RESTAURANT-STYLE DINING IN SKILLED NURSING FACILITIES: RESIDENT AND EMPLOYEE SATISFACTION

by

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B.S., College of St. Teresa, 1974
M.S., Northern Illinois University, 1982

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Hospitality Management and Dietetics
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Abstract

The culture-change movement in skilled nursing facilities is challenging foodservices to consider their role in supporting the paradigm shift to person-centered care. Optimal nutrition for residents supports physical and emotional health of institutionalized older adults.

The purpose of this study was to explore factors associated with resident dining in skilled nursing facilities that have transitioned from a traditional foodservice system to restaurant-style dining. The study investigated foodservice employee perceptions of resident satisfaction with foodservices, foodservice employee job satisfaction, and effect of the delivery system transition on employee intent to leave. The study was conducted in two phases. Phase I was a case study of one skilled nursing facility's transition from the traditional foodservice to restaurant-style dining. Phase II consisted of a survey of residents and employees in seven skilled nursing facilities utilizing restaurant-style dining. Two questionnaires, addressing the constructs of food quality, service quality, and customization relating to resident satisfaction with foodservices, were developed and administered to residents and foodservice employees.

The Phase 1 case study revealed differences in financial and unintended weight loss data from pre- to post-menu transitioning. Focus groups provided insight into resident satisfaction with food and foodservices. In both phases, residents were satisfied with restaurant-style dining. Statements regarding the ability to choose foods at meals times scored highly. Service statements such as "Being treated respectfully by employees" were rated high by the residents. Portion sizes and food quality consistency were rated lower by residents.

Employee perceptions of resident satisfaction were consistent with the resident ratings of satisfaction. Foodservice employee job satisfaction was high and intent to leave was low. Job satisfaction mediated the relationship between the employee perception of resident service and their intent to leave.

Overall, restaurant-style dining appears to be a positive alternative to the traditional foodservice system in skilled nursing facilities. Implications and future research are discussed.

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CHAPTER 1 - INTRODUCTION

Relative to the rest of the population the number and proportion of older people are increasing. The rapid growth of the older population (age 65+) in the United States will continue over the next 50 years. Considering the upward pattern of growth, the demographics of aging will continue to change. The aging "Baby Boomers", those born between 1946 and 1964, will accelerate the growth of the aging population (O'Connor, 2003; Administration on Aging [AOA], 2007). This older generation is more highly educated, has greater net worth, and is enjoying fewer disabilities and longer life than previous generations. "Older", "wealthier", "more numerous", and "more demanding" are terms which will describe the type of customer that long-term care facilities can expect as Baby Boomers reach retirement age in the next decade and continue to expect "the finer things in life" (Rosenthal, 2003). Many older people report being socially active; this may account for the desire to live in a less structured atmosphere with more personal freedom (Oleck, 1998). The Baby Boomers are a very active, health-conscious group and their desire for services and choice will carry over should they elect to stay in long-term care facilities.

Approximately 1.5 million older adults currently reside in skilled nursing facilities (AOA, 2004). Today skilled nursing facilities, those that provide 24 hour nursing care, are being challenged to improve the quality of care and services provided to residents. In October 2004, the government established the National Commission for Quality Long-Term Care. The group's charge is to evaluate the quality of long-term care, identify factors influencing the ability to improve quality of care nationally, and make recommendations about national efforts that should lead to sustainable quality improvement. (http://www.qualitylongtermcarecommission.org/) Moreover, the National Quality Forum (http://www.qualityforum.org/) has recently endorsed a set of national voluntary consensus standards to measure the quality of care in nursing homes, giving consumers an important new tool to help in the selection of a facility. Together, these attempts make up the largest and most comprehensive nationwide effort to report on America's long-term care services.

One of the quality-of-care indicators, unintentional weight loss (UWL) or involuntary weight loss following admission into a residential healthcare facility, is a growing concern (Cowan et al., 2004; Gallagher, 2004; Keller et al., 2003; Levinson et al., 2005; Splett, 2003). Up to 85 percent of the nearly 1.6 million residents in American nursing homes have protein undernutrition and involuntary weight loss (American Medical Directors, 2002; Remsburg et al., 2001). Several studies have indicated that there are reversible factors associated with undernutrition. These factors include inadequate staffing, poor food quality and service, lack of resident choice, and suboptimal dining room environment (Remsburg, et al., 2001). Good nutritional status has been documented to reduce the susceptibility to infections, reduce incidence of hospitalizations, and lower the death rate associated with co-existing illness (American Medical Directors, 2002; National Citizens' Coalition for Nursing Home Reform, 2000). The National Pressure Ulcer Long-Term Care Study identified optimal nutrition as a strong variable in the prevention and treatment of pressure ulcers. This retrospective study identified characteristics of wound development and healing. Over 50% of the residents in this study had weight loss of over 5% in 3 months. Poor nutritional intake was documented for greater than 39% of the study group. Poor nutritional intake is associated with wound development and poor healing. Residents at high risk for pressure ulcer development require greater nutritional interventions including use of commercial meal replacements and tube feedings (Horn et al., 2002). As of November 2004, a weight loss quality measure was added to the Centers for Medicare and Medicaid Nursing Home Compare website. The weight loss quality indicator reports the percentage of residents, in individual facilities, that have experienced clinically significant weight loss over a 30-day period (CMS, 2008).

Culture change and person-centered care are the foci in the long-term care arena. Culture change in long-term care, as described by Haran (2006), is the transformation of an institution into a home, providing residents with more control in a home-like setting. The resident, not the institution, becomes the focal point. A variety of models such as Wellspring Nursing Home Alliance, Eden Alternative, Service House, Action Pact, Inc., The Neighborhood Model, and the Pioneer Network have been instrumental in forging the path for this evolutionary process in skilled nursing facilities (Robinson & Gallagher,

2008; Grant, 2008; Doty, Koran & Sturla, 2008). The Pioneer Network (http://www.pioneernetwork.net/who-we-are/) represents groups and individuals across the United States that have formed a movement to advocate person-centered care and subscribe to the organization's values and principles. Their mission is to promote not only organizational transformation of long-term care facilities but to facilitate a positive culture of aging. The culture change movement is causing a paradigm shift in the long-term care industry. There is awareness that the current institutional model will not improve the quality of life for residents (Grant, 2008). The Commonwealth Fund 2007 National Survey of Nursing Homes (Grant, 2008) proposed to determine if the culture change movement had influenced organizational change at the national level and to measure the extent to which nursing homes had adopted and implemented resident-centered care. The research indicated mixed results with many areas of change still needed (Doty, Koran, & Sturla, 2008). In terms of dining modifications, progress in this area is slow. The survey also highlighted findings that the more a nursing home had adopted culture change principles, the greater the benefits that accrued to it, in terms of staff retention, higher occupancy rates, better competitive position, improved operational costs, and an overall improved level of resident satisfaction and quality of life.

The quality of food and food services are critical factors for successful aging in the institutional long-term care arena. Provision of nutritious food in an environment that encourages adequate nutrient intake and social interaction is critical for residents in skilled nursing facilities (ADA, 2005; Castellanos, 2004; King, 1999). Quality food and food service are directly related to the quality of life in residential facilities. Little is known about the residents' perspectives on this issue. Previous research on the relationship between appetizing food, quality food service, and quality of life in skilled nursing facilities and hospitals found that residents and patients reported they disliked the food served to them. The food was described as unappetizing because of poor appearance, lack of variety, or failure to address their personal preferences (ADA, 2002, 2005; Boutin, 1999; Evans, et al., 2001; Young & Brewer, 2001).

The traditional menu in a skilled nursing facility is typically non-selective. The typical long-term care menu is cyclical with a 4-6 week rotation. The menu is designed to provide an alternate entrée and vegetable at the lunch and dinner settings (Centers for

Medicare and Medicaid Services, 1999). The alternates, however, are usually not offered in advance, but are served only if they are specifically requested. Menus can be improved with attention to choice, variety, aesthetic appeal, and nutrition (Boutin, 1999; Bernstein et al., 2002; Buzalka, 2001; Castellanos, 2004; Cavanaugh, 2004; Chao, Boldy, Lee, 2003; Chao & Dwyer, 2004; Foltz-Gray, 1998). A dining experience where choice is promoted and encouraged is a trend that will benefit residents of any long-term care facility (Doll, 2003; Dorner & Niedert, 2002). Addressing the dining needs of older adults requires foodservice providers to drop misconceptions about aging and approach the segment with the same commitment to food quality, variety, and service that would be applied in any restaurant setting.

