

Fall 2019

Modernizing Life Plan Communities for Older Adults

Hannah Aljets
homccoid@iastate.edu

Follow this and additional works at: <https://lib.dr.iastate.edu/creativecomponents>



Part of the [Gerontology Commons](#)

Recommended Citation

Aljets, Hannah, "Modernizing Life Plan Communities for Older Adults" (2019). *Creative Components*. 367.
<https://lib.dr.iastate.edu/creativecomponents/367>

This Creative Component is brought to you for free and open access by the Iowa State University Capstones, Theses and Dissertations at Iowa State University Digital Repository. It has been accepted for inclusion in Creative Components by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.

Modernizing Life Plan Communities for Older adults

by

Hannah Belle Aljets

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
MASTER OF FAMILY AND CONSUMER SCIENCES

Major: Gerontology

Program of Study Committee:
Jennifer Margrett, Major Professor
Sarah L. Francis
Megan Gilligan

The student author, whose presentation of the scholarship herein was approved by the program of study committee, is solely responsible for the content of this thesis. The Graduate College will ensure this thesis is globally accessible and will not permit alterations after a degree is conferred.

Iowa State University

Ames, Iowa

Fall 2019

Copyright © Hannah McCoid, 2019. All rights reserved.

TABLE OF CONTENTS

	Page
ABSTRACT.....	iv
EXECUTIVE SUMMARY	v
CASE DESCRIPTION	viii
CHAPTER 1. NUTRITION AT NORTH SHORE	10
Case Introduction.....	10
Literature Review	10
Assessment	12
Findings	13
Recommendations	16
CHAPTER 2. FAMILY AND SOCIAL SUPPORT AT NORTH SHORE	18
Case Introduction.....	18
Literature Review	18
Assessment	20
Findings	21
Recommendations	26
CHAPTER 3. SUCCESSFUL AGING AT NORTH SHORE	29
Case Introduction.....	29
Literature Review	29
Assessment	31
Findings	33
Recommendations	39
CHAPTER 4. ENVIRONMENTAL STUDY OF NORTH SHORE	41
Case Introduction.....	41
Literature Review	41
Assessments.....	42
Findings	43
Recommendations	48
SUMMARY	50
Evaluation.....	50
Synthesis.....	52
REFERENCES	53
APPENDIX A. NUTRITION AT NORTH SHORE ASSESSMENTS	59
Interview Questions.....	59
Observation Questions	59
Mini Nutritional Assessment.....	60

DETERMINE.....	61
APPENDIX B. SOCIAL AND FAMILY SUPPORT AT NORTH SHORE ASSESSMENTS ...	62
Interview Questions.....	62
Observation Questions	62
Assessment Forms	62
Follow-up Questions	64
APPENDIX C: SUCCESSFUL AGING AT NORTH SHORE ASSESSMENTS	65
Interview Questions- Wellness Coordinator	65
Interview Questions- Leisure Services Coordinator	65
Observation Questions	66
Assessment Form	66
Follow-up Questions	67
APPENDIX D: ENVIRONMENTAL STUDY OF NORTH SHORE.....	69
Interview Guide.....	69
Environmental Checklist/Observation Guide (Regnier, 2002; Bamzar, 2019).....	69

ABSTRACT

This case study examines a life plan community to observe behaviors, draw conclusions, and develop recommendations. The case study includes four Gerontology content areas. This includes successful aging (Geron 530), environments (Geron 563), nutrition (Geron 540), and social support and family interactions (Geron 577). Each content area section contains a brief literature review, assessment, findings from the assessment, and recommendations. However, the recommendations will not be provided directly to the facility. Interviews were used to obtain adequate information required for recommendations based on conducting in-depth interviews with staff, specific to departmental areas. Professional assessments and observations were also utilized. During the interviews, staff were asked about their current efforts within each of the content areas, challenges they have experienced thus far in their operation of business, and changes they can make to their practices to reflect a focus on the residents. The case study concludes with a summary and synthesis of the four content areas as well as the implications of the study.

Keywords: nutrition, family interactions, social support, successful aging, environments, life plan community

EXECUTIVE SUMMARY

Long-term care services and life plan communities have been evolving since the creation of the Social Security Act in 1935. At this moment, the increasing consumer demand for care and choices in living environments are requiring long-term care service providers to tailor their communities to meet older adult needs. Some of these needs include wellness programs, social activities, dining, and homelike environments. Increasing demands are leading to modern communities, signature services and amenities, and contemporary employee titles. For example, an activity coordinator is now called a leisure services coordinator.

Four areas of importance to today's older adults include nutrition, social support and family interaction, successful aging, and the natural environment. The reason for conducting this case study was to examine how a life plan community is providing services to its residents knowing the increasing demand for consumer choices. Older adult's desires and choices are changing; thus, life plan communities must adopt the changes to be successful in providing an exceptional quality of life and care. Results of the case study will enable the community to better meet their residents' needs and desires which is of great importance to the community's mission statement. Implementing the results of the case study will also provide examples to other organizations in the field. The name of the life plan community, residents, and staff have been changed for confidentiality purposes.

The purpose of this case study was to evaluate a life plan community, North Shore Retirement Community's nutrition, social support and family interaction, successful aging, and the environment. This was accomplished by utilizing interviews, observations, and professional assessments to develop recommendations for each of the areas. Important findings from the nutrition assessment were identified:

- Comprehensive assessment processes for health care residents but they are less complete for assisted and independent living residents
- Less emphasis is placed on nutrition education or events among residents; however, a one-on-one meeting with the director of nutrition and food services or dietitian does occur if requested

The recommendation for nutrition at North Shore is to incorporate nutrition education programs once or twice a year by inviting university students studying nutrition to present interactive material and university Extension and Outreach programs focused on older adult nutrition needs.

Family interaction at North Shore has changed over the past few years due to positive and negative reasons, thus there are fewer planned family events. Findings from the assessments resulted in identifying:

- Small numbers of family members visit their loved ones during events, although family members are frequently encouraged to visit often and to be engaged in the life of the resident at North Shore.
- Conversation topics of the family seem to have a more negative connotation than positive
- Positive feedback from the three PROMIS questionnaires that focused on companionship, emotional and informational support could be used to identify resident ratings in the three areas as well as identify ways to increase family involvement

The recommendations for North Shore are to incorporate the PROMIS assessments into the admission process of residents across all levels of care, implement an already developed

intergenerational program into the community calendar, and plan more family events within the community.

Successful aging at North Shore was assessed and resulted in the following key findings:

- Frequent feedback/comments from residents on the types of events and activities planned
- Frequent staff involvement in promoting successful aging of residents: creating and providing a holistic environment and opportunities to enhance their aging
- Residents have positive perceptions of what it looks like to age successfully through the continuation of activities from younger and older adulthood and being supported by staff

The recommendation for North Shore is to incorporate preventative strategies for maximizing successful aging in the community newsletter bi-annually to remind residents of the importance of being actively engaged in the positive aging process.

The assessment of North Shore's environment revealed key findings that include:

- Design of indoor environments were specific to state code with unconventional long hallways of the health care center
- Recent heightened of outdoor space to experience nature, but there was a lack of indoor space to connect with nature
- Inconsistent realm of nature involvement between inside and outside spaces

The recommendations include incorporating more nature indoors (flower planters, enclosed garden room), integrate window boxes and fixed planters in assisted living, health care center, and memory care sections where there is currently no nature involvement.

CASE DESCRIPTION

The target of this case study is a local 55+ life-plan community called North Shore Retirement Community. Life plan communities were formerly termed Continuing Care Retirement Communities or CCRCs. Leading-Age and Mather LifeWays have spearheaded this initiative of transforming CCRCs into life plan communities. Leading-Age is a non-profit organization that leads initiatives to provide better aging services and resources. Mather LifeWays is a non-denominational not-for-profit organization that creates and implements aging programs. The growing demand for high quality and increased services by today's older adults are looking to make the most of their retirement (Three Pillars, 2016). Three key elements of the community foci are on offering more than one level of care, overall wellness, health, and active lifestyles, and integration into the community as partners (Three Pillars, 2016). The change in older adult perspectives of senior living is influencing the transformation of CCRCs to serve as a life plan community focused on individual care. North Shore was chosen because the community has experienced much growth over the years due to increasing popularity of the community, the need to address increasing demands of services and housing, and the increase of modern communities in the field.

This community offers all the levels of care which include independent living, assisted living, health care center, memory care, and home health. For individuals interested in independent living, they have the option of owning a townhouse or an apartment. Since North Shore is resident-owned, this has an impact on the daily activities of the community. For example, residents can make recommendations to the staff of things they would like to try or add. Residents can form committees that govern daily activities. Assisted living consists of private rooms with their own bathrooms and a common living and dining space for residents.

Memory care and the health care center provide private and semi-private rooms with a shared bathroom. Residents can still own their townhouse or apartment while living in the health care center until they decide to sell their previous home or are unable to return home. There are a variety of services and amenities available to residents such as wellness programs, leisure events/activities, rehabilitation, dining, office services, and in-home health. This community sits on 50 acres with a variety of walking paths, gardens, prairies, and a small pond. This community is also associated with the local university which allows university students to complete practicums and internships within the various departments.

As the community has grown in popularity and size, they have had to make accommodations and expand spaces. Some of the additions that were made followed the current trends at the time but now are considered outdated and unappealing. Challenges to be confronted at this community pertain to the natural environment involved in the indoor and outdoor spaces, limited nutrition education for residents, fewer family-planned events with the residents, and promoting residents to be successful in their aging. All the challenges mentioned above will be reviewed and assessed in the present case study.

CHAPTER 1. NUTRITION AT NORTH SHORE

Case Introduction

Nutrition is an essential component of the health and well-being of older adults living in life plan communities. Within the literature, there are many studies that have examined nutritional status among residents to identify the importance of nutrition education and assessment. This case study will assess a local life plan community, North Shore Retirement Community, nutritional assessment and education of residents.

Literature Review

Upon admission to life plan communities, older adults often undergo a comprehensive assessment. This assessment includes physical functioning, cognitive status, and nutrition. The nutritional status of older adults living in life plan communities varies by the level of care they receive. Prevalence estimates of adult malnutrition range from 6 to 60 percent (Saffel-Shrier et al., 2019), and 20 to 39 percent of older adults living in nursing homes were classified as malnourished and 47 to 62 percent were at risk of malnutrition (Mangels, 2018). A study of an assisted living facility found 22 percent of residents suffered from malnutrition, 64 percent were at risk, and 14 percent were well-nourished based on the Mini Nutritional Assessment (MNA) (Saarela et al., 2014). In the literature, there is no mention of the nutritional status of older adults living independently in life plan communities. The most widely used nutrition assessment tools are the MNA and the Nutritional Screening Initiative DETERMINE checklist (Thomas, 2008). Both assessments were developed to assess nutritional risk among the older adult population. Because there is a high percentage of malnutrition in nursing homes and life plan communities, it is essential for staff to be assessing and monitoring residents' status to prevent deleterious effects.

