRC, and perhaps they look forward to doing things such as meeting new people, developing new interests, or getting back to old interests. There may be other circumstances and settings in which older adults experience an expanded sense of time left such as when people retire and move into new places such as intentional communities. These suppositions would need to be validated or refuted with further research, however.

Limitations

Limitations of the study included the sample size, as well as the limited diversity of the sample. Future studies should include more participants and make an effort to study a group that is more representative of the general population, in terms of demographics such as race/ethnicity, age, and socioeconomic status. It would also be important to explore other CCRCs as each chain and facility may be quite different than the others. Another limitation with the sample was that, because this was part of a larger study involving computers, the residents who elected to participate may have been highly self-selective, more open to new experiences than others, have

higher cognitive functioning, or more things such as that nature. This would have all lead to a selection bias that would have to be controlled for in the future.

While those in a CCRC tend to be more affluent than other older adults, some of the options and amenities of a CCRC could be applied to other types of intentional/congregant communities, such as multiple-unit subsidized senior housing sites and shared housing (Stone, 2013). Many of the social activities offered at Wichita and Newton PMMA could be offered at senior centers, social clubs, in neighborhood organizations, and with other groups that are focused on older adults. Future studies could also compare different groups of the older adult population, such as high functioning community dwelling older adults, those in assisted living or those who receive HCBS services, to those in an IL setting within a CCRC. Of specific interest is what happens when people go through the experience of moving into the IL section of a CCRC. These experiences may differ depending on the situation and where the CCRCs are located. Findings in this study at the Wichita and Newton campuses of PMMA may be quite different than what may be found in other settings such as an urban or rural setting, and with other chains not affiliated with PMMA.

Future Research and Direction

Future research will hopefully include a replication of the current study within other IL facilities in different CCRCs to determine the differences between the facilities themselves, as well as include a larger sample size. PMMA seems to be doing many things right, and could possibly be considered as a model setting with programs that could be replicated with other settings. The Lubben Social Network Scale would also need to be studied further to determine its validity with an old old population, and the frequency of contact questions should also be broken down to reflect activities within the CCRC and in the community to determine exactly how much

contact is made within and without the facility. Important areas to explore in the future are older adults' motives for moving into CCRCs, the nature of their social engagement and social isolation, and the inclusion of fellow residents in social networks. It would also be interesting to do further investigation into the sense of time left before and after residents move into a CCRC, or move into other intentional communities.

Future directions would include taking what was learned and giving it back to PMMA so their staff will know this information moving forward. There is a lot of rich data that they could use to maintain or increase the overall well-being of their current and future residents. Best practices for them, as well as other CCRCs, could be determined from this and subsequent research that will add to ways in which CCRCs operate, as well as to the literature. Suggestions such as collecting baseline and follow-up data on social isolation, perceived quality of relations, and network types, as well as other outcome variables, could be collected by PMMA staff to help aid in the development of these best practices.

CHAPTER FIVE

CONCLUSION

This study was very informative, and while there were not as many significant results as hoped for, there were a lot of very interesting ones. The residents were extremely happy with Presbyterian Manors (PMMA), both in their interviews and anecdotally. They enjoyed the facility, the staff, their homes, and the engagement they were provided. In terms of the motivations, the residents were more likely to move into PMMA for positive pull reasons, such as wanting to plan while still able to do so, and the amenities of PMMA. The slightly more negative push reasons that dealt with home and yard maintenance and health issues were less influential. The majority of residents also made new friends after moving into PMMA while also maintaining ties to the community. The residents had large social convoys with closer inner circles, they were not socially isolated, they perceived their closest relationships as extremely positive, and they all appeared to be embedded in a specific network type.