Implementing a restaurant-style foodservice system with a greater variety of menu items and multiple meals and snacks per day is predicted to decrease unintended weight loss; increase resident satisfaction with food, foodservices, and the facility; enhance employee job satisfaction; and maintain or decrease food and labor costs. The design will also contribute to resident satisfaction by allowing residents more menu choices, flexible portion sizes, increased meal frequency, and additional opportunities for socialization.

Statement of Problems

Food and foodservices in the long-term care setting have been targeted by regulatory agencies and professional organizations as areas for improvement. With the growing older population and the advent of Baby Boomers entering into the long-term care arena, there is a growing demand for change in services and products and the provision of choice. Optimal nutrition for residents in skilled nursing facilities is well documented as a necessity for optimal health of institutionalized older persons (Cowan, Roberts, Fitzpatrick, While, & Baldwin, 2004; Crogan & Pasvogel, 2003; Kayser-Jones, 2000). Most nutrition-related problems in nursing homes are a consequence of undernutrition (Castellanos, 2004). Liberalizing diets and providing choices will enhance the residents' meal experience, increase energy intake, improve resident satisfaction with foodservice, and maintain economic viability of the facility (Bernstein, et al., 2002;

Crogan & Evans, 2001; Dorner, Niedert, & Welch, 2002; Evans, Crogan, & Shultz, 2003; Gallagher, 2004; Lengyel, Zello, Smith & Whiting, 2003; Marken, 2004; National Citizens' Coalition for Nursing Home Reform, 2000). The traditional tray service in long-term care and rehabilitation facilities has been a source of negative customer feedback. Foodservice management teams and administrators need to evaluate alternate systems where menu choices are expanded and menus have greater variety. A system based on the common restaurant concept of allowing residents to make food choices tableside at mealtime is preferred by residents of the facility (Roy & Spate, 1995).

A review of the literature revealed very few studies evaluating resident satisfaction with restaurant-style dining in skilled nursing facilities. There are no reported studies on foodservice employees' job satisfaction and their perception of resident satisfaction with restaurant-style dining.

Purposes

The following paragraphs present the purposes and objectives of this study. The study was conducted in two phases. These purposes and objectives were addressed in both phases of the research.

The purposes of this study were to:

- explore factors associated with residents' dining experiences in skilled nursing facilities that have transitioned to restaurant-style dining.
- explore how food quality, service quality, and customization influence resident satisfaction.
- explore changes in food and labor costs when transitioning from a traditional foodservice delivery system to a restaurant-style delivery system.
- investigate changes in unintended weight loss trends when transitioning from a traditional foodservice delivery system to a restaurant-style delivery system.
- investigate foodservice employee perception of resident satisfaction with food and food services, job satisfaction, and the effect of job satisfaction on intent to leave.

Research Propositions

This research is not based on previous models. Thus research propositions, rather than hypotheses, were developed for this study due to its exploratory nature. The research propositions addressed the purposes and objectives of the study and are discussed further in the Review of Literature.

Phase I Research Propositions

When transitioning from a traditional non-selective menu system to a restaurant-style dining system in a skilled nursing facility:

RP1. opportunities for residents to make menu selections at meal times leads to a decrease in unintended weight loss.

RP2. overall resident satisfaction with food quality, service quality, and customization increases.

RP3. there will be differences in raw food costs, commercially prepared oral supplements, enteral feedings, and foodservice labor costs.

RP4. foodservice employee ratings of resident satisfaction with food quality, service quality, and customization closely parallel the resident ratings of food quality, service quality, and customization.

RP5. foodservice employee job satisfaction and intent to leave does not change.

Phase II Research Propositions

A model was developed for Phase II (see Figure 1.1) of the research project. The model depicts the foodservice constructs of food quality, service quality, and customization and the relationship to resident and employee job satisfaction and intent to leave. The research propositions depicted in the model are:

In skilled nursing facilities using a restaurant-style dining system:

RP6. residents are satisfied with (a) food quality, (b) service quality, and (c) customization.

RP7. foodservice employee ratings of resident satisfaction with (a) food quality, (b) service quality, and (c) customization closely parallel the resident ratings of food quality, service quality, and customization.

RP8. foodservice employee job satisfaction is negatively associated with intent to leave.

Significance of Research

Results of this study will be useful to long-term care administrators, foodservice managers, and dietetics practitioners in determining the most appropriate menu style, and delivery system, and to gain insight into the opinions and job satisfaction of foodservice workers in order to meet the needs and improve the quality of life for residents in skilled nursing facilities.

Limitations of Research

Limitations of this study are similar to other studies of resident satisfaction with foodservices in long-term care. Generalizability is limited by the sample size and geographic location. The convenience sampling method did not allow for randomization.

Some assumptions can be made regarding the demographics of residents in skilled nursing facilities: age ranges will be similar; female residents will be the majority; most residents will have multiple chronic disease conditions affecting daily living; and most residents may not have chosen to reside in the facility. Some residents may feel socially compelled to inflate their ratings. Some residents may have fatigued during the process of completing the survey and answered quickly in order to finish. Over one-third of the residents required assistance with completion of the survey. Some residents completed the survey immediately following a meal, which could have skewed the ratings.

Even though most of the foodservice facilities studied were under the same corporate structure, differences in foodservice management and personnel management styles do exist and could have an effect on employee job satisfaction. Employees may have altered their ratings due to fear of possible retribution. Employees were offered a

small incentive to complete the survey. The incentive may have caused some employees not to give sufficient thought and time to completing the survey.

Phase II Model

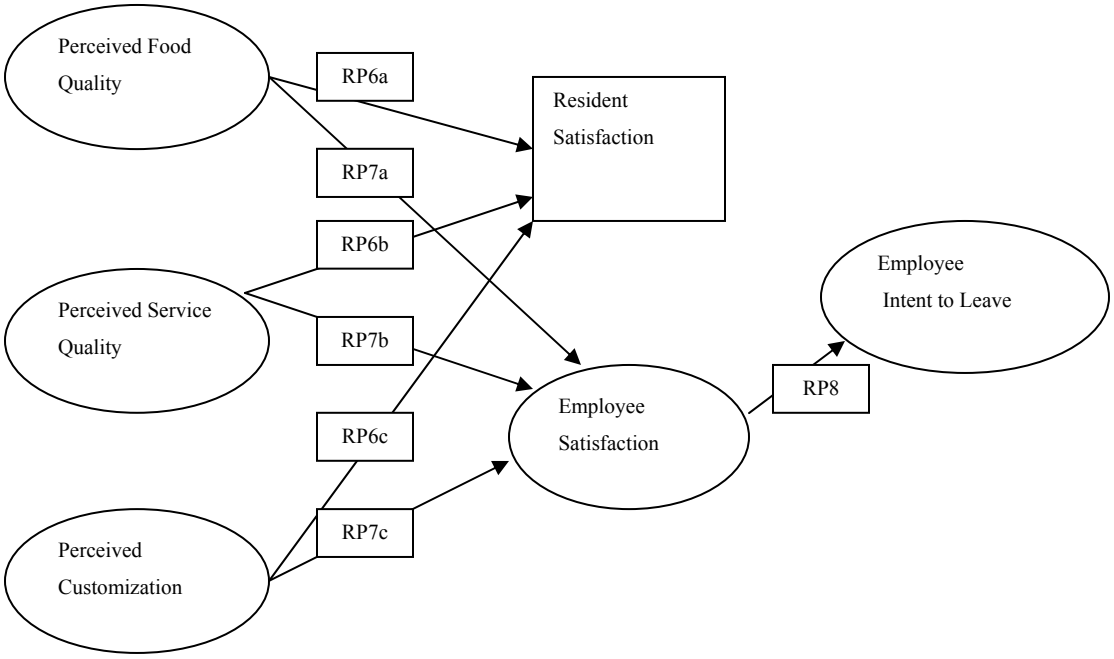

Figure 1.1 Proposed model for food quality, service quality, customization, resident satisfaction, employee satisfaction, and employees' intent to leave.