While most practitioners agree nutritional screening and assessment are beneficial for older adults at high risk, there are no clear guidelines on who should be screened, how often, and by whom (Johnson et al., 2018). Thus, there is a need for consistent nutritional screening processes and assessments. In the literature, it has been noted that follow-ups vary on the severity of the nutritional risk upon admission to a community (Johnson et al., 2018). For example, one study identified registered dietitians (RDs) followed up with moderate risk malnutrition residents every six months while another RD followed up annually with residents identified as low nutrition risk (Johnson et al., 2018). Much of the follow-up is determined by changes in resident health status. Once a resident has been identified as at risk, a comprehensive nutrition assessment is completed by the medical staff. This assessment helps staff to create a plan to manage nutritional needs and prevent less malnutrition or other detrimental effects (Johnson et al., 2018).

Along with the development of nutritional plans for older adults includes education programs. Within the literature, there are studies examining the nutritional status of older adults after their completion of an education program. Emerging evidence shows participation in Older Americans Act nutrition programs is related to improved self-reported health, diet, food security, and the ability to remain in one's homes (Saffel-Shreir et al., 2019). One study identified a significant increase in positive dietary behaviors, self-rated perceptions of health and depression after attending a four-week program (Kim et al., 2012). Another study investigated the effect of a nutrition education program for older adults living in a rural health center. The researchers identified the education of residents was effective in enhancing their knowledge of nutrition and overall nutritional status (Abdelwahed et al., 2018). These studies identified participation in

some form of educational program will result in improved nutritional status. Thus, there is a need for nutrition education for older adults to improve nutritional status.

Assessment

To assess nutrition at North Shore, professional assessments, an interview with the Director of Food and Nutrition Services, and observations of a meal being served were utilized. The Director of Food and Nutrition Services is responsible for creating dining and The Bistro menus, overseeing kitchen staff, and ensuring compliance with state and federal guidelines. The assessment began with an interview with the Director of Food and Nutrition Services which took place in The Bistro. The director was asked the interview questions with North Shore's current practices and residents in mind. After the interview, the director was provided with the two professional assessments to answer with a resident in mind who has difficulties with nutrition.

MNA and DETERMINE checklist are widely known and well-used nutrition tools. The purpose of using the two assessments was to identify the process North Shore employs to create nutrition plans and potential gaps in older adults' knowledge of nutrition. MNA has been noted as a widely valid assessment tool. This tool has a sensitivity of 96% (Beck et al., 2008), reliability of 0.83, and test-retest reliability of 0.89 (Bleda et al., 2002). There are three scoring categories for this tool: 12-14 points (normal nutritional status), 8-11 (at risk of malnutrition), and 0-7 points (malnourished). Interpreting this tool consists of calculating the total number and locating the respected total points to identify the nutritional status. Conversely, the DETERMINE checklist is a widely used awareness tool of potential risk of malnutrition among the aging population. A sample statement from the tool includes "I have an illness or condition that made me change the kind and/or amount of food I eat." (NSI, n.d.). The participant would circle the number 2 if their answer was 'yes'. The maximum score is 22. This tool has three scoring categories: 0-2 (good), 3-5 (moderate risk), and 6 or more (high risk; NSI, n.d.).

Observations of a meal being served were used to obtain more information about nutrition and staff-resident engagement. The questions were derived from the Department of Health and Human Services and Centers for Medicare and Medicaid Services dining observations form. They include questions like “Does the facility offer an appealing option of similar nutritive value to residents who refuse food being served?” and “Does the facility serve meals that conserve nutritive value, flavor, and appearance, and are palatable, attractive, and a safe and appetizing temperature (e.g., provide a variety of textures, colors, seasonings, pureed foods not combined)?” (DHS, 2013). The purpose of this dining observation is to determine whether North Shore dining services take into consideration appealing and nutritive food choices, substitutes, and resident engagement regarding nutrition.

Findings

The director was asked to answer the MNA and DETERMINE checklist with a resident in mind. The director reported the resident had terminal cancer and resided in hospice. Table 1 summarizes the MNA and DETERMINE checklist results. The following items from MNA indicated the resident is malnourished: severe decrease in food intake; weight loss between 2.2 and 6.6 lbs.; bed or chair bound; and BMI 23 or greater. The results of the assessments are used to create an intervention plan for the resident with terminal cancer. The results of the two assessments identified a resident with terminal cancer to be at nutritional risk, which requires the staff to devise an intervention plan to improve their nutritional status.

Table 1

Scores of Nutrition Assessments

Assessment Name	Score
Mini Nutritional Assessment	Screening score: 7 (0-7 points: Malnourished)
DETERMINE Checklist	Total score: 13 (6 or more: High nutritional risk)

Results of the interview questions are summarized in Table 2. One of the results from the questions identified North Shore has a comprehensive assessment process for older adults living in the health care center; however, there is less of an assessment process for assisted and independent living. Another finding was less emphasis on nutrition education among residents, although staff received nutrition information/training for preparing food. The only form of nutrition education residents receive is from a one-on-one meeting with the Director of Food and Nutrition Services. Reduced emphasis on education for residents can be a subtle form of ageism against older adults. Ageism results from stereotyping and/or discriminating against a group of people based on their age, which is a significant issue faced by older adults. Many illnesses and functional declines among older adults are a result of malnutrition and improvements could be observed with educational and other interventions.

Table 2

Responses to Interview Questions

Question	Interviewee Response
How are residents screened for nutritional status upon admission?	In the health center, new admission residents are screened within the first 48 hours, asked about their food preferences, likes and dislikes, allergies. A very basic screen. After 14 days, residents undergo a comprehensive nutrition assessment by the dietician. For long-term residents, they are assessed quarterly unless something happens/changes. For assisted and independent living, we are more hands-off unless we are asked.
Who is involved in creating nutrition plans for residents if they're needed?	A dietician consultant comes one day a week to complete the initial assessment. I complete follow-throughs of the initial assessments by the consultant and work on weight checks.
How often are resident plans reviewed?	As needed- medical change.
How are residents educated/informed about nutrition?	If there is a medical concern, the resident receives 1-on-1 with the dietician. Residents have a liberalized diet, meaning choices of what they want. Not much education since some are towards the end of their life and near-death: don't want to control or limit
What is the process for creating a menu that meets daily nutritional value?	Ask residents what they would like to eat. Season menu cycle- 1 daily special every day (breakfast, lunch, dinner) and rotates every 4 weeks. Meals follow the Heart Healthy guidelines. Staff encourage/provide smart choices- trans-fat free. Educate staff on limiting extra sodium after cooking is finished. Utilizes Meal Sweet plan to create menus.
How do staff work together to prevent malnutrition or obesity among residents?	Use dining strategies such as high-calorie sides for malnutrition: sauces, milkshakes; often prescribe a nutrition supplement, and pay attention to eating abilities such as providing assistive devices (plate guard i.e.). It's hard to prevent obesity if they're coming in this way: encourage walking, limiting desserts, substituting low-calorie foods, and smart eating through the snack cart with low calories. The snack cart goes through all levels of care.
What challenges are you facing regarding nutrition at this facility?	Not facing challenges. Having to learn to accommodate residents with gluten intolerance and vegan diets with good alternatives.

Observations of a meal being served were not able to be completed. The serving of meals occurred later than the appointment time with the nutrition and food services director. However, the director was able to answer some questions. The results are summarized in Table 3. A strong finding from the observation questions was that North Shore highly values resident opinions of the dining menus. They directly seek out the types of food they would like for meals whether it be breakfast, lunch, or dinner. During the admission process for residents, they are asked about their food likes and dislikes as well as preferences.

Recommendations

The recommendation for nutrition pertains to nutrition education. During the interview, the director shared they do not spend much time educating residents at large, but rather in one-on-one meetings. It has been noted in the literature that nutritional education programs have significantly improved the resident's nutritional status and have been a worthwhile investment (Kim et al., 2012; Abdelwahed et al., 2018). Many research articles stressed the importance of nutrition programming not only on nutritional status, but also depression, satisfaction with life, and happiness. Incorporating nutrition education into community events once or twice a year can be beneficial for residents. This can take several forms such as presentations from the local university students studying nutrition or the university Extension and Outreach Human Sciences programming. It would be beneficial and cost-effective to utilize the university since North Shore is associated with them. On the Human Sciences Extension and Outreach webpage (<https://www.extension.iastate.edu/humansciences/healthy-living-and-eating-families>), there are three nutrition research-based programs and newsletters that could be utilized. The programs include What's On My Plate, and Stay Independent: A Healthy Aging Series. Two other Extension and Outreach research-based programs not specifically designed for older adults, but have topics of interest include Healthy and Homemade, and "Is It Whole Grains?". Words on

Wellness is a nutrition newsletter available to all. As noted by Bernstein et al. (2016), nutrition has implications on many aspects of the human body and neglect of nutrition has negative implications. Thus, the director of food and nutrition services should work with the leisure services coordinators to incorporate a yearly nutrition event for all levels of care in their community to promote healthy eating and behaviors.

Table 3

Results from Observations

Question	Response
Does the facility offer substitutes of similar nutritive value to residents who refuse food being served? Yes or No	Yes. Residents have a variety of choices to choose from (looking at the menu). If they do not like the daily special, they have the other kitchen menu to choose from.
Does the facility promote care for residents in a manner and environment that maintains or enhances each resident's dignity and respect to recognition of their individuality? Yes or No	Yes. Within the healthcare center, assisted living, and independent living dining rooms, there are private rooms residents can use for privacy, especially when visitors come, or residents use assistive devices. Dining rooms are well lighted and aesthetically appealing.
Does the facility engage in conversation with residents about nutrition and eating healthy? Yes or No	Yes, on condition: quarterly assessment or 1-on-1 with a dietician. No observation of dining staff engaging with residents.
Does the facility serve meals that conserve nutritive value, flavor, and appearance, and are palatable, attractive, and a safe and appetizing temperature (e.g., provide a variety of textures, colors, seasonings, pureed foods not combined)? Yes or No	No. No observation of this question.

CHAPTER 2. FAMILY AND SOCIAL SUPPORT AT NORTH SHORE

Case Introduction

Aging in the family setting is an important aspect of older adults' lives. Older adults tend to value relationships with their adult children and intergenerational relationships with grandchildren and great-grandchildren. Often when an older adult moves into a life plan community, the relationships with their family members become less frequent. The majority of facilities offer social events and activities within the community for older adults to participate in along with their family members. This is one-way older adults can gain companionship and emotional support from their peers.

Literature Review

Much of the family involvement with older adults in life plan communities pertains to preservative, personal, instrumental, emotional, and social care as well as staff monitoring and acting as advocates for their relatives (Gladstone et al., 2006). Two important reasons family members spend more time engaging in socioemotional support include: relinquishing technical tasks to staff and believing socioemotional support engagement preserves residents' well-being (Plys & Bliwise, 2013). In addition, families who were more socially engaged with their loved ones and involved in identifying their preferences for activities saw higher percentages of loved one's participation (Dobbs et al., 2005). Intergenerational involvement in facilities has meaningful benefits for the children/youth and older adults. For example, older adults who participate in intergenerational programming experience an increase in memory function, physical mobility, and a sense of social connectedness (Kaplan et al., 2006). One study revisited a life plan community two years after the completion of an intergenerational pilot program to

find three quarters of the youth and older adult participants still engaged in the program events (Kaplan et al., 2006). This study highlighted the value of intergenerational programming.