In terms of negative outcomes, it is important to keep those residents in mind who are on the cusp of entering another state. The residents who are "moderately" socially isolated should be watched and an effort made to make sure they do not become a high risk for social isolation. This is also true for those who indicated small social convoys. If the existing social convoy members leave the residents' lives, they are at risk for a potentially negative shift in their perceived quality of relations and other outcomes. Since perceived quality of relations is tied to overall well-being, these relationships should also be monitored. Of the network types identified, those that are of most concern are the restricted, institutional, and non-family. These tend to have

more negative outcomes, especially as they tend to be more socially isolated groups, and care should be taken to keep residents in as diverse networks as possible.

Due to the fact that social convoy size and composition, social isolation, perceived quality of relations, and the network types as determined by frequency of contact with network members can all change at any time, it would be beneficial for continuing care retirement communities (CCRCs) such as PMMA to evaluate and monitor these outcomes in their residents. The types of activities the residents participate in should also be recorded so these outcomes could be compared to social engagement, and that way the CCRCs would have a way to evaluate what they are doing that is successful and what is not. This would be helpful in determining best practices in this relatively unstudied population, aid their staff in creating programming and marketing strategies. These outcome measures could also help translate the success they have to other facilities, and potentially increase overall well-being for more CCRC residents.

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APPENDICES

APPENDIX A

MOTIVATION OPEN-ENDED QUESTIONS

- When did you move into the Independent Living facility at Presbyterian Manors? _____

- What led you to move to Independent Living at Presbyterian Manors (did you move from another IL facility before here)? _____

_____

_____

- What role, if any, did your family play in your moving to Newton or Wichita Presbyterian Manors? _____

_____

_____

ANTONUCCI HEIRARCHICAL MAPPING TECHINIQUE

Ok, now I'd like to change topics… As you know, one goal of this study is to learn more about your social support network, so I'd like to continue by asking you some questions about the people you know, how close you feel to them, and how important they are to you. We ask that you think of people in your life who you would consider part of your social support network. Such people can be family members, friends, neighbors, caregivers, and others. As you think of them, we will place them in three different groups, represented by three over-lapping circles or rings. The definition of each ring or group is as follows:

- Inner ring- "People to whom you feel so close that it is hard to imagine life without them."
- Middle ring- "People to whom you may not feel quite that close, but who are still very important to you."
- Outer ring- "People whom you haven't already mentioned but who are close enough and important enough in your life that they should be placed in your personal network."

Feel free to make changes as we go along (i.e. – if you feel that one of the names in the inner circle should go in the outer circle instead, feel free to move it to the outer circle). Please list off the people who belong in your social support network now.

Present a board with a picture of three concentric circles, with a smallest circle titled "you"
Participants are to think of, and place individuals into each of the rings
- *Inner ring- "People to whom you feel so close that it is hard to imagine life without them."*
- *Middle ring- "People to whom you may not feel quite that close, but who are still very important to you."*
- *Outer ring- "People whom you haven't already mentioned but who are close enough and important enough in your life that they should be placed in your personal network."*

Name	Ring #	Relationship	Resident (R) or Staff (S)

Name	Ring #	Relationship	Resident (R) or Staff (S)

LUBBEN SOCIAL NETWORK SCALE (LSNS)

Now I'd like to ask you a few additional questions about your social support network.

Family Networks

- How many relatives do you see or hear from at least once a month?

  0 = none   1 = one   2 = two   3 = three or four
  4 = five thru eight   5 = nine or more

- How often do you see or hear from the relative whom you have the most contact with?

  0 = less than monthly 1 = monthly 2 = few times a month 3 = weekly
  4 = few times a week 5 = daily

- How many relatives do you feel close to? That is, how many of them do you feel at ease with, can talk to about private matters, or could call on for help?

  0 = none   1 = one   2 = two   3 = three or four
  4 = five thru eight   5 = nine or more

Friends Networks

- Do you have any close friends? That is, do you have any friends with whom you feel at ease, can talk to about private matters, or could call on for help? If so, how many?