Note: Two data sets were used to test the proposed relationships.

Definition of Terms

Baby Boomer Generation: Those individuals born between and including the years of 1946 through 1964 as defined by the United States Census Bureau (2001).

Clinically Significant Weight Loss: A weight loss of 5% of usual body weight or more within 30 days or 10% or more within 180 days as defined by the Centers for Medicare and Medicaid (CMS).

Culture Change: A new model aimed at transforming skilled nursing facilities away from the institutional (medical) model to "person-centered" or "resident-directed" model of care (Grant, 2008).

Customization: The ability to choose food items and specify portion sizes from a menu at the time of meal service (Dube, et al., 1994).

Cycle Menu: Series of menus offering different items daily on a weekly, biweekly, or some other basis, after which the menus are repeated (Spears, 2007).

Nursing Home: A general term covering a wide variety of short- and long-term care facilities that provide medical and nursing care and other services (CMS).

Pressure Ulcer: Damage to skin and underlying tissues resulting from prolonged or intense pressure.

Resident (person) Centered Care: Empowering residents to have choices over their daily routines while empowering the staff to be responsible to the needs of residents (Robinson & Gallagher, 2008)

Restaurant-Style Menu and Service: A menu offering a wider variety of choices within each food category. The base menu remains the same but daily specials may be offered. Wait service is provided where the resident is able to choose meal selections at mealtimes.

Skilled Nursing Facility: A skilled nursing facility (SNF) is a term defined by the Health Care Financing Administration as an institution that provides persons 65+ years (and younger disabled persons) with daily, twenty-four hours skilled nursing care, skilled rehabilitation services, and other medical services (CMS).

Static Menu: A menu designed to offer the same foods each meal and every day. Often it is referred to as a restaurant-style menu (Spears, 2007).

Unintended Weight Loss (UWL) or Involuntary Weight Loss: Any unplanned weight loss from the usual body weight (CMS).

References

Administration on Aging. (2008). *Older Americans 2008: Key indicators of well-being.* Retrieved May 25, 2009, from http://www.agingstats.gov/chartbook2008/default.htm

Amella, E. (1999). Factors influencing the proportion of food consumed by nursing home residents with dementia. *Journal of the American Geriatrics Society, 47*(7), 879-885.

American Dietetic Association. (2000). Position of the American Dietetic Association: Nutrition, aging and the continuum of care. *Journal of the American Dietetic Association, 100,* 580-595.

American Dietetic Association. (2002). Position of the American Dietetic Association: Liberalized diets for older adults in long-term care. *Journal of the American Dietetic Association, 102*(9), 1316-1323.

American Dietetic Association. (2005). Liberalization of the diet prescription improves quality of life for older adults in long-term care. *Journal of the American Dietetic Association, 105* (12), 1955-1965

American Dietetic Association. (2005). Nutrition across the spectrum of aging. *Journal of the American Dietetic Association, 105* (4) 616-633.

American Medical Directors Association. (2002). *Clinical practice guideline: Altered nutritional status.* American Medical Directors Association. Columbia, MD.

Ball, M., Whittington, F., Perkins, M., Patterson, V., Hollingsworth, C., King, S., & Combs, B. (2000). Quality of life perspectives from assisted-living residents. *Applied Journal of Gerontology, 19*(3), 304-325. Retrieved June 24, 2009 from PsycINFO database.

Bernstein, M., Tucker, K., Ryan, N., O'Neill, E., Clements, K., Nelson, M., Evans, W., & Fiartarone, S. (2002). Higher dietary variety is associated with better nutritional status in frail elderly people. *Journal of the American Dietetic Association, 102*(8), 1096-1104.

Boutin, D. (1999, Fall). Resident dining in long-term care food service administer add "fragrance" back into residents' lives. *Healthcare Food Service Trends,* 20-21.

Buzalka, M. (2001). Why residents now love dining at Laurel Lake. *Food Management,* 30-34.

Castellanos, V. (2004). Food and nutrition in nursing homes. *Generations, 28*(3), 65-71.

Cavanaugh, B. (2003). Upscale dining drives sales at Hyatt retirement village. *Nation's Restaurant News, 37*(38), 157-158.

Centers for Medicare and Medicaid Services. (1999). Survey *protocol for long-term care facilities: Investigative protocol dining and food service*. (pp. 41-43). Retrieved September 5, 2008 from http://www.cms.hhs.gov/manuals/107_som/som107ap_p_ltcf.pdf

Centers for Medicare and Medicaid Services. (2008). Nursing *home compare*. Retrieved April 2, 2008 from http://www.medicare.gov/NHCompare/Include/DataSection/Questions/SearchCriteria.asp?version=default&browser=IE%7C7%7CWinXP&language=English&defaultstatus=0&pagelist=Home&CookiesEnabledStatus=True

Chao, S., Boldy. D., & Lee, A. (2003). Factors influencing resident satisfaction in residential aged care. *The Gerontologist, 43*(4), 459-472.

Chao, S. & Dwyer, J. (2004). Food and nutrition services in assisted living facilities: boon or big disappointment for elder nutrition. *Generations, 28*(3), 72-77.

Cowan, D., Roberts, J., Fitzpatrick, J., While, A., & Baldwin, J. (2004). Nutritional status of older people in long-term care setting: Current Status and future directions. *International Journal of Nursing Studies, 4*(3), 225-237.

Crogan, N., & Evans, B. (2001). Guidelines for improving resident dining experiences in long-term care facilities. *Journal for Nurses in Staff Development, 7*(5), 256-259.

Crogan, N., & Pasvogel, A. (2003). The influence of protein-calorie malnutrition on quality of life in nursing homes. *Journals of Gerontology: Series A; Biological Sciences and Medical Sciences, 58*(2), 159-164.

Crogan, N., Evans, B., & Velasquez, D. (2004). Measuring nursing home resident satisfaction with food and food service: Initial testing of the FoodEx-LTC. *Journals of Gerontology: Series A; Biological Sciences and Medical Sciences, 370*(8), 370-378.

Doll, G. (2003). An *exploratory study of the process of culture change in three Kansas Nursing homes, dissertation summary*. Unpublished doctoral dissertation, Kansas State University, Manhattan.

Dorner, B., Niedert, K., & Welch, P. (2002). Liberalized diets for older adults in long-term care. *Journal of the American Dietetic Association, 102*, 1316-1323.

Doty, M., Koren, J., & Sturla, E. (2008). *Culture change in nursing homes: How far have we come?* The Commonwealth Fund. Retrieved May 5, 2009 from http://www.commonwealthfund.org/publications/publications_show.htm?doc_id=684709#areaCitation

Dube, L., Trudeau, E., & Belanger, M. (1994). Determining the complexity of patient satisfaction with foodservices. *Journal of the American Dietetic Association, 94,* 394-401.

Evans, B., Crogan, N., & Shultz, J. (2003). Quality dining in the nursing home: The residents' perspective. *Journal of Nutrition for the Elderly, 22*(3), 1-17.

Foltz-Gray, D. (1998). Let them eat cake. Contemporary Long-Term Care, 21(7), 60-65.

Gallagher, A. (2004, Fall). *Undernutrition and causes of involuntary weight loss in long-term care.* Global Monitor: Special Meeting Reporter. (Available from www.LTCnutrition.org), 5-9.

Gilmore, S., Robinson, G., Posthauer, M., & Raymond, J. (1995). Clinical indicators associated with unintentional weight loss and pressure ulcers in elderly residents of nursing facilities. *Journal of the American Dietetic Association, 95*(9), 984-992.

Grant, L. (2008). Culture change in a for-profit nursing home chain: An evaluation. The Commonwealth Fund. Retrieved May 5, 2009 from

http://www.commonwealthfund.org/publications/publications_show.htm?doc_id=668880

Haran, C. (April 2006). *Transforming long-term care: Giving residents a place to call "home".* The Commonwealth Fund. Retrieved September 2008 from http://www.commonwealthfund.org/publications/publications_show.htm?doc_id=365728

Horn, S., Bender, S., Bergstrom, N., Cook, A., Reguson, M., Rimmasch, H., Sharkey, S., Smout, R., Taler, G., & Voss, A. (2002, November). Description of the National Pressure Ulcer Long-Term Care Study. *Journal of the American Geriatrics Society, 50* (11), 1532-5415.