Within the literature, the frequency of family involvement and visitation varies after admission. One study identified family members visited twice a week on average for at least 18 months (Gladstone et al., 2006). Other studies have identified longer involvement and visitation time when the families were encouraged to participate. Port et al. (2005) reported family members spent more than four hours each week visiting a relative in assisted living. Some factors that are associated with greater frequency of contact include living nearby, being white, and having a relative without cognitive impairment (Port et al., 2001; Yamamoto-Mitani et al., 2002). Of the studies reporting visiting patterns, it was clear to the observer that visits occurred daily (Puurveen et al., 2018). It is interesting to find out that families did not view their involvement in fixed terms, but saw the visits as fluid and shifting over time. It seems that the frequency of visitation varies by family member, older adult, location, and situation.

There are challenges associated with family involvement and interactions and older adults living in the communities; however, there are limited research studies in the literature. One challenge identified focused on the cognitive status of older adults. For instance, Dobbs et al. (2005) examined the reasons older adults with dementia did not participate in activities with their families in nursing homes compared to assisted living. They found limitations in activities of daily living, the environment of the location, and frequency of family involvement to be factors associated with a lower prevalence of participation in the nursing home versus assisted living (Dobbs et al., 2005). It was also noted greater family involvement and encouragement, despite the cognitive status, would result in more participation from older adults. Characteristics of the caregivers and family members govern the frequency and length of involvement.

Yamamoto-Mitani et al. (2002) found the status of spouse, lower education, close past relationship, and living close to the community predicted more and longer visits. On the contrary, caregivers who were still employed and held advanced degrees declined in their frequency of being involved.

Assessment

For the assessment of family interaction, an interview with the Leisure Services Coordinator, observation of a planned event, and a professional assessment were utilized. The Leisure Services Coordinator is responsible for organizing community events, completing resident admission surveys, and supervising Leisure Service Assistants. The interview questions, as noted in Table 4, are based on content within the literature review and contained self-constructed questions. The observation questions are also based on content within the literature review and contained self-constructed questions. Both sets of questions were used to identify missing areas in the planning of events for residents and families as well as to identify areas that can be improved upon.

The professional assessments are from HealthMeasures PROMIS. PROMIS measures physical, mental, and social health for the general population and individuals living with chronic conditions (PROMIS, 2018). The three assessments include the Companionship Short Form (SF) 6, Informational Support SF 8, and Emotional Support SF 8. One important note about the measures is the length of the questions indicates the domain is being studied more and the measure is becoming more precise (PROMIS, 2017). The number behind SF indicates the number of questions. Some sample items from the Emotional Support measure are “I have someone who will listen to me when I talk.” and “I have someone to confide in to talk to about myself or my problems.” (PROMIS, 2017). A Likert scale response is used which gives five options: *Never, Rarely, Sometimes, Usually, and Always*. To score the measures, the raw score is

totaled and divided by the number of questions. This score results in the raw score which helps identify the scale score and standard error. This identifies whether the participant is below, at, or above the average population. Each measure has a minimum and maximum score:

Companionship, 6 and 30; Emotional Support, 8 and 40; and Informational Support, 8 and 40 (PROMIS, 2014; PROMIS, 2015; PROMIS, 2017).

Findings

The results of the interview are summarized in Table 4. One interview finding recognized a change in events over the years involving friends and family members. In previous years, families and friends were involved more often in the events at North Shore. Reasons for the change in involvement resulted from family scheduling conflicts, staffing issues, and resident behaviors. Depending on the event, residents would have irregular bowel movements from food consumed not normal to their diet, and refuse to attend events in large gathering spaces. For example, after a rich holiday meal with their families, residents would experience diarrhea and irregular bowel movements because they didn't follow their diet for one meal. It would take a day or two for the resident's bowel movements to return to normal. Along with the change in events involving families is the frequency of planned events with families, not just families being encouraged to come for an already planned event. Two past events planned for families and residents were outdoor gatherings. Over the years, those types of events have occurred less, although the holiday meals with families have persisted.

Table 4

Responses to Interview Questions

Question	Interviewee Response
Describe some ways you and North Shore promote family involvement and interactions.	The majority of the family involvement in interactions are in the health care and memory care areas, although the family is also involved with those living in independent and assisted living. Family involvement is very encouraged here a North Shore.
Describe some past events/activities families have participated in at North Shore.	Some examples of past events are outdoor gatherings, family picnic and holiday meal twice a year.
How often does your community integrate family activities into its schedule?	Family activities are integrated a few times a year: meals, holidays, socials.
How would greater family involvement in activities/events impact a resident's quality of life, happiness, etc.?	For older adults living in memory and health care, the frequency of their families visiting is high for some residents. Family members are very responsive to their older adults living in the care center and make time to be by themselves with their older adult, whether in a private room or off-campus. For spouses who live in North Shore but are in different levels of care, they visit each other very frequently and their spouses greatly value the time spent.
What are some benefits to family involvement in day-to-day activities and events for residents at North Shore?	Family presence is a way for them to create memories with their loved ones. Encourages residents to participate in an activity they might otherwise ignore. Family can help with discussion topics that help residents share about themselves and family's stories.
How are families of different cultures accommodated in the community's events/activities?	We have universal holidays and events to reduce offending other people. For example, we celebrate Jewish holidays along with Christmas to not exclude them.
Are there any current challenges you're facing with family interactions?	The problem after a family event is chaos among the residents, staffing issues, and residents not wanting to join in the main areas for events. Regarding events in general, residents often make comments of not knowing when events are happening which requires staff to remind residents more often.

	There are troubles in communications between staff and residents when the newsletter contains all the event information.
Other	Residents can make suggestions in all levels of care for events. We have monthly events that we do in all levels of care, but also spontaneous events.

Results of the observation from an ice cream social among residents from independent living, assisted living, health care center, and memory care are summarized in Table 5. One finding from the observations focused on family members present. As mentioned above, family members are frequently encouraged to visit often and be engaged in events, although there were only four adult children present at the ice cream social. For the residents in the health care center and memory care who had family members with them, their behaviors seemed to be more happy and cheerful compared to residents with no family members present. Residents in independent and assisted living did not seem to be any less happy or cheerful than residents in the health care center and memory care. Another topic examined the family topic of conversation. Conversations that were observed seemed to have a more negative connotation. For example, one resident said their children were too far apart to take care of them, thus they were dropped off at North Shore.

Table 5

Observations of a Planned Event

Question	Observation
Are the older adults conversing with one another?	Residents in the health care center and memory care did not talk as much to their peers. Residents in independent and assisted living talked a lot to their peers and staff.
Is the topic of conversation light or in-depth?	Conversation topics ranged primarily on light topics among residents from the health care center and memory care: how is it going, Sensory garden flowers. Conversation topics among residents in independent and assisted living were more in-depth: upcoming board meetings, early life careers, families, North Shore environment.
Are staff engaging in conversation with residents?	Staff engaged less than frequently with residents. Staff periodically checked on residents for trash and safety.
Are there any family members present- adults, children?	There were 4 adult children present. Only observed residents from the health care center and memory care with the family. No adult children present with independent living and assisted living. No children present.
Are there comments about the residents wishing family members were present with them?	The only comments regarding families pertained to being dropped off at North Shore by their children. One resident commented North Shore was the only place to go since their children lived on the east and west coasts.

Results from the PROMIS assessments are summarized in Table 6. The Leisure Services Coordinator was asked to complete the three forms with a resident in mind, then determine how these types of assessments can be used in planning North Shore events to support. The resident the Leisure Services Coordinator had in mind was one who does not attend many planned events during the week, prefers to stay in their room and read the newspaper, and have their meals delivered to their room. The following scores were generated by utilizing the resident who stays in their room. When looking at Companionship, the raw score of 21 equals a scale score of 46.3 which results in a standard error of 2.3. The standard error of 2.3 means the participant is below

the average referenced population. This score would be considered an undesirable outcome. For Emotional Support, the raw score of 25 equals a scale of 43.1, which results in a standard error of 1.5. For this form, the outcome is desirable because it falls around 1.5 standard deviations above the average. The final measure, Informational Support, had a raw score of 26, scale score of 46.6, and standard error of 1.9. This outcome falls around 65 percent which would be an undesirable outcome because it is 1.9 below the average. The highest a participant can score on all three of these forms is a raw score of 40 which equals a scale score of 63.5 which would put the individual 5.3 standard deviations above the average. Based on the results of these three measures compared to the highest score available, the participant would need more companionship, emotional and informational support.

Table 6

Score of PROMIS Assessments

Form Name	Raw Score	Scale Score (T-Score)	Standard Error (Standard Deviation)
Companionship- SF 6	21	46.3	2.3
Emotional Support- SF 8	25	43.1	1.5
Informational Support- SF 8	26	46.6	1.9

Two follow-up questions accompanied the assessment in Table 7. Based upon the answers to the follow-up questions, these three measures would be helpful to create partnerships for residents who need more support in companionship and emotional support, and plan more events with visitor's residents would know. The partnerships can lead to relationships with people in the local community and schools.

Table 7

Follow-up Question Responses

Question	Interviewee Response
How could these types of assessments be used in planning North Shore events	The assessments could help plan more companionship, emotional and informational support. Companionship measure would be the easiest to implement and often would result in pairing resident with a friend. The emotional measure would be difficult because the residents want a specific person to confide in, but it could be done.
Do your current events help strengthen residents' informational and emotional support, and companionship?	Yes. Some events with special visitors often know residents here. Thus, they engage a lot with the residents, which makes residents happy.

Recommendations

Based on all the findings discussed above, there are three recommendations focused on furthering social support and family interaction and involvement at North Shore. The first recommendation is to incorporate the PROMIS assessments into the admission process. The Leisure Services Coordinator said these assessments would be useful because it can assist them in planning events to incorporate informational and emotional support and companionship into the events based on how residents would score themselves. For example, if a resident rated themselves poorly in companionship and emotional support, partnering with intergenerational groups in the community would be one avenue to address that problem. Integrating the PROMIS assessments into the North Shore is another way to design events that are meeting the needs of older adults.

The second recommendation is implementing an intergenerational program into North Shore's event calendar. Currently, North Shore does not have events involving youth. As noted in the literature, youth and older adults greatly benefit from this type of programming (Dobbs et

al., 2005; Plys & Bliwise, 2013). Older adults also have the desire to give back to younger generations which satisfies the generative feeling. The programming takes place within the community- schools, libraries- and life plan community. Generations United and Leading-Age put together an intergenerational program guide based on the findings from a yearlong study (https://leadingage.org/sites/default/files/Intergenerational_Programming_in_Senior_Housing_Full_Report.pdf). Leading-Age is a non-profit organization who leads initiatives to provide better aging services and resources. Some examples of programs and activities from the guide include arts programming, tutoring and mentoring, language learning, joint community service and co-learning, technology, health and workforce-related activities, and friendly visiting (Henkin et al., 2017). Through interviews conducted with program participants, they recommended the following strategies to be effective: be intentional about designing activities that foster crossed age understanding and empathy; offer a mix of opportunities for youth ranging from one time to on-going events; create activities that build on interest knowledge and skills of all the participants; and utilize life plan community vehicles to transport participants to activities (Henkin et al., 2017). Residents at North Shore as well as youth in the community would benefit and reap the many rewards associated with intergenerational programming.