  0 = none   1 = one   2 = two   3 = three or four
  4 = five thru eight   5 = nine or more

- How many of your friends do you see or hear from at least once a month?

  0 = none   1 = one   2 = two   3 = three or four
  4 = five thru eight   5 = nine or more

- How often do you see or hear from the friend whom you have the most contact with?

  0 = less than monthly 1 = monthly 2 = few times a month 3 = weekly
  4 = few times a week 5 = daily

Confidant Relationships

- When you have an important decision to make, do you have someone you can talk to about it?

    0 = never   1 = seldom   2 = sometimes   3 = often   4 = very often
    5 = always

- When other people you know have an important decision to make, do they talk to you about it?

    0 = never   1 = seldom   2 = sometimes   3 = often   4 = very often
    5 = always

Helping Others

     a. Does anybody rely on you to do something for them each day? For example: shopping, cooking dinner, doing repairs, cleaning house, providing childcare, etc.

NO- if no, score a "0"; **go on to "b"**   YES- if yes, score "5", **go to next section**

     b. Do you help anybody with things like shopping, filling out forms, doing repairs, providing childcare, etc.?

0 = never   1 = seldom   2 = sometimes   3 = often   4 = very often

Living Arrangements

- Do you live alone or with other people?

    0 = live alone   1 = live with other unrelated individuals
    4 = live with relatives or friends   5 = live with spouse/partner

PERCEIVED QUALITY OF RELATIONS

I would like to ask you some questions about how much you enjoy the contact you have with family, friends, and relatives.

- **Which fellow independent living resident (not including family member/significant other living with you) do you have the most contact with?**

    _____

Thinking of *(person named above)***:**

- I feel [Person name/relationship] supports me, that (he/she) is there when I need (him/her).

    1 = Agree   2 = Somewhat agree 3 = Neither agree or disagree
    4 = somewhat disagree 5 = disagree   NA

- I enjoy being with [Person name/relationship].

    1 = Agree   2 = Somewhat agree 3 = Neither agree or disagree
    4 = somewhat disagree 5 = disagree   NA

- [Person name/relationship] gets on my nerves.

    1 = Agree   2 = Somewhat agree 3 = Neither agree or disagree
    4 = somewhat disagree 5 = disagree   NA

- I feel that [Person name/relationship] believes in me.

    1 = Agree   2 = Somewhat agree 3 = Neither agree or disagree
    4 = somewhat disagree 5 = disagree   NA

- When [Person name/relationship] is having a hard time, I want to help (him/her).

    1 = Agree   2 = Somewhat agree 3 = Neither agree or disagree
    4 = somewhat disagree 5 = disagree   NA

- [Person name/relationship] makes too many demands on me.

    1 = Agree   2 = Somewhat agree 3 = Neither agree or disagree
    4 = somewhat disagree 5 = disagree   NA

- I feel [Person name/relationship] encourages me in whatever I do.

    1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
    4 = somewhat disagree   5 = disagree   NA

- **Which PMMA staff member do you have the most contact with?**

    _____

Thinking of *(person named above)***:**

- I feel [Person name/relationship] supports me, that (he/she) is there when I need (him/her).

    1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
    4 = somewhat disagree   5 = disagree   NA

- I enjoy being with [Person name/relationship].

    1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
    4 = somewhat disagree   5 = disagree   NA

- [Person name/relationship] gets on my nerves.

    1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
    4 = somewhat disagree   5 = disagree   NA

- I feel that [Person name/relationship] believes in me.

    1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
    4 = somewhat disagree   5 = disagree   NA

- When [Person name/relationship] is having a hard time, I want to help (him/her).

    1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
    4 = somewhat disagree   5 = disagree   NA

- [Person name/relationship] makes too many demands on me.

    1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
    4 = somewhat disagree   5 = disagree   NA

- I feel [Person name/relationship] encourages me in whatever I do.

    1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
    4 = somewhat disagree   5 = disagree   NA

Skip these questions if participant doesn't have any children.