Kayser-Jones, J. (2000). Improving the nutritional care of nursing home residents. *Nursing Homes Long-Term Care Management, 49*(10), 56-59.

Lambert, L., Boudreaux, J. Conklin, M., & Yadrick, K. (1999). Are new meal distribution systems worth the effort for improving patient satisfaction with foodservice? *Journal of the American Dietetic Association, 99*, 1112-1114.

Lengyel, C., Zello, G., Smith, J., & Whiting, S. (2003). Evaluation of menu and food service practices of long-term care facilities of a health district in Canada. *Journal of Nutrition for the Elderly, 22*(3), 29-45.

Marken, D. (2004). Enhancing the dining experience in long-term care: Dining with dignity program. *Journal of Nutrition for the Elderly, 23*(3), 99-109.

National Citizens' Coalition for Nursing Home Reform. (2000, June). *Malnutrition and dehydration in nursing homes: Key issues in prevention and treatment.* National Citizens' Coalition for Nursing Home Reform, 24.

O'Connor, J. (2003). Long-term care: A market in transition. *McKnight's Long-Term Care News.* Retrieved October 12, 2003 from www.mcknightsonline.com

Parasuraman, A., Zeithaml, V., & Berry, L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing, 49*, 41-50. Retrieved May 5, 2009, from ABI/INFORM Global database

Parasuraman, A., Zeithaml, V., & Berry, L. (1988). SERVQUAL: A multiple-items scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12-40.

Rantz, M., Zwygart-Stauffacher, M., Popejoy, L., Grando, V., Hicks, L., & Conn, V. (1999). Nursing home care quality: A multidimensional theoretical model integrating the views of consumers and providers. *Journal of Nursing Care Quality, 14*(1), 16-37.

Remsburg, R., Luking, A., Baran, P., Radu, C., Pineda, D., Bennett, R., & Taback, M. (2001). Impact of a buffet-style dining program on weight and biochemical indicators of nutritional status in nursing home residents: A pilot study. Journal *of the American Dietetic Association, 101*(12), 1460-1463.

Robinson, G. & Gallagher, A. (2008). Culture change impacts quality of life for nursing home residents. *Topics in Clinical Nutrition, 23*(2), 120-130.

Rosenthal, B. (2003). Broken and unsustainable: The aging of baby boomers means a cost crisis in long-term care. Contemporary Long-Term Care, 26(10), 22-25.

Roy, R., & Spate, L. (1995, Supplement). Restaurant-style service in the long-term care setting: The customer service focus of the future. *Journal of the American Dietetic Association, 95*(9), A-83

Spears, M., & Gregoire, M. (2007). *Foodservice organizations: A managerial and systems approach (6th Ed.).* New Jersey: Prentice-Hall.

Splett, P., Roth-Yousey, L., & Vogelzang, J. (2003). Medical nutrition therapy for the prevention and treatment of unintentional weight loss in residential healthcare facilities. *Journal of the American Dietetic Association, 103*(3), 352-363.

United States Department of Commerce: Census Bureau (2001). The 65 years and over population: 2000. Retrieved May 2009 from http://www.census.gov/prod/2001pubsc2kbr01-10.pdf

Young, C., & Brewer, P. (2001). Marketing continuing-care retirement communities: A Model of residents' perceptions of quality. *Journal of Hospitality & Leisure Marketing, 9*(1/2), 133-151.

CHAPTER 2 - REVIEW OF LITERATURE

This review of literature provides a summary of the research related to food and nutrition services in the long-term care arena. Specific areas of discussion will include: demographics of the older population, the long-term care continuum targeting skilled nursing facilities; the quality and types of food and foodservices utilized in long-term care and resident satisfaction of those services; and the incidence of unintended weight loss in residents of skilled nursing facilities.

Primary sources of literature researched are professional peer-reviewed journals and trade publications in the areas of institution administration, nursing, nutrition, foodservice, hospitality management, gerontology, and geriatrics. In addition, citations are referenced from unpublished doctoral dissertations and professional seminar presentations. The World Wide Web was accessed for references from government, organization and business websites, and professional listservs.

The research propositions are presented in the corresponding sections of the Literature Review.

Older Adults

Demographics

The demographics of aging are continually changing. The most recent United States census shows the growth of the population age 65 and older to be continually rising. In 2000, an estimated 35 million people age 65 and older resided in the United States, accounting for almost 13 percent of the total population. Over the next 30 years, this older population is expected to double. Growing at even a greater rate is the age 85 and older population. This age group is expected to increase to over 5% (19.4 million) of the general population by the year 2050 (U.S. Census Bureau, 2001). Globally, the United Nations predicts that one out of every five persons will be over the age of 60 years by the year 2050. Even though the health status of this group is improving with self-

reported disabilities decreasing 6.5% from 1982 to 1999, the size of this age group is of special concern because of the need for more intense services (Administration on Aging [AOA], 2008). Life expectancy at birth has increased about twenty years since 1950. Those surviving to age sixty can expect to live another seventeen years for men and twenty-one years for women (AOA, 2008).

The older population can be segmented into individual cohorts: Young-Old: 65-74; Old: 75-84; Old-Old: 85-99; and the Oldest-Old: 100 and older. Each cohort has its own identity, needs, and requirements (AOA, 2008; American Association of Retired Persons [AARP], 2008). Someone who is 65, born in 1944, has a very different demographic profile and life experiences than someone who is 95 and was born in 1914. It is important for healthcare professionals to not stereotype these people together and assume that because they are over 65 their population and individual needs are the same (AOA, 2008).

As the population continues to grow, this group also will become more diverse. The Hispanic older population is expected to have the greatest growth outnumbering the non-Hispanic black, Asian, and Pacific Islander groups. The non-Hispanic white older population is estimated to decrease from 84% to 64%. Programs and services will require a greater level of flexibility to meet the demands of this growing diverse population (AOA, 2008).

Additional key descriptors for the aging population include economics, marital status, health risks and behaviors, and healthcare delivery. According to the Administration on Aging (2008), economically, the status of the older population has improved over the past five decades. Even though the percentage of older persons living in poverty has declined from 35% in 1959 to 10% in 2002, there are still great disparities among diverse groups especially older blacks and older women (AOA, 2008). Marital status can affect emotional and economic well-being and may influence care giving and living arrangements. Older women are much more likely to be widowed and not remarried than men, accounting for the high percentage of older women living alone. Americans are living longer than ever before. Life expectancy has increased significantly. The leading causes of death for older Americans continue to be heart disease, cancer, and stroke. The incidence of chronic disabilities has declined over the

past decades in both men and women. Overall, 73% of those over the age of 65 reported their health status as good, very good, or excellent (AOA, 2008). Health-related behaviors seem to be improving. Twenty-one percent of people over the age of 65 report that they engage in some form of physical activity; have reduced cigarette smoking; and have improved their diets (AOA, 2008). Finally, healthcare costs continue to rise for older Americans (AOA, 2008). Prescription costs and general medical services experienced increases especially after 1997 (AOA, 2008). Medicare pays for about half of the total health care costs for those over 65 (AOA, 2008).

The Long-Term Care Continuum

Aging in Place

America faces a looming challenge in the years ahead. There are more than 77 million Baby Boomers who will require some type of healthcare support in the coming decades (Rosenthal, 2003). An emerging trend in long-term care is "aging in place". Older Americans want independence for as long as possible (ADA, 2000, 2005; Wellman, 2004). The idea of a continuum of care is to keep older adults out of nursing homes and similar institutions for as long as possible. The goal is to support older adults, with the utilization of community services to live in their own homes or independently in the least restrictive setting (Moody, 2002).