To foster family involvement more effectively, I recommend staff read the book *Promoting Family Involvement in Long-Term Care Settings* and utilize applicable material. As it has been noted in the literature, family involvement has many positive benefits for older adults living in life plan communities (Plys et al., 2018; Port et al., 2001). This book offers innovative strategies and programs that are designed to get families more involved in ways that complement the staff and support older adults (Gaugler, 2005). The strategies and programs mentioned in this book have been tested across the country. Not only does this book talk about programs, but it

also talks about improving communication with family members. It also has been noted in the literature that communication between staff and family members is often tense and includes conflict (Puurveen et al., 2018). One important aspect of *Promoting Family Involvement in Long-Term Care Settings* was the section discussing overcoming barriers. The Leisure Services Coordinator discussed some of the barriers they experienced in family events. Thus, this section of the *Promoting Family Involvement in Long-Term Care Settings* could be beneficial. Cultivating family involvement and social support in life plan communities is important and the recommended book for North Shore will address the current challenge.

CHAPTER 3. SUCCESSFUL AGING AT NORTH SHORE

Case Introduction

The concept of “successful aging” was cultivated by John Rowe and Robert Kahn (1997). This concept has transformed into the “model of successful aging”, which has taken on various translations by different researchers over time. Successful aging has three major components including: biological, avoiding/preventing disease and disability; psychological, maintenance of cognition and physical function; and social, sustained social engagement with life (Cavanaugh & Blanchard-Fields, 2015; Rowe & Kahn, 1997). Many older adults have the desire to age well and avoid diseases/illnesses whether they are living at home or in a life plan community. It is also important for older adults to learn ways of adapting to change, but still maximizing the things they enjoy. This concept is called selective optimization with compensation (Baltes & Baltes, 1990). The question becomes how are life plan communities promoting and encouraging their residents to age successfully? This case study will examine North Shore’s promotion and involvement in their residents’ aging process.

Literature Review

Older adults hold various perceptions of what it means to age successfully. A study by Duay and Bryan (2006) examined a diverse (education attainment, religious affiliation, ethnicity, employment status) group of older adults’ perceptions of what successful aging entails. They found engaging with others, coping with changes, and maintaining physical, mental, and financial health were commonly held perceptions and strategies used to adapt to changes in life (Duay & Bryan, 2006). It was also noted that helping others gave older adults positive feelings of contributing to society, sense of purpose, and personal satisfaction (Duay & Bryan, 2006). Another held perception pertains to coping with change which is supported by Baltes and Baltes

(1990) model of selective optimization with compensation. This concept is described as becoming more selective in choosing activities and interests while seeking to maximize the chances of achieving desirable outcomes or goals within selected domains (Baltes & Baltes, 1990). An older adult may experience hardship from a physical limitation and still age successfully, despite their limitation, by adapting the process of selective optimization with compensation. When it comes to dealing with change, older adults often utilize various strategies to help them cope and age successfully. Duay and Bryan (2006) found positively accepting changes outside their control, having a strong faith, maintaining a positive attitude, and using learning as a coping strategy are some of the various strategies used.

Without knowing, the staff at life plan communities have a great impact on the residents' participation in events, activities, and aging. A study by Smith (2018) examined senior living employees' perceptions of aging and employee engagement. The author found that after controlling for age, gender, education, and amount of interaction with residents, it revealed that more positive perceptions of aging are associated with greater work engagement, lower burnout, and a higher sense of purpose (Smith, 2018). These findings suggest that residents will benefit greatly when the staff has positive perceptions/attitudes towards aging that result in a superior work environment. As noted by Holleran (2018), a strong engagement tie between employee and resident is important. When this type of relationship exists in life plan communities, staff feel they are treated better and residents have a higher perception of satisfaction and engagement in activities and events. Holleran (2018) also identified residents' successful aging is supported when they feel a stronger level of connectedness with staff. Broadly speaking, residents' successful aging is in part dependent upon staff engagement and support. Therefore, as noted by

Baltes and Baltes (1990), successful aging is related to positive health behaviors, including physical activity, good nutrition, mental health, self-efficacy, personal control, and socialization.

Assessment

For the assessment of successful aging at North Shore Retirement Community, interviews, observation of a strength exercise class, and professional assessments were utilized. The interviews took place with the Leisure Services Coordinator, Wellness Coordinator, and Director of Clinical Services in their respective offices. The Leisure Services Coordinator is responsible for organizing community events, completing resident admission surveys, and supervising Leisure Service Assistants. The Wellness Coordinator is responsible for organizing and leading exercise classes as well as coordinating personal training sessions. The Director of Clinical Services is responsible for developing and coordinating resident care plans and ensuring care plan compliance. All the interview questions were derived from the literature review and contained some self-constructed questions. A few sample questions both interviewees were asked included “Describe your current efforts to optimize resident aging.” and “Describe some ways you are working or strengthening those 3 components of successful aging for your residents.”

Observations were conducted on a strength exercise class to identify how staff encouraged residents to be engaged and actively participating. Questions to guide the observations contained self-constructed and literature review content. A few sample questions include “Are residents actively participating in the exercise?” and “Are residents socially engaged with their peers?”

A professional assessment from the HealthMeasures PROMIS followed. PROMIS measures physical, mental, and social health for the general population and individuals living with chronic conditions (PROMIS, 2018). Physical Function- Short Form (SF) 8b and Ability to

Participate in Social Roles and Activities- SF 8 were utilized. Physical Function and Ability to Participate have a minimum raw score of 8 and a maximum raw score of 50 and 40 respectively (PROMISE, 2018; PROMIS, 2019). The raw score is associated with a scale score or T-score that identifies where the individual is placed. The same scoring goes for Physical Function. A Likert scale response is used which gives five options: *Never, Rarely, Sometimes, Usually, and Always*. HealthMeasures has identified these two PROMIS assessments to be reliable with the internal consistency reliability of 0.90 (PROMIS, 2019; PROMIS, 2018). Both interviewees were provided with a completed assessment (Table 8) from the consultant who portrayed an older adult who rated themselves rarely and sometimes. Both assessments place the portrayed older adult one standard deviation worse than the average population. The highest a participant can score on Physical Function is a 50 raw score with a T-score of 61.3 which results in a 6.1 standard deviation above average. For the Ability to Participate assessment, the highest score possible is 40 with a scale score of 65.4 which results in 4.9 standard deviations above average. The interviewee's task was to evaluate the completed assessments and devise an action plan to assist this older adult in their physical function and ability to participate in social roles and activities.

Table 8

Consultant Portrayed Older Adult Completed Assessment

Form Name	Raw Score	Scale Score (T-score)	Standard Error (Standard Deviation)
Physical Function SF 10b	23	30.3	1.8
Ability to Participate in Social Roles and Activities SF 8	19	39.9	1.6

Findings

Results from the interviews are summarized in Table 9, Table 10, and Table 11. One finding from the interviews was the frequency of input residents have in events and activities that occur. As mentioned by the interviewees, North Shore is resident-owned. Thus, residents essentially determine what occurs. Residents can provide feedback constantly by sharing with staff resources and committee meeting decisions on new or different things they want to try. In most life plan communities, the staff is planning the events with little to no input from residents. North Shore has a person-centered care perspective that provides residents with an environment to be successful in their aging.

The second finding from the interviews was the incorporation of the many dimensions of wellness into the planned events and activities. On the event calendars, there are symbols next to each event that determines the aspect of wellness being challenged. For example, exercise class would fit into the physical and social dimensions. Since residents have mentioned they want to be engaged, providing the symbols represents the dimensions of wellness to help residents determine what area to be challenged in.

The third finding from the interviews is the frequency of staff involvement. The interviewees described ways they help residents accommodate changes, refer residents to visit with their doctors or take into consideration resident preferences for events and activities. The frequency of staff involvement is daily, if not weekly depending on the residents' care plans. Not only did the two interviewees describe ways they are involved, but they also described ways other staff within the community are involved with residents. For example, there is a Health Wellness Nurse Navigator that has conversations with residents when the nurse observes or hears about resident changes.

Table 9

Wellness Coordinator Interview Responses

Question	Interviewee Response
Describe your current efforts to optimize resident aging.	I try to keep the residents active and moving in the classes. As a wellness coordinator, I work on all the dimensions of wellness in my classes, not just physical. Since our community is resident-owned, there are tons of committees that drive my efforts since they can share what they want to do with all staff.
Successful aging contains 3 components: Biological-Avoidance and prevention of disease and disability; Psychological- Maintenance of cognitive and physical function; and Social-Sustained social engagement with life. Describe some ways you are working or strengthening those 3 components for your residents.	During some of the exercises, we will be marching and counting backward to challenge them cognitively. We hold a one-month program each year that includes nutrition, healthy cooking, fad diets, and guest visitors.
In what ways are you being challenged to plan exercises/events that work on those 3 components?	I don't have any goals set for how many events are planned. I focus on the needs of the residents because they share things they want to do. So, I guess my goals are similar to resident goals. I will bring in interns who develop exercise courses as their projects and incorporate them into the schedule if they are well-liked and successful.
How do staff help residents accommodate changes they experience?	If a resident is to change physically, I encourage them to change the level of exercise. There are nurses who follow-up with residents if they have a fall or accident to see where they are. Often residents' level of care changes. The Health Wellness Nurse Navigator helps facilitate conversations on change, shares resources, and assists in transitional changes (leaving the community).
How are residents able to provide input or feedback for the types of events that are cognitively and socially stimulating?	Since our community is resident owed, they give feedback all the time. Residents often give articles and resources to staff on things they find interesting. Residents want to help a lot- 'let's try this'.

Table 10

Leisure Services Coordinator Interview Responses

Question	Interviewee Response
Describe your current efforts to optimize resident aging	<p>I try to keep routine stimulation for some residents, but also a low stimulation environment for others.</p> <p>I think it is important to keep up with the trends for residents. We also incorporate skype from stimulation with family members, etc.</p> <p>On the event calendars, there is a legend that says what dimension of wellness is being worked on for residents to know.</p>
<p>Successful aging contains 3 components: Biological- Avoidance and prevention of disease and disability; Psychological- Maintenance of cognitive and physical function; and Social- Sustained social engagement with life.</p> <p>Describe some ways you are working or strengthening those 3 components for your residents.</p>	<p>For the health care center, there is daily socialization, intellectual events, and health practitioner visits three times a week.</p> <p>In independent living, a podiatrist visits often, 24-hour nursing care, skin checks, wellness services, and therapy. They also have weekly events that challenge them cognitively, etc.</p>
<p>In what ways are you being challenged to plan exercises/events that work on those 3 components?</p>	<p>I try to keep a wide variety of events for all the residents. Plan events that work on all the dimensions of wellness.</p>
<p>How are residents able to provide input or feedback for the types of events that are cognitively and socially stimulating?</p>	<p>Residents are provided with surveys every once a year. There are many committees here that have meetings often and inform staff on things they would like to try.</p>

Table 11

Interview Responses from Director of Clinical Services

Question	Interviewee Response
Describe your current efforts to optimize resident aging.	By creating a holistic clinical practice aimed towards creating the best opportunity for self-actualization for the resident.
Successful aging contains 3 components: Biological, Psychological, and Social. Describe some ways you are working or strengthening those 3 components for your residents	<p>Biological- All clinical programs are created with the intent to optimize resident physical & emotional health. Clinical programs include: Gradual Dose Reduction pharmacy review monthly, weekly chronic skin condition review, bowel & bladder retraining, psychotropic medication review, restorative therapy, pain assessment, infection prevention & control, antibiotic stewardship. General adherence to best nursing practices is the foundation for all the other clinical programs. Psychological Therapy on-site supported by nursing through the restorative program. Wellness coordinator in conjunction with the Activity programming.</p> <p>Social- Sustained social engagement with life Activity programming and friendship with the clinical nursing team. Strong social connections benefit the nursing team and the residents.</p> <p>Addressing quality measurables in a systematic review system called Quality Assurance Performance Improvement (QAPI). Reviewing residents' comments at monthly resident council meetings. Reviewing resident & family satisfaction with anonymous satisfaction surveys. From those sources, we are identifying that the Activity programming needs to reach further to meet residents' desires. Delivering mail to residents' expectations and waiting times in the dining rooms have been recent concerns from the residents. The nursing team is working on adhering to regulatory compliance with snack charting.</p>
In what ways are you being challenged to promote the biological aspect of successful aging?	Regulations and guidelines for quality from CMS challenge the clinical team to promote all areas of resident health. Resident & family expectations for service push the desire for better outcomes ultimately.
If you are notified of a resident who is decreasing in their ability to function or continually ill, what is your course of action?	Preferably have an RN provide the assessment to identify the possible root cause to address underlying conditions to assist the resident in achieving their optimal outcome. RNs will follow a guide in addressing health concerns acutely and chronically. ADPIE: Assessment, Diagnosis, Planning, Implementation, and Evaluation is an example of a nursing care planning system. It is very effective for any resident concern.