- **If you have more than one child, which child do you have the most contact with? -** _____

Thinking of *(person named above):*

- I feel [Person name/relationship] supports me, that (he/she) is there when I need (him/her).

  1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
  4 = somewhat disagree   5 = disagree   NA

- I enjoy being with [Person name/relationship].

  1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
  4 = somewhat disagree   5 = disagree   NA

- [Person name/relationship] gets on my nerves.

  1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
  4 = somewhat disagree   5 = disagree   NA

- I feel that [Person name/relationship] believes in me.

  1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
  4 = somewhat disagree   5 = disagree   NA

- When [Person name/relationship] is having a hard time, I want to help (him/her).

  1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
  4 = somewhat disagree   5 = disagree   NA

- [Person name/relationship] makes too many demands on me.

  1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
  4 = somewhat disagree   5 = disagree   NA

- I feel [Person name/relationship] encourages me in whatever I do.

  1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
  4 = somewhat disagree   5 = disagree   NA

- Do you have a spouse/partner?

  1 = yes   2 = no

If yes, answer the next seven questions. If no, skip the next seven questions and go to questions about friends.

- I feel [Person name/relationship] supports me, that (he/she) is there when I need (him/her).

  1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
  4 = somewhat disagree   5 = disagree   NA

- I enjoy being with [Person name/relationship].

  1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
  4 = somewhat disagree   5 = disagree   NA

- [Person name/relationship] gets on my nerves.

  1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
  4 = somewhat disagree   5 = disagree   NA

- I feel that [Person name/relationship] believes in me.

  1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
  4 = somewhat disagree   5 = disagree   NA

- When [Person name/relationship] is having a hard time, I want to help (him/her).

  1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
  4 = somewhat disagree   5 = disagree   NA

- [Person name/relationship] makes too many demands on me.

  1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
  4 = somewhat disagree   5 = disagree   NA

- I feel [Person name/relationship] encourages me in whatever I do.

  1 = Agree   2 = Somewhat agree   3 = Neither agree or disagree
  4 = somewhat disagree   5 = disagree   NA

- **Which friend (outside the facility, NOT a resident) do you have the most contact with?**

  _____

Thinking about *(person named above)***:**

- I feel [Person name/relationship] supports me, that (he/she) is there when I need (him/her).

  | 1 = Agree | 2 = Somewhat agree | 3 = Neither agree or disagree |
  | 4 = somewhat disagree | 5 = disagree | NA |

- I enjoy being with [Person name/relationship].

  | 1 = Agree | 2 = Somewhat agree | 3 = Neither agree or disagree |
  | 4 = somewhat disagree | 5 = disagree | NA |

- [Person name/relationship] gets on my nerves.

  | 1 = Agree | 2 = Somewhat agree | 3 = Neither agree or disagree |
  | 4 = somewhat disagree | 5 = disagree | NA |

- I feel that [Person name/relationship] believes in me.

  | 1 = Agree | 2 = Somewhat agree | 3 = Neither agree or disagree |
  | 4 = somewhat disagree | 5 = disagree | NA |

- When [Person name/relationship] is having a hard time, I want to help (him/her).

  | 1 = Agree | 2 = Somewhat agree | 3 = Neither agree or disagree |
  | 4 = somewhat disagree | 5 = disagree | NA |

- [Person name/relationship] makes too many demands on me.

  | 1 = Agree | 2 = Somewhat agree | 3 = Neither agree or disagree |
  | 4 = somewhat disagree | 5 = disagree | NA |

- I feel [Person name/relationship] encourages me in whatever I do.

  | 1 = Agree | 2 = Somewhat agree | 3 = Neither agree or disagree |
  | 4 = somewhat disagree | 5 = disagree | NA |

- **Which relative (not including children) do you have the most contact with? -**

  _____

Thinking about *(person named above)***:**

- I feel [Person name/relationship] supports me, that (he/she) is there when I need (him/her).