Continuing-Care Retirement Communities

Continuing-care Retirement Communities (CCRCs) have seen rapid growth as a solution for those wanting to maintain independence and have the security of on-site services when the need arises. CCRCs typically provide a campus where all levels of care may be obtained when necessary. Individuals move to the campus and live independently, utilizing only minimum services such as laundry, dining, and social activities. Assisted-living and complete nursing care are available on-site when the CCRC resident cannot continue to live independently. CCRCs are believed by some analysts to be the perfect model of health care for older people (Moody, 2002). Unfortunately, there are some drawbacks. CCRCs are not accessible to all because they are expensive. CCRCs may require a lifetime commitment with a large entry fee

guaranteeing financial support as residents grow older and frailer (AARP, 2005; Continuing-care Accreditation Commission, 2003; Moody, 2002).

Assisted-Living

Assisted-living facilities offer another approach to long-term care by providing residents with limited supportive care. This customer-driven long-term care option has emerged as a choice for older people rather than choosing a skilled nursing facility. In the past, assisted-living facilities focused on residents with lower care needs. Now, however, there is increasing competition between assisted-living and skilled nursing facilities for similar residents (Salmon, 2001). Assisted-living facilities could be high-rise buildings, converted Victorian homes, or renovated schools. Residences may be free-standing or associated with a CCRC or skilled nursing facility (Norrgard, 2001). Additionally, assisted-living facilities are not subject to national standards, but rather, are overseen by state governments that have widely varying regulations. Fewer than half of the states require assisted-living facilities to be licensed (Naditz, 2003).

Skilled Nursing Facilities

Skilled nursing facilities provide round-the-clock medical care, the most intense level of health care and daily living services. For decades, skilled nursing facilities have played the leading role in providing long-term care services. The federal government estimates that approximately 17,000 skilled nursing facilities provide 1.7 million beds for about 5% of the older population (Centers for Medicare and Medicaid Services [CMS], 2008). This low 5% figure may underestimate the importance of nursing facilities. It is estimated that approximately 40% of those 65 and older will require the services of a nursing home at some point in their lives (Moody, 2002). The use of skilled nursing facilities and home health care increases significantly with age. In 2005, there were 30 skilled nursing facility stays per 1000 Medicare enrollees between the ages of 65-74, compared with 228 per 1,000 enrollees age 85 and older (AOA, 2008; Matthews, 2008). The difference between cross-sectional and longitudinal data may be significant in interpreting skilled nursing facility usage (O'Connor, 2003). The role played by skilled nursing facilities is changing. Due to improved technology, lower acuity residents have been able to stay at home or utilize assisted-living facilities. Furthermore, the skilled

nursing facility is playing a larger role in providing post-acute care. Sub-acute care (rehabilitative care) may also be provided in the skilled facility on a short-term basis. The average length of stay for rehabilitation could be from a few days to a few months (Rosenthal, 2003).

Over the past decade, long-term care options have improved but are a long way from providing care for all those in need. Current estimates suggest that the demand for long-term care among the elderly will more than double in the next thirty years (Feder, Komisar, & Niefeld, 2000). The Baby Boomer generation will have different needs and demands from the current older generation. Long-term care facility operators should expect the next generation of seniors to have several demands including:

-Apartment life instead of institutional care. Technological advances to allow seniors to live independently.

-A more home-like environment with choices of how to live. Maintaining patterns similar to those they knew at home will be a priority for the Boomer generation.

-Boomers will not be attracted to long-term care facilities as they exist today. Boomers will demand a myriad of conveniences similar to what they currently are experiencing.

-Technology will play a major role in facility selection. Access to the World Wide Web will be expected along with other communication and entertainment technologies.

-Provision of health and wellness facilities complete with the latest equipment and indoor pools (AARP, 2005; Norrgard, 2001; Oleck & Stone, 1998; Rosenthal, 2003; Salmon, 2001, American Healthcare Association, 2006).

The boomer generation will expect and demand conveniences, expanded high quality services, and most importantly the ability to make decisions regarding activities of daily living.

Culture Change in Long-Term Care

Writings on culture change in organizational literature are numerous. Edgar Schein (1993), one of the most prominent theorists of organizational culture, defines culture as a set of beliefs, values, and assumptions shared by a group. His model for

examining culture change has three levels: artifacts (tangibles), those things clearly visible in the institution; values or the vision of those directing the organization; and assumptions or the way things really are. The ultimate definition of culture change is "deep systems change"; change experienced throughout the entire organization (Schein, 1993). In 2003, Doll, et al. reported a swell in culture change in skilled nursing facilities. "Culture change" and "person-centered care" are relatively new terms in the long-term care arena. Culture change in long-term care, as described by Haran (2006), is the transformation of an institution into a home, providing residents with more control in a home-like setting. The resident, not the institution, becomes the focal point. Person-centered planning has six critical components: (1) supporting personal satisfaction in resident lives; (2) providing individual living spaces; (3) empowering the staff as resident advocates; (4) respecting the need for choice and individual life patterns; (5) providing opportunity for personal growth and contribution; (6) fostering a community connection (Pfeiffer, Rogers, Roseman, Jarema, Reimann, & Jones, 2005). A variety of models such as Wellspring Nursing Home Alliance, Eden Alternative, Service House, Action Pact, Inc., The Neighborhood Model, and the Pioneer Network have been instrumental in forging the path for this evolutionary process in skilled nursing facilities (Robinson & Gallagher, 2008; Grant, 2008; Doty, Koran & Sturla, 2008). The Pioneer Network (2008) represents groups and individuals across the United States that have formed a movement to advocate person-centered care and subscribe to the organization's values and principles. Their mission is to promote not only organizational transformation of long-term care facilities but to facilitate the culture of aging. The culture change movement is causing a paradigm shift in the long-term care industry. There is awareness that the current institutional model will not improve the quality of life for residents (Grant, 2008). The Commonwealth Fund 2007 National Survey of Nursing Homes (Grant, 2008) proposed to determine if the culture change movement had influenced organizational change at the national level and to measure the extent to which nursing homes have adopted and implemented resident-centered care. The research indicated mixed results with many areas of improvements still needed (Doty, Koran, & Sturla, 2008).

In terms of dining modifications, progress is slow. The survey also found that the more a nursing home had adopted culture-change principles, the greater were staff retention, occupancy rates, competitive position, lowered operational costs, and an overall improved level of resident satisfaction and quality of life were identifiable. Food and nutrition services play an integral role in the support of culture change as a means to providing higher quality of life for residents (Andreoli, et al., 2007; Robinson & Gallagher, 2008).

Nutrition and Health

A key component of nursing home care is nutrition. Adequate nutrition contributes to the quality of life, independence, and physical and mental functioning in nursing home residents (Gallagher, 2004). Unintentional weight loss (UWL) also referred to as unintended or unplanned weight loss, is one of the most prevalent nutritional disorders encountered in long-term care (Gallagher, 2004; Niedert & Dorner, 2004; Splett, 2003; Thomas, Verdery, & Gardner, (1991). The 1987 Omnibus Budget Reconciliation Act defines UWL for Medicare and Medicaid (Center for Medicare and Medicaid Services [CMS]) facilities, as a 5% decrease in body weight in 30 days or 10% or greater weight loss in 180 days. Unintentional weight loss has been identified by CMS as one of the quality indicators that is measured and reported monthly to state and federal agencies (CMS). Weight loss is common among older adults especially those who are institutionalized (ADA, 2000; 2002; 2005; Crogan & Pasvogel, 2003; Wendlund, 2003; Dorner, 2004; Cowan, Roberts, Fitzpatrick, White, & Baldwin, 2004; American Healthcare Association, 2005). Studies have shown that 50% of older adults consume less than the recommended levels of calories and many of the essential vitamins and minerals (Morely, 2001; Huffman, 2002; Keller & Hedley, 2002). This is one reason why residents are often found to be undernourished when admitted to a residential facility. It is estimated that the incidence of protein-calorie malnutrition ranged from 25-85% in cross-sectional studies of these individuals (Silver et al., 1988: Horn, Bender, Bergstrom, Cook, Reguson, Rimmasch, Sharkey, Smout, Taler, & Voss, 2004). In prospective studies of long-term care admissions undernutrition ranged from 4-54% with

10% of residents having lost 5% of their body weight in 1 month (AHA, 2005; Dyck, 2008; Grant, 2008; Thomas, Verdery, & Gardner, 1991).