Results of the observation are summarized in Table 12. A major observation was the intentionality of the resident's engagement in exercise and aging. When the residents were asked the question of what they were doing to age well, all of them had things to share. Some of what the residents shared was what they had been doing since their middle adulthood and found great enjoyment in them. So, it is fair to say that the residents at North Shore are actively engaged in their aging and are being successful. The Wellness Coordinator also had an impact on the residents' engagement. The Wellness Coordinator greeted all the residents individually as they came into the aerobics room and was happy to see the residents. Throughout the class, the Wellness Coordinator was saying encouraging things to keep the residents going. As it is mentioned in the literature, staff involvement has an impact on the successful aging of residents (Holleran, 2018; Smith, 2018).

Table 12

Exercise Class Observations

Question	Observations
Ask residents: What are some things you are doing to age well?	Keep a garden. Stay active more than sedentary. Attend the exercise classes weekly. Go to events that are cognitively stimulating like bridge or cribbage. Kept up the same/similar activities of younger adulthood.
Are residents actively participating in the exercise?	As the residents arrived at the class, they went to the storage closet to get their equipment and put it by their seat. Majority of the residents were actively participating in the exercise. One of the residents was more passive in participating. If a resident was not doing the exercise completely, a few of the residents would encourage them to lean back farther in their chair for the dumbbell chest press or sit-ups.
Are residents socially engaged with their peers?	Before the beginning of the class, residents were talking with the wellness coordinator and their peers. They talked about what events were going on for the day, how a trip went for one of the residents, and the train coming through the town.

	<p>One of the residents was quieter and we did at her seat to begin the class.</p> <p>During the exercise, many of the residents were talking across the room to each other and encouraging each other to try harder.</p>
<p>How is the Wellness Coordinator encouraging residents in the exercise?</p>	<p>The wellness coordinator said encouraging phrases “like almost there, feel that stretch, keep going, you'll feel this tomorrow”.</p> <p>The wellness coordinator had a very positive and upbeat behavior in their tone. This helped the residents to keep working through their exercises.</p>

The results of the assessment follow-up are summarized in Table 13 and Table 14. Based on the follow-up interview, the PROMIS assessments of Physical Function and Ability to Participate would be useful to assess baseline results upon admission to the community and develop a course of action for low scores to assist residents in their successful aging. The social component of the “successful aging model” can be assessed with the Ability to Participate questionnaire: how comfortable a resident feelings engaging with others, and the limitations and troubles they have with completing leisure activities. The PROMIS assessments could also be incorporated into their current processes like the wellness fair that is held annually.

Table 13

Physical Function and Ability to Participate Assessment Follow-up: Wellness Coordinator

Question	Interviewee Response
<p>How could this type of assessment be used in planning events knowing a resident's scores?</p>	<p>The Physical Function and Ability to Participate assessment forms would be useful for planning events.</p> <p>The problem is that these assessments might not be returned. However, we could incentivize them to get them back soon. We currently have a wellness fair for one week each year. There are health and ability assessments residents can take. They are voluntary, so not many people do them.</p>
<p>Let's say a resident took this assessment and rated their physical function and ability to participate low. What</p>	<p>For a low score of Physical Function, residents can see their doctor to have therapy orders prescribed, the therapist and wellness coordinator can talk about what's next for them or recommend personal training to increase their physical function.</p>

would be your next steps to help them know their scores?	When looking at Ability to Participate with a low score, classes are offered to the resident based on and observed ability by the wellness coordinator, in share some of the events that are planned by the leisure services coordinator staff.
---	---

Table 14

Ability to Participate Assessment Follow-up: Leisure Services Coordinator

Question	Interviewee Response
How could this type of assessment be used in planning events?	This type of assessment could be used by planning events that go along with the resident's preference for activities, events that are open to family and friends to attend, or that include tasks that the resident would have previously done at home- i.e. baking, folding laundry, raising children.
Let's say a resident took this assessment and rated their physical function and ability to participate low. What would be your next steps to help them know their scores?	Would have a conversation with that resident asking them why they think their ability to participate is low and how we could accommodate their needs to help them attend and participate in the activities that are important to them. An example of this is that many residents say that going to church is important, but they can't go to church anymore due to not being able to drive or no one is here to take them. Would further explain that we have weekly church service here with pastors from the community. We would see if the church they belong to is one of the churches that comes to here, and if their church doesn't come here, we'd investigate partnering with that church.

Recommendations

Overall, North Shore is performing well in promoting successful aging among its residents in all levels of care based upon the interviews, observations of an exercise class, and follow-up responses to the PROMIS assessments. Residents are actively engaged and challenging themselves daily as well as being encouraged by staff. Staff is also creating and providing residents with a holistic environment that fosters growth, wellness, and aging. The recommendation for North Shore to further their residents' successful aging includes incorporating in the community newsletter biannually preventative strategies for maximizing

successful aging. Cavanaugh and Blanchard-Fields (2015) have a chapter in their textbook that focuses on successful aging. The authors wrote about four strategies that older adults can utilize that pertain to concepts found in the successful aging model: physiological, social, biological. The first strategy is to adopt a healthy lifestyle by making it a part of your daily routine. The second strategy is to stay active cognitively by keeping an optimistic outlook and maintaining interest in things. Maintaining a social network and staying engaged with others is the third strategy. The final strategy is to maintain good economic habits to avoid financial dependency. Currently, North Shore has planned events, available resources and staff to assist older adults in pursuing successful aging. Since North Shore is resident-owned, residents should have input in the ways they want to age successfully while staff should be taking their input seriously. Incorporating these preventative strategies into the community newsletter biannually will remind residents that staying engaged and active is important to age well. Residents at North Shore display positive health behaviors such as physical activity, good nutrition, mental health, self-efficacy, personal control, and socialization (Baltes & Baltes, 1990) that are related to the components of successful aging.

CHAPTER 4. ENVIRONMENTAL STUDY OF NORTH SHORE

Case Introduction

In the next few decades, the United States will experience a steady growth of the 60 and older population. Appropriate housing in older age not only provides residential stability and personal meaning but also environmental support to overcome or compensate for declines in the functional capacity associated with aging (Lawton & Nahemow, 1973). There are many useful conceptual frameworks and theories that can be used to study a lived environment. For the purpose of this case study, Lawton and Nahemow's (1973) ecological theory of aging will be used. This case study will examine the life plan community's design and the natural environment.

Literature Review

To begin, Lawton and Nahemow's (1973) ecological theory of aging looks at how the performance of comfort with daily necessities and desired activities is possible when there is an appropriate match between a person and their environment. The match between a person and an environment is called person-environment fit (P-E fit). When there is not a P-E fit, home modifications or move to a life plan community are undertaken. Life plan communities are built with the universal design and desirable features of older adults for a good P-E fit. Universal design is the design of spaces (residential and commercial) and environments that are accessible by all people regardless of ability level and age.

One aspect of life plan communities desired by residents is the natural environment: views and exterior spaces. It has been noted in the literature that individuals living in standalone communities or life plan communities prefer nature over urban scenes, whether in actual experience or in pictures of nature scenes (Reynolds, 2016). Research on the environment and

human behavior has shown that views of nature and being in natural settings are associated with elevated mood, decreased depression, and reduced stress (Reynolds, 2016). One study explored how individuals living in care environments perceived the value of nature and personal factors that may influence the use of garden spaces. Results identified that views of nature are fundamentally important to resident well-being, access to nature influences community choice, and the use of garden spaces are influenced by the way in which individuals prefer to enjoy nature (Reynold, 2016). Thus, it is important for life plan communities to design spaces within the community, whether indoor or outdoor, for residents' positive well-being.

Brawley and Troxel (2002) found outdoor environments to be therapeutic for residents. These outdoor spaces put the focus on older adults' physical and emotional support as well as the needs of the aging body (Brawley & Troxel, 2002). They also provide activities that reaffirm an individual's dignity, self-esteem, and happiness (i.e. vegetable gardens for fresh produce and flowers to decorate indoor spaces; Brawley & Troxel, 2002). Outdoor environments also provide psychological benefits. One study examined the effect of horticulture therapy and gardening activities for older adults living in long-term care facilities. They found participating in gardening significantly increased psychological well-being, enhanced sense of achievement, confidence, and satisfaction (Sugiyama & Thompson, 2007). Therefore, natural environments are highly valued by residents and beneficial for their physical health and well-being.

Assessments

For the environmental assessment of North Shore Retirement Community, interviews with staff, and observations of the community with an environmental checklist were utilized. The Administrator of North Shore and the Director of Facilities were interviewed jointly. The Administrator is responsible for overseeing all department personnel and financial matters, and complying with federal policies. The Director of Facilities is responsible for overseeing

housekeeping and maintenance personnel, managing facility operations, and conducting facility inspections. The interview questions were formed from content found in the literature and contained self-constructed questions. The questions served as the interview guide.

For the observations of North Shore's environment, the environmental checklist was based on Victor Greiner's chapter, *Design for Assisted Living* (2002), and an indoor environmental study by Roya Bamzar (2019). Regnier (2002) has identified the features and characteristics important to an environment being socially and physically successful. Taken as a whole, the features and characteristics provide a comprehensive checklist for measuring the appropriateness of a space (Regnier, 2002). On the contrary, taking the features and characteristics individually allows spaces to be questioned, reviewed, and enhanced (Regnier, 2002). Bamzar (2019) assessed the quality of the indoor living environment of a local senior apartment by utilizing a checklist that was in accordance with universal design. The domains to be assessed included: outdoor spaces as rooms; variety and control of lighting; realm between the inside and outside; wildlife attraction; and resident gardens. The checklist can be interpreted as what the community is currently utilizing and areas they need to improve upon or incorporate more efficiently if the domain is not present. Regnier's chapter and Bamzar's study offer suggestions and alternatives for improving the observed spaces. The checklist guided observations of the indoor and outdoor areas of nature's involvement.