1 = Agree	2 = Somewhat agree	3 = Neither agree or disagree
4 = somewhat disagree	5 = disagree	NA

- I enjoy being with [Person name/relationship].

1 = Agree	2 = Somewhat agree	3 = Neither agree or disagree
4 = somewhat disagree	5 = disagree	NA

- [Person name/relationship] gets on my nerves.

1 = Agree	2 = Somewhat agree	3 = Neither agree or disagree
4 = somewhat disagree	5 = disagree	NA

- I feel that [Person name/relationship] believes in me.

1 = Agree	2 = Somewhat agree	3 = Neither agree or disagree
4 = somewhat disagree	5 = disagree	NA

- When [Person name/relationship] is having a hard time, I want to help (him/her).

1 = Agree	2 = Somewhat agree	3 = Neither agree or disagree
4 = somewhat disagree	5 = disagree	NA

- [Person name/relationship] makes too many demands on me.

1 = Agree	2 = Somewhat agree	3 = Neither agree or disagree
4 = somewhat disagree	5 = disagree	NA

- I feel [Person name/relationship] encourages me in whatever I do.

1 = Agree	2 = Somewhat agree	3 = Neither agree or disagree
4 = somewhat disagree	5 = disagree	NA

FREQUENCY OF CONTACT

Now I would like to ask you a few questions about the contact you have with your children, friends, and your involvement in community organizations.

- How frequently do you have contact with your children?

1 = more than once a week	2 = once a week	3 = 2 or 3 times a month
4 = about once a month	5 = less than once a month	6 = never NA

- How frequently do you have contact with your friends inside the facility (within PMMA)?

1 = more than once a week	2 = once a week	3 = 2 or 3 times a month
4 = about once a month	5 = less than once a month	6 = never NA

- How frequently do you have contact with your friends outside the facility (within the community)?

1 = more than once a week	2 = once a week	3 = 2 or 3 times a month
4 = about once a month	5 = less than once a month	6 = never NA

- How frequently do you have contact with the PMMA staff?

1 = more than once a week	2 = once a week	3 = 2 or 3 times a month
4 = about once a month	5 = less than once a month	6 = never NA

- How frequently do you have contact with your family?

1 = more than once a week	2 = once a week	3 = 2 or 3 times a month
4 = about once a month	5 = less than once a month	6 = never NA

- How often do you attend religious services?

1 = more than once a week	2 = once a week	3 = 2 or 3 times a month
4 = about once a month	5 = less than once a month	6 = never NA

- How often do you attend meetings of community organizations (Neighborhood Association, Masonic Lodge, Gardening Club, etc.)?

1 = more than once a week	2 = once a week	3 = 2 or 3 times a month
4 = about once a month	5 = less than once a month	6 = never NA

APPENDIX F

DEMOGRAPHICS

Now for the final questions, I'd like to ask you some personal questions about your background.

- Year of birth _____
- Sex (***observe***) _____

- Race or cultural group(s) that you identify with (all that apply):

1 = African American	2 = Caucasian
3 = Hispanic/Latino	4 = Asian
5 = Other	

- # of Sons _____

- # of Daughters _____

- # of Grandchildren _____

- # of Great Grandchildren

- # of Brothers _____

- # of Sisters _____

- # of Living Siblings _____

- Have you ever been married?   1 = Y   2 = N

- If yes, is your spouse still living? 1 = Y   2 = N   98 = DK

- If you were ever married, are you divorced or separated?   1 = divorced   2 = separated

- Do you have a significant other? 1 = Y   2 = N

- How long have you and spouse/partner been together? _____

- Educational level: (circle highest level of educational achievement)

1 = No high school	2 = Some High school	3 = HS Diploma/GED	
4 = Some College	5 = Technical	6 = Associate's	
7 = Bachelor's	8 = Master's	9 = Doctorate	10 = Professional