There are many causes of UWL. The majority of nursing home resident studies implicate chronic disease, depression, use of multiple medications, and the overall frailty of the resident as the major causes of weight loss (Levinson, Swolatzky, Epstein, Adler, & Epstein, 2005). Food, foodservices, and the dining environment must be examined as critical intervention factors. Mount Carmel Long Term Care Facility in Milwaukee, Wisconsin implemented a select menu cart for breakfast and hour of sleep snack (HS). The breakfast cart is stocked with a wide variety of hot and cold food items. The cart is taken directly to residents' rooms where the food is served immediately. The same type of system is utilized for the evening snack. Additionally, a select menu system was implemented for lunch and dinner. The program has been ongoing since 2002. The facility has documented a decrease in UWL, a decrease in commercial supplement usage, and an increase in resident satisfaction (Buzalka, 2004). Additional attempts by long-term care foodservice operators to improve their residents' appetites and increase customer satisfaction have resulted in decreasing UWL (Anonymous, 2005; Desidaro, 2001; Lipowski, 1998; Weisberg, 2005).

Nutrition care in long-term care settings must meet two goals: maintenance of health and promotion of quality of life (ADA, 2002, 2005). For most residents food is the highlight of their day. Meal times should be enjoyable involving the right to choose the foods one feels like eating (Dorner, 2004). Many residents enter the skilled nursing facility with multiple chronic disease conditions that require a prescribed modified diet (e.g. diabetes, high blood pressure). Over the past five years there has been and continues to be a movement to liberalize modified diets for residents in skilled nursing facilities (Robinson & Gallagher, 2008). Liberalization means less restriction in the types and amounts of foods residents are allowed to consume. An example of liberalization would be eliminating a particular calorie level and allowing regular foods in smaller portions for diabetic residents (American Dietetic Association, 2005). Because residence in a nursing home is not a short-term situation, limited choice is unacceptable. A high percentage of residents will live out the remainder of their years in the facility (Kayser-Jones, 2000; Simmons, Osterwall, & Schnelle, 2001; Wendland, 2003). As Goodwin

(2005) pointed out there are many indicators of quality care but nutrition, hydration, and the dining experience are critical elements of quality care from the consumer's point of view.

Research Proposition: When transitioning from a traditional non-selective menu system to a restaurant-style dining system in a skilled nursing facility opportunities for residents to make menu selections at meal times leads to a decrease in unintended weight loss.

Food and Foodservices in Long-Term Care

Traditionally, foodservice in skilled nursing facilities is based on utilizing a multi-week cycle menu. Cycle menus are developed to provide a variety of foods to meet the nutritional needs of the residents (Lengyel, Zello, Smith, & Whiting, 2003). Often the menu is considered to be non-selective or semi-selective; providing little choice to the resident. Frequently, corporate food distribution and contract management companies provide menu templates that are imposed upon the facility with minimal adaption allowed. Production of meals is usually centralized and individual food trays are distributed to the residents. Nursing home residents either consume their meals in a congregate dining area or in the privacy of his/her room (Castellanos, 2004; Beck & Owen, 2003; Crogan & Evans, 2001; Hackes, Shanklin, Kim, & Su, 1997; Sindevall, 1999).

A study conducted by Williford, Snell, and Houston (1995) investigated the difference in nutrient intake of 24 long-term care residents between a resident-selected menu planning system (the Meal Card/Menu Board System-MCMBS) and corporate planned menus on the nutrient intake of 24 residents in a long-term care facility. The results indicated that resident intake was basically the same (as measured through plate waste) but with resident-selected menus, their nutritional intake for many select nutrients increased. It was concluded that resident input into menu development was viable and provided additional resident contact with foodservice.

King (1999) reported about a long-term care facility, which, due to construction, set up a buffet-style foodservice to accommodate residents. Residents in this facility, normally dined through tray service in their rooms. With the service delivery changed because of construction, the residents, for the first time in several years, were the given

the right to choose their food selections. During the 6 months the program was implemented, weight loss among residents diminished. When the new facility opened buffet service was continued.

A pilot study was conducted in a skilled nursing facility to determine the feasibility of implementing a comprehensive buffet-style dining program and to determine the impact of the program on weight and nutritional status among the residents. The researchers found that there was overwhelming acceptance by the residents and staff of the new foodservice delivery system. Weight gain was not noted, and overall weights remained constant from the control to the experimental group (Remsburg, Luking, Baran, Radu, Pineda, Bennett, & Tayback, 2001). Shatenstein and Ferland (2000) introduced into a skilled nursing facility a decentralized bulk-food portioning meal service system and reported a 370 kcal increase in the average daily food consumption of residents. Weisberg (2005) discussed the foodservice changes made in a 547-bed skilled nursing center and adjoining 158-bed sub-acute and retirement facility. The resident satisfaction with the quality of food served was low so the foodservice manager decided to implement a high-end buffet service. As a result, food satisfaction survey ratings increased from "acceptable" to "excellent". In addition, the overall food costs decreased 5% as a direct result of decreased plate waste.

Roy and Spate (1995) explored the effect of implementing a restaurant style menu and meal service on the overall resident satisfaction in a nursing home and rehabilitation center. The design of the system allowed residents to make choices from a selective menu at tableside. The results of the change were recorded on a continuous quality indicator tool. Residents in this facility were extremely satisfied with the change in meal service. No data was collected regarding weight status of the residents (Roy & Spate, 1995).

Cura Hospitality, a contract management firm in Pennsylvania reported on its "Living Life" approach to dining. Faced with resident dissatisfaction with foodservice, residents with poor appetites, and weight loss, the director of dining implemented a two-week trial of display cooking. Food is prepared in bulk and finished in the dining room in display fashion. Residents can receive omelets cooked to order for breakfast and a variety of appetizers-size portions for lunch. Food aromas filled the air. Residents

reported that watching the Chef prepare their meals was the highlight of their day. Twenty-two percent of the residents participating in the two-week trial experienced weight gain of one pound or more (Food Service Director, 2005).

Covenant Village of Florida, in anticipation of 21st century retirees' expectations, knew their current dining and production facilities would not meet the needs of potential residents in the future. Their two-year renovation consisted of adopting a bistro concept of foodservice. The bistro reflects casual restaurant style dining that is able to accommodate presentation cooking, a made-to-order deli, specialty beverages, and fresh bakery items. They incorporated table service with crisp linens, host/hostess seating, within a fine dining atmosphere. Their key to success was resident and staff involvement in all phases of the project from planning to execution (Petrosky, 2006).

Resident satisfaction with foodservices is a key quality indicator for long-term care facilities (Cavanaugh, 2003; Evans, et al., 2003; Peaslee, 2003; Sheridan, 2002; Young & Brewer, 2001). Many long-term care facilities have heightened their efforts to make foodservice a more important facet of life in their facilities by enhancing dining areas, increasing menu variety, and diversifying service methods. A paradigm shift from the traditional medical model to a hospitality model is needed (Rousseau, 1996). Moreover, food and foodservice delivery are critical components in the culture change movement. Restaurant-style dining, traditionally, has been reserved for upscale assisted and independent living communities, but skilled nursing facilities are beginning to trade in their tray lines for more personalized table service. When residents are able to make their own menu selections, they experience a sense of control over their lives, an improvement in their quality of life, and satisfaction with foodservices (Schenkel, 2006).

Research Proposition: When transitioning from a traditional non-selective menu system to a restaurant-style dining system in a skilled nursing facility there will be differences in raw food costs, commercially prepared oral supplements, enteral feedings, and foodservice labor costs.

Satisfaction with Food and Nutrition Services

Residents

Managers of food and nutrition services in long-term care are attempting to understand customer satisfaction. Overall, foodservice directors, both in for-profit and not-for-profit settings, realize that knowing the customer, identifying their needs, and prioritizing those needs is critical to their operations. Customer satisfaction with food and foodservices is a significant key to residents' quality of life (Case & Gilbert, 1997; Evans, Crogan & Shultz, 2003; Lengyel, Smith, Whiting, & Zello, 2004; Shultz, Crogan & Evans, 2005).