Findings

The results of the joint interview are summarized in Table 15. One finding from the interview was the design of environments must follow specific state code. This may or may not result in a good P-E fit for the residents. A good P-E fit for a resident means the environment is meeting the needs of an individual and the environmental demand is met by the individual's abilities (Lawton & Nahemow, 1973). One example of this provided by the administrator was

black toilet seats in the bathrooms of memory care rooms to establish a difference between the ground and toilet for residents with visual or cognitive impairments. For these individuals, this necessitates a good P-E fit. The administrator and director of facilities both mentioned the unconventional long hallways of the health care center were once a trend of building nursing homes and met state codes but now are unappealing. More recent buildings of nursing homes or health care centers have private resident rooms build around a shared living and dining space.

Another observation was the additions that were made to heighten outdoor spaces of nature rather than the indoor spaces. As per the request of residents and management decisions, North Shore has added raised garden beds, a sensory garden in the health care and memory care area, the Health Hikers Club as well as a walking path around the pond and prairie. A sensory garden is an environment designed to stimulate the five senses (taste, touch, smell, sound, sight) with various floral textures and materials. The Health Hikers Club is an afternoon walk around outdoor and/or indoor spaces, depending on the weather, led by a Restorative Aid from the physical therapy office. Studies have found views and experiences with nature improve resident well-being and satisfaction (Reynolds, 2016). Since the introduction of the raised garden beds, all of them are reserved by residents each year with more to be built. The Health Hikers Club participation has significantly increased to a larger number. Management believes these additions are improving their residents' lives.

Regarding the indoor spaces, there have not been many changes to incorporate nature within the community. The administrator mentioned the memory care area would benefit from nature involvement within their space and should consider making this addition to resemble the rest of the community's nature involvement.

Table 15

Interview Responses from Administrator and Director of Facilities

Question	Interviewee Response
How do you or other staff determine if an environment is a good fit (match) for a resident?	The environment is guided by specific codes we must follow such as certain room sizes, light emission, colors. For people with dementia in the memory care area, there are black toilet seats to help them identify where it is
If an environment is determined as not a good fit (match), what is the process for addressing it?	See how the environment is not helping the individual. Make changes to best work for the individual as long as it meets codes and is safe.
Share with me the changes in outdoor and indoor spaces of nature over the years. Were these changes initiated by resident comments/feedback or management?	There are raised garden beds, the addition of the sensory garden, various flowers with colors and textures, and bird feeders for the outdoor spaces. Not much change for indoor spaces. It is a combination of both residents and management. There are committees to discuss these changes.
How could the views of indoor and outdoor spaces of nature be heightened?	For memory care, bringing in more plants and views of the sensory garden for those with that view and flowers outside the other resident windows with no garden view. We have added a Health Hikers for residents in the health care center. They walk around the community and trails to the pond and prairie. This is liked by many of the residents.
What benefits do you think nature has on your residents-independent to memory care?	For those who face the sensory garden, they love to see the colors and birds. It gives them a sense of peace and incorporates more life. Independent living has access to the raised garden beds where they can grow whatever they please. This gives them a sense of purpose and enjoyment.
Describe the process of remodeling or renovating spaces.	We renovate spaces to keep up with technology, growth of the community, and needs of residents. Currently remodeling the health care center to make it more home-like and durable, but also meet codes. Regarding technology, we want the spaces to work well for family visits, lift chairs, and reduce the use of extension cords. Also, use other health care and retirement communities as guides for what the new trends are- Brio of Johnston.
Describe your ideal health care center layout and function?	This space is open with low-level windows (floor-ceiling) and no central nursing station. It would have technology incorporated into

	<p>resident rooms and gathering spaces such as Alexa (turn of the lights i.e.).</p> <p>There would be bigger beds and private bathrooms/showers with more features than just a TV.</p> <p>A wellness space would be incorporated into the health care center as a living room feels.</p>
What would it take for this ideal environment to be a reality?	<p>The funding is a big component.</p> <p>Also working with someone like an architect who understands health care needs.</p>

Results of North Shores' environmental study are summarized in Table 16. Several findings resulted from the observations that are important to P-E fit and nature experiences. The first finding pertains to nature's involvement in entry spaces and resident windows. These two spaces contained the least involvement of nature. As someone is pulling into the community, the independent living balconies and main entrance are first seen and contain many flowerpots and mini gardens. As you continue north around to the assisted living, the health care center, and the north entrance (not facing the sensory garden) contained zero floral planters or window boxes. These three areas are lacking a nature component compared to the front area of the community. There is a need for consistency throughout the community regarding nature's involvement that all residents desire and positively benefit from.

Another finding is the contrast from the realm between inside and outside. The only locations in the community with the realm is the health care center activity room and The Bistro. Four large floor-ceiling windows connect residents inside to the outside sensory garden. The Bistro also had floor-to-ceiling windows with views of open green space to connect residents with the outdoors. This is a popular place for residents to visit with friends and enjoy a snack. There are several other locations that could have an increased realm such as the library and the independent and assisted living dining rooms. Currently, these three locations have a partial view of nature; however, it is not a continuum as Regnier (2002) suggests. These are also highly

visited locations and a view of nature would heighten the space. The characteristics of the environment have an influence on one's ability to navigate the environment.

Table 16

Environmental Checklist for Observations

Statement	Observation
<p>Develop outdoor spaces as rooms</p> <ul style="list-style-type: none"> a. Walking around the building b. Views to the site c. Entry landscape d. Benches to rest e. Barbecue plaza f. Exterior retreat places g. Dwelling unit windows h. Resident gardens i. Shade Control j. Outdoor storage places k. Walkways and pathways- slip-resistant and safe 	<ul style="list-style-type: none"> a. Some parts of the community have paths around it. There is a path from independent living to the garden. The path from the front reception area around the east side of independent living. The long-term residents on the west side of health care have a path. b. There are views from almost all the windows to a garden space or courtyard area. c. There is not much nature involvement in entry spaces. Not very appealing. d. The sensory garden, courtyard, and sidewalks have benches to rest on. e. Two spaces have a barbecue space- between independent and assisted living as well as between assisted living and health care center. f. The sensory garden and pond areas are large retreat spaces with gazebos and seating. g. Only independent living has dwelling windows h. Residents in independent living have attached porches with flowerpots and mini gardens only. i. The only space with shade control is the sensory garden with several large trees and a covered gazebo. j. No outdoor storage spaces that were visible. k. The majority of the sidewalks and pathways have smooth pavement. The sensory garden has some bricks as pavement, which can be slippery.
<p>Provide variety and control of lighting</p> <ul style="list-style-type: none"> a. Pools of light b. Balance natural and artificial light c. Skylights and clerestory windows d. Control of natural light e. Lights on pathways and sidewalks 	<ul style="list-style-type: none"> a. Several shared spaces in the community have pools of light: library, activity room, hallways, reception area. b. There is a great balance of natural and artificial light. Dimmer switches and blinds c. The reception area has a large skylight above a seating area that draws in a lot of natural light. During the day, artificial light is off or dim. d. All windows in the shared spaces have blinds to block natural light as needed. e. There are no lights in any pathways around the community outdoor or indoors.

<p>Provide a realm between the inside and outside</p> <p>1. Continuum of indoor/outdoor experiences</p> <p>a. Large viewing windows</p> <p>b. Landscape views from rooms</p> <p>c. Erker or bay windows</p> <p>d. Front porches</p> <p>e. Enclosed and French balconies</p>	<p>a. Large windows provide a continuum of light and views in hallways to assisted living and health care, activity room.</p> <p>b. The health care center activity room, hallway between the courtyard and assisted living dining room have large (tall and wide) windows. The library is an ok viewing space.</p> <p>c. All rooms have a view of some form of nature: sensory garden, raised garden beds, forest.</p> <p>d. No erker or bay windows present in the community.</p> <p>e. Independent living (townhomes) have front porches. A few independent living apartments have enclosed balconies, the rest do not.</p>
<p>Attracting wildlife</p>	<p>All the outdoor garden spaces attract wildlife such as squirrels, rabbits, butterflies, and various birds.</p>
<p>Resident gardens</p> <p>a. Raised garden beds</p> <p>b. Fixed planters and garden beds</p> <p>c. Window boxes</p>	<p>a. The garden neat the pond and independent living townhomes have raised garden beds that were a recent addition.</p> <p>b. A few places in the sensory garden had garden beds near resident windows. No fixed planters, all are moveable.</p> <p>c. There are no window boxes on any exterior window.</p>

Recommendations

Recommendations for North Shore were based on the literature review discussion, in addition to an assessment of the above findings. The first recommendation is to incorporate nature indoors. This can take several different forms such as flower planters in the common areas (e.g., library, The Bistro), an enclosed garden room, and indoor container trees in the hallway corners. For some residents who may not be able to visit the raised garden beds outdoors, an enclosed garden room would allow these residents to care for plants and provide them with enjoyment and a sense of purpose year-round. Regnier (2002) discussed ways to design enclosed garden rooms to make them accessible for all and allow year-round floral growth. North Shore has two possible locations that would accommodate an enclosed garden room such as the east side of the courtyard between the aerobic room and independent living-dining room and between the north side of the assisted living and south side of the health care center.

The second recommendation is to incorporate nature in the areas with limited nature involvement. These areas include windows of the first and second floor of assisted living, health care center and memory care not facing the sensory garden, and the health care center entrance. All the rooms not facing the sensory garden could have window boxes and garden beds placed outside the window at viewing height, except for the second floor. This would be a nice addition for residents who like to look out the window. A chapter in Regnier's book (2002) discusses how to design resident gardens with window boxes and fixed planters. Compared to the main entrance, the health care center entrance has a nursing home appearance. This can be changed by making it look like the main entrance with the same color brick pillars, porte-cochere (covered porch-like structure), brown benches, and mulch landscaping with bushes.

SUMMARY

The present case study took four topics (nutrition, family interaction, successful aging, and environments) from the Great Plains IDEA curriculum (Geron 534, Geron 545, Geron 563, Geron 577) and applied them to North Shore Retirement Community. Interview questions, observations, and professional assessments were utilized to identify areas of the community they can improve upon and strengthen current practices. The findings of each topic assessment along with the literature review were implemented to provide specific recommendations.

Evaluation

To evaluate the present study, the findings will be assessed in relation to the recommendations to identify their practicality and real-life application. Some of the recommendations made are more costly than others; however, all of them will positively benefit residents and staff of North Shore. The first recommendation was utilizing local university students studying nutrition presenting material and local university Extension and Outreach programming about older adult nutrition. Since the life plan community is associated with the university, there are no known associated costs. Several departments within the community allow university students to complete internships at no cost. However, there may be associated costs for utilizing the university Extension and Outreach materials as Extension specialists lead the courses. These recommendations are practical and applicable because it will not have any financial investment and allow residents to learn about nutrition through a collaboration with the local university.

The second recommendation of social support and family interaction by planning more family events and utilizing existing programs will have many benefits for participants and require some financial investments. In the literature review for this section, life plan

communities that utilized family and intergenerational programming observed older adults and family members positively benefited compared to communities that did not utilize these programs or events (Kaplan et al, 2006). Two of the three recommendations would require a financial contribution from North Shore. By creating partnerships with community businesses and planning more family events, residents and/or their families would be paying for meals and events with outside entertainment, etc., although the costs should not be extensive if planned effectively. These recommendations, in relation to the findings, are practical and applicable because the positive benefits from participation and financial contribution of North Shore are worthwhile.