Some attempts have been made to determine the attributes of resident satisfaction with food and foodservices and to develop a foodservice customer satisfaction instrument for the long-term care industry. Huang (2004) surveyed assisted-living facility residents to explore various physical factors associated with aging and the effect on satisfaction with food and foodservices. The results indicated that resident satisfaction was significantly influenced by the resident's age-associated physical factors. This study also verified (through plate waste studies) that residents had greater food intake when given choices. Huang (2004) recommended use of both qualitative and quantitative approaches in obtaining customer satisfaction data. This study spurred further research in assisted-living utilizing a revision of Huang's instrument to explore factors associated with the dining experience. Residents' perceptions of food and service qualities, level of customization, and the dining room environment was positively associated with their level satisfaction (Howells, 2007).

Lengyel, Smith, Whiting, and Zello (2004) developed and administered a questionnaire (face-to-face) to 205 residents in a long-term care facility in Saskatchewan, Canada. The researchers summarized information from the residents regarding what they thought to be important aspects of food and foodservices. The survey results indicated that residents were least satisfied with areas relating to autonomy such as food choice (Lengyel, et al., 2004). Evans, Crogan, and Shultz (2003) used a phenomenological

approach to determine resident satisfaction with food and foodservices. The results of their study indicated resident preference for food variety, choice, menu alternatives, and getting meals on time. Evans and Crogan (2005) developed and tested the FoodExLTC, a simple, 44-item, 5-subscale questionnaire that measures food and foodservice satisfaction. The FoodExLTC is intended to collect preliminary data regarding institutional practices that control the food that is served to the resident, the resident satisfaction with the food, and additional factors that influence resident consumption. Results indicated that 52% of the residents received foods they disliked, 56% often received the same food, and 59% received food always cooked the same way. Most residents (79%) wanted to choose what to eat (Evans & Crogan, 2005).

West, Ouellet, and Ouellette (2003) surveyed residents in nine skilled nursing facilities to identify attributes of foodservices that were most and least important. In addition, the foodservice employees were administered the same survey to determine their beliefs regarding how the residents rated the foodservice. Importance items were classified as food quality, choice, and service. The *t*- tests revealed no significant differences between resident and staff means for 11 of 29 importance items. Employee mean estimates of resident satisfaction were higher than resident ratings (West, et al., 2003).

Meeting the personal preferences of long-term care residents is critical to their well-being. In order to determine those attributes which influence resident satisfaction a regular and ongoing program of measuring client satisfaction and taking action to improve is necessary (Sandow, 2002). Simmons, Cleeton, and Prochak (2009) found in a study of skilled nursing home residents that 89% of the 163 residents were able to complete a structured interview and 65% expressed complaints about the nursing home foodservice. The residents who expressed complaints had less than optimal intakes.

Today, most healthcare organizations are focusing on customer satisfaction and how to measure it in a variety of healthcare settings. There is a body of evidence suggesting that positive patient outcomes lead to positive customer feedback and return utilization of services. Patient experiences that fall within their level of expected satisfaction will result in higher satisfaction levels (Powers & Bendall-Lyon, 2003). Healthcare services are often assessed by the consumer in three areas: the

physical environment, interaction with personnel, and the result of the process or interaction. Ultimately, patient (customer satisfaction) becomes the driving force that influences attitudes and consequent behaviors (Chu & Pike, 2003; Finley, Diekmann, Dorner, & Lofley, 2005).

Over the past decade, there has been considerable movement in the long-term care industry to improve quality of care and services provided to residents by incorporating customer satisfaction measurement techniques. The movement has been spurred by nursing home reform legislation included in the Omnibus Budget Reconciliation Act (OBRA) from 1987. This legislative action served to shift the focus of healthcare evaluations away from process to outcomes, resident satisfaction, and quality of life (Lowe, Lucas, Castle, Robinson, & Crystal, 2003; Peak & Sinclair, 2002). An example of this shift is the adoption by long-term care facilities of continuous quality improvement (CQI) and other quality assurance programs based on the work of W. Edward Deming. Dr. Deming is best known for his customer centered business model with quality as the core value (Lowe, Lucas, Castle, Robinson, & Crystal, 2003). Traditionally, long-term care facilities have relied on symbolic quality initiatives such as meeting licensure or certification requirements. Such initiatives do not address quality issues as perceived by the resident. A more accurate picture of resident satisfaction is feedback from residents on the services provided by the facility (Young & Brewer, 2001). Genuinely listening to the concerns of customers and person-to-person experiences has a greater overall impact on customer satisfaction (Chu & Pike, 2003; Hoban, 2005; Rantz, Zwygart-Stauffacher, Popejoy, Grando, Hicks & Conn, 1999). It is important in the healthcare industry to utilize a number of methods to determine customer satisfaction (Finley, et al., 2005; Walter, Sorenson, Fiala, & Wismer, 2003).

The development of a customer satisfaction instrument for long-term care has lagged behind the acute healthcare industry. Although some studies have focused on the Assisted-living Facilities (ALF) and Continuing-care Retirement Communities (CCRC) few have ventured into the Skilled Nursing Home setting (Ejaz, Straker, Fox, & Swami, 2003; Lowe, et al., 2003; Robbins, 2002). The Ohio Department of Aging (ODA) recently developed and implemented a family satisfaction survey that is being used in over 500 statewide skilled nursing facilities. This multidimensional instrument will allow

administrators to target particular domains such as foodservice for future quality initiatives (Ejaz, et al., 2003; Lowe, et al, 2003).

Research Proposition: When transitioning from a traditional non-selective menu system to a restaurant-style dining system in a skilled nursing facility, overall resident satisfaction with food and foodservices increases.

Foodservice Staff

The demographic of the foodservice worker is changing. No longer are the 16-24 year-olds the only faces being seen working at fast food establishments. Older workers, disabled workers, and retired workers are being recruited to fill open positions (Archetti, et al., 1993; Institute for the Future of Aging Services [IFAS], 2003, 2007; Aging Research Institute [ARI], 2003). The Institute for the Future of Aging Services IFAS (2003, 2007) predicts that the growth in the long-term care market will continue, and if unemployment numbers drop, the shortage of younger workers will be compounded. Wage adjustments over time will help to mitigate the problem but third-party reimbursement (Medicare/Medicaid) may prevent substantial wage increases (ARI, 2003; Kansas Association of Homes & Services for the Aging [KAHSA], 2003). The KAHSA study (2003) was developed to investigate the rate of turnover of the nursing staff (Registered Nurses and Nurses Aids). Noting the obvious financial causes and results of high turnover, the study also investigated the administrative and organizational culture and interpersonal practices in the workplace. The study noted that a supportive work environment is critical for behavior change (KAHSA, 2003). Additional research regarding long-term care employees clearly documented that high turnover and inadequate staffing contributes to lower quality of care and lower resident satisfaction (& Evans, 2001; Doll, 2003; Ejaz, Straker, & Swami, 2003; Feder, Komisar, & Niefeld, 2000; Kayser-Jones, 2000; Lowe, Lucas, Castle, Robinson, & Crystal, 2003). People who work in healthcare should be passionate and self-motivated. Who, but a self-motivated caring person could work in a 365 days a year-24/7 environment day in and day out, experience the death of a someone that he/she cares about, and come to work the next day for more of the same? (Studor, 2004).

Long-term care foodservice workers should be embraced by management as internal customers. Job satisfaction is important, but having employees fully engaged with their jobs is even more important. Research confirms that the most important reason direct-care paraprofessional workers stay in their jobs are the relationships they have with older the adults in their care. Turnover and job dissatisfaction is clearly linked to poor pay and benefits (PHI, 2004). However, compensation issues alone do not explain overall dissatisfaction or turnover. Direct care staff whose work is valued and appreciated by their supervisors, and who are listened to and encouraged to participate in care planning decisions, have higher levels of job satisfaction and are more likely to stay in their jobs (Bowers, Esmond, & Jacobson, 2003; Harris-Kojetin, Lipson, Fielding, Kiefer & Stone, 2004). High turnover is a sign of unhappy employees. Most experts agree that working conditions and the quality of the job must be improved. While many providers have gotten the message and made changes in the way staff are viewed, valued, developed, and treated, too many others have not. Because foodservice employees control and perform technical and service tasks and interact closely with residents, their opinions regarding resident satisfaction should be considered (West, et al., 2003). Without significant changes in working conditions, workforce shortages are likely to continue (IFAS, 2007. It is important to build a sense of belonging (Kroll, 2005). In March 2008, the U.S. Senate passed the Caring for an Aging America Act of 2008. This bill provides a number of incentives to attract and retain professional and direct health care workers to the long-term care field (ASA, 2008).