The third recommendation for successful aging was incorporating preventive strategies for maximizing aging by Cavanaugh and Blanchard-Fields (2015). Findings from this section identified residents at North Shore are aging well because they are socially engaged with their peers, challenging themselves cognitively, physically, and psychologically through exercise, the continuation of hobbies, and staff encouragement. Based on these findings, residents of North Shore are successful in their aging by what they continue to do and what is provided by the community. The recommendation is practical because bi-annual reminders in the community newsletter have little financial costs that are different from the monthly newsletter budget and portray the importance of being active in aging successfully.

The final recommendation is to incorporate more nature indoors and outdoors through window boxes, fixed planters, flower plants, and an enclosed garden room. The findings identified North Shore had made recent additions to outdoor spaces but not indoor spaces. For this section, there are more practical recommendations than the others such as placing flower plants in hallways corners or window boxes at resident windows. All of them will require a

financial investment and staff and/or volunteer residents to maintain the plants. Several independent living residents help maintain the sensory garden. The more extensive recommendation is incorporating an enclosed garden room because an outside contractor will be required to build the garden room. As it was noted in this section's literature review, residents prefer views of nature (Reynolds, 2016) and experience positive psychological benefits (Sugiyama & Thompson, 2007).

Synthesis

A SWOT analysis has been put together to identify the strengths, weaknesses, opportunities, and threats of the organization. The analysis provides insight into the present study's ideas and findings. In summary, this case study was an opportunity to apply Great Plains IDEA concepts to a real-life organization to gain professional experience and reflection.

Strengths	Change from CCRC to life plan community
	Provides an array of services and amenities to residents in all levels of care
	Interviews with staff from different departments have similar perspectives on aging
	The resident-owned community that influences community events
Weaknesses	Areas of the organization that feel and resemble a nursing home
	Inconsistent utilization of nature (flower beds, planters) around the community inside and outside
	Less family involvement in planned community events over the years
Opportunities	Identified several areas of the organization that can be improved upon in a positive way
	Residents will have improved chances to be engaged in the community's events and amenities
	Create collaborations and partnerships with more local community organizations and agencies
	Appeal to more older adults looking for a community that has the consumer demands met
	Increased opportunities and benefits of growth in resident-ownership
Threats	Informal language of staff towards residents (honey, bud)
	Increase of adverse nutritional status of residents as a result of few educational opportunities

REFERENCES

- Abdelwahed, A. Y., Algameel, M. M., & Tayel, D. I. (2018). Effect of a nutritional education program on nutritional status of elderly in rural areas of Damanhur city, Egypt. *International Journal of Nursing Science*, 8(5), 83-92. doi: 10.5923/j.nursing.20180805.02
- Baltes, P. B., & Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P. B. Baltes & M. M. Baltes (Eds.), *Successful aging: Perspectives from the behavioral sciences* (pp. 1–34). New York, NY: Cambridge University Press.
- Bamzar, R. (2019). Assessing the quality of the indoor environment of senior housing for a better mobility: A Swedish case study. *Journal of Housing and the Built Environment*, 34, 23-60. doi: 10.1007/s10901-018-9623-4
- Beck, A., Holst, M., & Rasmussen, H. (2008). Efficacy of the mini nutritional assessment to predict the risk of developing malnutrition or adverse health outcomes for old people. *The European e-Journal of Clinical Nutrition and Metabolism*, 3, 102-107. doi: 10.1016/j.eclnm.2008.03.001
- Bernstein, M., & Munoz, N. (2014). *Nutrition for the Older Adult 2nd ed.* Burlington, MA: Jones & Bartlett Learning, LLC.
- Bleda, M., Bolibar, I., Pares, R., & Salva, A. (2002). Reliability of the mini nutritional assessment (MNA) in institutionalized elderly people. *The Journal of Nutrition, Health & Aging*, 6, 134-137.

Brawley, E. & Troxel, D. (2002). *Designing dementia-friendly gardens*. Workshop presented at the Joint Conference of the National Council on Aging and the American Society on Aging, Denver, CO.

Cavanaugh, J., & Blanchard-Fields, F. (2015). *Adult development and aging*. Boston, MA: Cengage Learning.

Department of Health and Human Services, Centers for Medicare & Medicaid Services. (2013). Dining observations. Retrieved from <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/Dining-Observation.pdf>

Dobbs, D., Munn, J., Zimmerman, S., Boustani, M., Williams, C. S., Sloane, P. D., & Reed, P. S. (2005). Characteristics associated with lower activity involvement in long-term care residents with dementia. *The Gerontologist*, *45*(1), 81-86. doi: 10.1.93/geront/45.suppl_1.81

Duay, D. L. & Bryan, V. C. (2006). Senior adults' perceptions of successful aging. *Educational Gerontology*, *32*(6), 423-445. doi: 10.1080/03601270600685636

Gladstone, J. W., Dupuis, S. L., & Wexler, E. (2006). Changes in family involvement following a relative's move to a long-term care facility. *Canadian Journal on Aging*, *25*, 93-106. doi: 10.1353/cja.2006.0022

Henkin, N. Z., Patterson, T., Stone, R., & Butts, D. (2017). Intergenerational programming in senior housing: From promise to practice. *Generations United*, 1-47. Retrieved from https://leadingage.org/sites/default/files/Intergenerational_Programming_in_Senior_Housing_Full_Report.pdf

- Holleran, M. (2018). Senior living communities must foster connection and engagement. *McKnight's Senior Living*. Retrieved from <https://www.mcknightsseniorliving.com/home/columns/guest-columns/senior-living-communities-must-foster-connection-and-engagement/>
- Johnson, S., Nasser, R., Rustad, K., Chan, J., Wist, C., Siddique, A., & Tulloch, H. (2018). Review of nutrition screening and assessment practices of long-term care residents. *Journal of Nutrition in Gerontology and Geriatrics*, 37(3-4), 169-182. doi: 10.1080/21551197.2018.1482811
- Kaplan, M., Liu, S. T., & Hannon, P. (2006). Intergenerational engagement in retirement communities: A case study of a community capacity-building model. *The Journal of Applied Gerontology*, 25(5), 406-426. doi: 10.1177/0733464806292862
- Kim, B. H., Kim, M. J., & Lee Y. (2012). The effect of a nutritional education program on the nutritional status of elderly patients in a long-term care hospital in Jeollanamdo province: Health behavior, dietary behavior, nutritional risk level and nutrition intake. *Nutrition Research and Practice*, 6(1), 35-44. doi: 10.4162/nrp.2012.6.1.35
- Lawton, M., P. & Nahemow, L. (1973). Ecology and the aging process. In Eisdorfer, C. & Lawton, M. P. (Eds.), *The Psychology of Adult Development and Aging* (pp. 619-674). Washington, DC, USA: American Psychological Association
- Mangels, A. R. Malnutrition in older adults. *American Journal of Nursing*, 118(3), 34-41. doi: 10.1097/01.NAJ.0000530915.26091.be
- Nutritional Screening Initiative (NSI). (n.d.) DETERMINE checklist. Retrieved from <https://nutritionandaging.org/wp-content/uploads/2017/01/DetermineNutritionChecklist.pdf>

- Plys, E. J., & Bliwise, N. G. (2013). Family involvement and well-being in assisted living. *Senior Housing & Care Journal*, 21(1), 21-35. Retrieved from https://www.ttisi.com/wp-content/uploads/2016/04/SHCJ-NIC_2013_SeniorsHousingandCare_Journal.pdf#page=26
- Port, C. L., Gruber-Baldini, A. L., Burton, L., Baumgarten, M., Hebel, J. R., & Zimmerman, S. I. (2001). Resident contact with family and friends following nursing home admission. *The Gerontologist*, 41, 589–596. doi: 10.193/geront/41.5.589
- Port, C. L., Zimmerman, S., Williams, C. S., Dobbs, D., Preisser, J. S., & Williams, S. W. (2005). Families filling the Gap: Comparing family involvement for assisted living and nursing home residents with dementia. *The Gerontologist*, 45, 87-95. doi: 10.1093/geront/45.suppl_1.87
- PROMIS. (2014). PROMIS- Companionship [Measurement Instrument]. Retrieved from http://www.healthmeasures.net/images/promis/manuals/PROMIS_Companionship_Scoring_Manual.pdf
- PROMIS. (2015). PROMIS- Informational Support [Measurement Instrument]. Retrieved from http://www.healthmeasures.net/administrator/components/com_instruments/uploads/15-09-02_01-58-23_PROMISInformationalSupportScoringManual.pdf
- PROMIS. (2017). PROMIS- Emotional Support [Measurement Instrument]. Retrieved from http://www.healthmeasures.net/images/PROMIS/manuals/PROMIS_Emotional_Support_Scoring_Manual.pdf
- PROMIS. (2018). PROMIS- Ability to Participate in Social Roles and Activities [Measurement Instrument]. Retrieved from

http://www.healthmeasures.net/images/PROMIS/manuals/PROMIS_Ability_to_Participate_in_Social_Roles_and_Activities_Scoring_Manual.pdf

- PROMIS. (2019). PROMIS- Physical Function [Measurement Instrument]. Retrieved from http://www.healthmeasures.net/images/PROMIS/manuals/PROMIS_Physical_Function_Scoring_Manual.pdf
- Puurven, G., Baumbusch, J., & Gandhi, P. (2018). From family involvement to family inclusion in a nursing home settings: A critical interpretive synthesis. *Journal of Family Nursing*, 24(1), 60-85. doi: 10.1177/1074840718754314
- Regnier, V. (2002). Guidelines for housing the physically and mentally frail. *Design for assisted living* (pp. 253-277). Hoboken, NJ: Wiley.
- Reynolds, L. (2016) A valued relationship with nature and its influence on the use of gardens by older adults living in residential care. *Journal of Housing for the Elderly*, 30(3), 295-311. doi: 10.1080/02763893.2016.1198740
- Rowe, J. W. & Kahn, R. L. (1997). Successful aging. *The Gerontologist*, 37(4), 433-440. doi: 10.1093/geront/37.4.433
- Saarela, R. K.T., Lindroos, E., Soini, H., Hiltunen, K., Muurinen, S., Suominen, M. H., & Pitkala, K. H. (2014). Dentition, nutritional status and adequacy of dietary intake among older residents in assisted living facilities. *Gerodontology*, 33, 225-232. doi: 10.1111/ger/12144
- Saffel-Shrier, S., Johnson, M.A., & Francis, S.L. (2019). Position of the academy of nutrition and dietetics and the society for nutrition education and behavior: Food and nutrition programs for community-residing older adults. *Journal of the Academy of Nutrition and Dietetics*, 119(7), 1188-1204. doi: 10.1016/j.jand.2019.03.011

- Smith, J. (2018). Senior living employees; perceptions of aging and employee engagement. *Innovation in Aging*, 2(1), 452. doi: 10.1093/geroni/igy023.1694
- Suguyama, T., & Thompson, C. W. (2007). Outdoor environments, activity, and the well-being of older people: Conceptualizing environment support. *Environment and Planning A*, 39, 1943-1960. doi: I:10.1068/a38226
- Yamamoto-Mitani, N., Aneshensel, C. S., & Levy-Storms, L. (2002). Patterns of family visiting with institutionalized elders: The case of dementia. *Journal of Gerontology: Social Sciences*, 57B, S234–S246. doi:10.1093/geronb/57.4.S234

APPENDIX A. NUTRITION AT NORTH SHORE ASSESSMENTS**Interview Questions**

1. How are residents screened for nutritional status upon admission?
2. Who is involved in creating nutrition plans for residents if they're needed?
3. How often are resident plans reviewed?
4. How are residents educated/informed about nutrition?
5. What is the process for creating a menu that meets the daily nutritional value?
6. How do staff work together to prevent malnutrition or obesity among residents?
7. What challenges are you facing regarding nutrition at this facility?

Observation Questions

1. Does the facility serve meals that conserve nutritive value, flavor, and appearance, and are palatable, attractive, and a safe and appetizing temperature (e.g., provide a variety of textures, colors, seasonings, pureed foods not combined)? Yes No
2. Does the facility offer an appealing option of similar nutritive value to residents who refuse food being served? Yes No
3. Does the facility promote care for residents in a manner and in an environment that maintains or enhances each resident's dignity and respect in full recognition of his or her individuality? Yes No
4. Does the facility engage in conversations with residents about nutrition and eating healthy? Yes No

Mini Nutritional Assessment

A. Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?

0 = severe decrease in food intake

1 = moderate decrease in food intake

2 = no decrease in food intake

B. Weight loss during the last 3 months

0 = weight loss greater than 3 kg (6.6 lbs)

1 = does not know

2 = weight loss between 1 and 3 kg (2.2 and 6.6 lbs)

3 = no weight loss

C. Mobility

0 = bed or chair bound

1 = able to get out of bed/chair but does not go out

2 = goes out

D. Has suffered psychological stress or acute disease in the past 3 months?

0 = yes

2 = no

E. Neuropsychological problems

0 = severe dementia or depression

1 = mild dementia

2 = no psychological problems

F1. Body Mass Index (BMI) (weight in kg) / (height in m)

0 = BMI less than 19

1 = BMI 19 to less than 21

2 = BMI 21 to less than 23

3 = BMI 23 or greater

F2. Calf circumference (CC) in cm (utilize if BMI not available)

0 = CC less than 31

3 = CC 31 or greater

Screening score (max. 14 points):

12-14 points: Normal nutritional status

8-11 points: At risk of malnutrition

0-7 points: Malnourished

DETERMINE	YES
I have an illness or condition that made me change the kind and/or amount of food I eat.	2
I eat fewer than 2 meals per day.	3
I eat few fruits or vegetables or milk products.	2
I have 3 or more drinks of beer, liquor or wine almost every day.	2
I have tooth or mouth problems that make it hard for me to eat.	2
I don't always have enough money to buy the food I need.	4
I eat alone most of the time.	1
I take 3 or more different prescribed or over-the-counter drugs a day.	1
Without wanting to, I have lost or gained 10 pounds in the last 6 months.	2
I am not always physically able to shop, cook and/or feed myself.	2
TOTAL:	

APPENDIX B. SOCIAL AND FAMILY SUPPORT AT NORTH SHORE ASSESSMENTS

Interview Questions

1. Describe some ways you and North Shore promote family involvement and interactions.
2. Describe some past events/activities families have participated in at North Shore.
3. How often does your community integrate family activities into its schedule?
4. What are some benefits to family involvement in day-to-day activities and events for residents at North Shore?
5. How would greater family involvement in activities/events impact a resident's quality of life, happiness, etc.?
6. How are families of different cultures accommodated in the community's events/activities?
7. Are there any current challenges you're facing with family interactions?

Observation Questions

1. Are the older adults conversing with one another?
2. Is the topic of conversation light or in depth?
3. How are the older adults utilizing non-verbals?
4. Are staff engaging in conversation with residents?
5. Are there any family members present- adults, children?

Assessment Forms

PROMIS is a set of person-centered measures that evaluates and monitors physical, mental, and social health in adults and children.

Information Support- SF 8a (PROMIS, 2015)

Statement	Never	Rarely	Sometimes	Usually	Always
I have someone to give me good advice about a crisis if I need it	(5)	(4)	(3)	(2)	(1)
I have someone to turn to for suggestions about how to deal with the problem	(5)	(4)	(3)	(2)	(1)
I have someone to give me information if I need it	(5)	(4)	(3)	(2)	(1)
I get useful advice about important things in life	(5)	(4)	(3)	(2)	(1)
I can get helpful advice from others when dealing with the problem	(5)	(4)	(3)	(2)	(1)
My friends have useful information to help me with my problems	(5)	(4)	(3)	(2)	(1)
I have people I can turn to for help with my problems	(5)	(4)	(3)	(2)	(1)
Other people help me get information when I have a problem	(5)	(4)	(3)	(2)	(1)

Emotional Support- SF 8a (PROMIS, 2017)

Statement	Never	Rarely	Sometimes	Usually	Always
I have someone who will listen to me when I need to talk	(5)	(4)	(3)	(2)	(1)
I have someone to confide in or talk to about myself or my problems	(5)	(4)	(3)	(2)	(1)
I have someone who makes me feel appreciated	(5)	(4)	(3)	(2)	(1)
I have someone to talk with when I have a bad day	(5)	(4)	(3)	(2)	(1)
I have someone who understands my problems	(5)	(4)	(3)	(2)	(1)
I have someone I trust to talk with about my feelings	(5)	(4)	(3)	(2)	(1)
I have someone with whom to share my most private worries and fears	(5)	(4)	(3)	(2)	(1)

wow I have someone I trust to talk with about my problems	(5)	(4)	(3)	(2)	(1)
---	-----	-----	-----	-----	-----

Companionship- SF 6a (PROMIS, 2014)

Statement	Never	Rarely	Sometimes	Usually	Always
Do you have someone with whom to have fun?	(5)	(4)	(3)	(2)	(1)
Do you have someone with whom to relax?	(5)	(4)	(3)	(2)	(1)
Do you have someone with whom you can do something enjoyable?	(5)	(4)	(3)	(2)	(1)
Can you find companionship when you want to?	(5)	(4)	(3)	(2)	(1)
Do you have someone to keep you company at home?	(5)	(4)	(3)	(2)	(1)
Do you have someone to go with you to an event?	(5)	(4)	(3)	(2)	(1)

Follow-up Questions

1. How could these types of assessments be used in planning North Score events?
2. Do your current events help strengthen residents' information and emotional support and companionship?

APPENDIX C: SUCCESSFUL AGING AT NORTH SHORE ASSESSMENTS

Interview Questions- Wellness Coordinator

- Describe your current efforts to optimize resident aging.
- Successful aging contains 3 components:
 - Biological- Avoidance and prevention of disease and disability
 - Psychological- Maintenance of cognitive and physical function
 - Social- Sustained social engagement with life

Describe some ways you are working or strengthening those 3 components for your residents.

- In what ways are you being challenged to plan exercises/events that work on those 3 components?
- How do staff help residents accommodate changes they experience?
- How are residents able to provide input or feedback for the types of events are cognitively and socially stimulating?

Interview Questions- Leisure Services Coordinator

- Describe your current efforts to optimize resident aging.
- Successful aging contains 3 components:
 - Biological- Avoidance and prevention of disease and disability
 - Psychological- Maintenance of cognitive and physical function
 - Social- Sustained social engagement with life

Describe some ways you are working or strengthening those 3 components for your residents.

- In what ways are you being challenged to plan exercises/events that work on those 3 components?
- How are residents able to provide input or feedback for the types of events are cognitively and socially stimulating?

Observation Questions

- Ask residents: What are some things you are doing to age well?
- Are residents actively participating in the exercise?
- Are residents socially engaged with their peers?
- How is the wellness coordinator encouraging residents in the exercise?

Assessment Form

Physical Function- SF 10 (PROMIS, 2019)

Statement	Without any difficulty	With a little difficulty	With some difficulty	With much difficulty	Unable to do
Are you able to do chores such as vacuuming or yard work?	(5)	(4)	(3)	(2)	(1)
Are you able to get in and out of a car?	(5)	(4)	(3)	(2)	(1)
Are you able to go up and down stairs at a normal pace?	(5)	(4)	(3)	(2)	(1)
Are you able to run errands and shop?	(5)	(4)	(3)	(2)	(1)
Are you able to bend down and pick up clothing from the floor?	(5)	(4)	(3)	(2)	(1)
Are you able to lift 10 pounds above your shoulder?	(5)	(4)	(3)	(2)	(1)
Statement	Not at all	Very little	Somewhat	Quite a lot	Cannot do
Does your health now limit you in doing vigorous activities, such as running, lifting heavy	(5)	(4)	(3)	(2)	(1)

objects, participating in strenuous sports?					
Does your health now limit you in bathing or dressing yourself?	(5)	(4)	(3)	(2)	(1)
Does your health now limit you and putting a trash bag outside?	(5)	(4)	(3)	(2)	(1)
Does your health now limit you in doing moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf?	(5)	(4)	(3)	(2)	(1)

Ability to Participate in Social Roles and Activities- SF 8b (PROMIS, 2018)

Statement	Never	Rarely	Sometimes	Usually	Always
I have trouble doing all of my regular leisure activities with others	(5)	(4)	(3)	(2)	(1)
I have trouble doing all of the family activities that I want to do	(5)	(4)	(3)	(2)	(1)
I have trouble doing all of my usual work (include work at home)	(5)	(4)	(3)	(2)	(1)
I have trouble doing all the activities with friends that I want to do	(5)	(4)	(3)	(2)	(1)
I have to limit the things I do for fun with others	(5)	(4)	(3)	(2)	(1)
I have to limit my regular activities with friends	(5)	(4)	(3)	(2)	(1)
I have trouble doing all of the work that is really important to me (include work at home)	(5)	(4)	(3)	(2)	(1)
I have to limit my regular family activities	(5)	(4)	(3)	(2)	(1)

Follow-up Questions

- How could this type of assessment be used in planning North Shore events knowing a resident's scores?

- Let's say a resident took this assessment and rated their physical function and ability to participate low. What would be your next steps to help them knowing their scores?

APPENDIX D: ENVIRONMENTAL STUDY OF NORTH SHORE**Interview Guide**

1. How do you or other staff determine if an environment is a good fit (match) for a resident?
2. If an environment is determined as not a good fit (match), what is the process for addressing it?
3. Share with me the changes in outdoor and indoor spaces of nature over the years. Were these changes initiated by resident comments/feedback or management?
4. How could the views of indoor and outdoor spaces of nature be heightened?
5. What benefits do you think nature has on your residents- independent to memory care?
6. Describe the process of remodeling or renovating spaces.
7. Describe your ideal health care center layout and function.
8. What would it take for this ideal environment to be a reality?

Environmental Checklist/Observation Guide (Regnier, 2002; Bamzar, 2019)

1. Develop outdoor spaces as rooms
 - a. Walking around the building
 - b. Views to the site
 - c. Entry landscape
 - d. Benches to rest
 - e. Barbecue plaza
 - f. Exterior retreat places
 - g. Dwelling unit windows
 - h. Resident gardens

- i. Shade Control
 - j. Outdoor storage places
 - k. Walkways and pathways: slip-resistant and safe
2. Provide variety and control of lighting
 - a. Pools of light
 - b. Balance natural and artificial light
 - c. Skylights and clerestory windows
 - d. Control of natural light
 - e. Lights on pathways and sidewalks
3. Provide a realm between the inside and outside
 - a. Continuum of indoor/outdoor experiences
 - b. Large viewing windows
 - c. Landscape views from rooms
 - d. Erker or bay windows
 - e. Front porches
 - f. Enclosed and French balconies
4. Attracting wildlife
5. Resident gardens
 - a. Raised garden beds
 - b. Fixed resides planters and garden beds
6. Window boxes