Research Proposition: When transitioning from a traditional non-selective menu system to a restaurant-style dining system in a skilled nursing facility, foodservice employee job satisfaction and intent to leave does not change.

Research Proposition: When transitioning from a traditional non-selective menu system to a restaurant-style dining system in a skilled nursing facility, foodservice employee job satisfaction is negatively associated with intent to leave

Food Quality

Food quality in healthcare organizations has been under scrutiny for several years. Driven by customer satisfaction data, the entire healthcare foodservice segment has been taking cues from their commercial counterparts—restaurants (Anonymous, 2003, 2005; Buzalka, 2001; Cavenaugh, 2003; Desidaro, 2001; Dorner, 2004; Peaslee, 2003). Bill

Lutz, vice president of Optimum Solutions, a full-service consulting firm in Columbus, Ohio, maintains that the restaurant-style methodology is one of the most efficient ways to produce and serve food. He proposes the use of the restaurant concept theme and provides "cooking to order" in healthcare foodservice. A trained chef should be hired. The benefit of hiring trained chefs is their skill and showmanship in providing healthy food that is satisfying and appealing, therefore raising the bar on quality (Peaselee, 2003; Riell, 2002; Schenkel, 2006). Creating a positive relationship with customers takes three positive experiences to offset every negative one (Studor, 2004). High food quality has been defined as flavor and freshness, maintenance of appropriate temperatures, consistency of produce, and appealing presentation (Buzalka, 2001; Dube, Trudeau, Belanger, 1994; Evans, Crogan, & Shultz, 2003; Hutlock, 2005). These modifiable factors in foodservice, when corrected, can have a very positive impact on resident satisfaction, consumption of food, and nutritional status of residents in long-term care.

Service Quality

In the commercial foodservice setting, quality food and services have long been identified as drivers of customer satisfaction, increased profits, and brand loyalty. Older adults utilizing the commercial foodservice market have many of the same service expectations as younger adults (Fu and Parks, 2001). Case and Gilbert in 1997 identified that the older institutionalized population values the same constructs identified by other commercial foodservice customers. Dependability, trust, and personal control are a few of the intangibles important to residents in a long-term care setting. Gronroos (1988) identified six criteria of high quality service providers: professionalism and skills; attitudes and behavior; accessibility and flexibility, reliability and trustworthiness; reputation and credibility. These six criteria were based on the body of empirical and conceptual research available at the time of publication (Gronroos, 1988). Since then several researchers have developed and tested instruments for determining resident satisfaction including service quality.

Lee, Shanklin, and Johnson (2003) developed a new service quality measurement instrument based on the well-established Parasuraman, Zeithaml, and Barry SERVQUAL

tool (1988). This instrument was developed for use in continuing-care retirement communities (CCRCs) and included the dimensions of assurance, empathy, food, reliability, responsiveness, and tangibles (Lee, et al., 2003). Their instrument was pilot-tested and found to be valid and reliable. Huang (2004), Seo and Shanklin (2005), and Howells (2007) further developed and tested the instrument (Lee, et al., 2003) with residents in assisted-living facilities. The additional studies confirmed the reliability and validity of the instrument for use in long-term care foodservices.

Becker and Kaldenberg (2000) conducted satisfaction surveys for residents and family members to determine what items correlated to recommending the facility. The results showed a greater correlation to items such as being treated with dignity and the friendliness of the staff. The researchers also found that items were rated differently by residents and family members of those residents. As noted in West, et al. (2003) residents and foodservice staff rated respect of utmost importance.

The question is raised regarding the difference in perceived expectations. Defining and measuring service quality has been researched for many years in different settings. The relationship between customer satisfaction and behavior has been identified in several studies. Service quality and satisfaction are distinct constructs with satisfaction strongly affected by current performance (Cronin & Taylor, 1994; Fitzmaurice, 2005).

Customization

Providing residents with greater control of their meal selections through choice may enhance satisfaction with food and foodservices (Cavanaugh, 2003; Crogan & Evans, 2001; Evans, Crogan, & Shultz, 2003; Shultz, Crogan, & Bronwynne, 2005). Dube, et al. (1994) defines customization as the "possibility to choose appealing meals, possibility to choose healthful meals, clarity of menu presentation, portion size, conformity with menu choices, instruction about menu choices, and flexibility in service hours" (p. 397).

For residents of skilled nursing facilities, a point of dissatisfaction is the inability to choose their own foods at mealtimes. Older adults residing in a skilled nursing facility often surrender their decision-making regarding many activities of daily living. In their lives before entering institutionalized care, most adults have not experienced loss of

control of food choices and mealtimes. Much of the daily rhythm, pace, and socialization for residents in a skilled nursing facility revolves around food and dining (Case, 1997).

Residents have the right to be treated with dignity and respect (CMS, 1999). Closely related to the preservation of dignity is preservation of resident food and beverage choice. Choice should include not only what the resident wants to eat but also where and when the meal is consumed. The resident should have the choice of eating in his/her own room or the dining room; and, within reasonable and flexible guidelines, allowing the resident to choose when that meal will take place. If a resident wants to "sleep in" without missing the breakfast meal, that is their right. Every effort should be made to accommodate that choice (Marcus, 2003; West, et al., 2003; Shultz, et al., 2005; Robinson & Gallagher, 2008).

In the exploratory phenomenological study conducted by Shultz, et al. (2005), organizational empowerment of the residents occurred when the facility offered alternatives on the menu, involved the residents in menu planning, permitted residents to return foods they did not like, and allowed friends or family to bring in foods from the outside (Shultz, et al., 2005). Dube (1994) and Howells (2007) found that along with food quality, customization was a high predictor of resident satisfaction. West (2003) also reported that staff rated customization low but important for resident satisfaction. Remsburg, et al. (2001) reported that a buffet-style meal was one way to allow residents to have choices. In addition, fewer comments from residents regarding poor food temperatures were heard from residents during the study period. Everyday decision-making, including those regarding food and foodservices provides the basis for autonomy for residents in skilled nursing facilities.

Research Proposition: When transitioning from a traditional non-selective menu system to a restaurant-style dining system in a skilled nursing facility, residents are satisfied with food quality, service quality, and customization.

Research Proposition: When transitioning from a traditional non-selective menu system to a restaurant-style dining system in a skilled nursing facility, foodservice employee ratings of resident satisfaction with food quality, service quality, and customization parallels the resident ratings of food quality, service quality, and customization.

Summary

This review of literature has confirmed that the older American population (65+) is on an upward trend with the aging of the "Boomer" generation. The 85 and older segment of the population is experiencing the most dramatic growth with an expected increase to over 19.4 million by the 2050. Additionally, the older population will continue to become more diverse, more educated, more demanding, and have greater expendable income. The current trend in long-term care is the Continuing-care Retirement Community (CCRC). The campus concept of the CCRC has the purpose of providing independence with access to healthcare on an as-needed basis.

The majority of the long-term care facilities are skilled nursing facilities. Skilled nursing facilities also have taken on a relatively new role of providing short-term rehabilitation and sub-acute care. The demand for skilled nursing facilities will continue rise. Quality indicators and continuous quality improvement are current issues in the long-term arena. Malnutrition and dehydration are prevalent in many skilled nursing facilities. Prevention of unintended weight loss continues to be a priority. State and federal legislation continues to address quality issues in long-term care. Food and foodservices will need to change to meet the demands of the incoming generation. The traditional foodservice will not meet the customer satisfaction needs of this group. Some facilities have recognized the need to change and have implemented innovative menus and other system changes to accommodate their residents' needs. Both quantitative and qualitative studies have linked foodservices to quality of life for nursing home residents. The development of customer satisfaction instruments and other methods to collect satisfaction data from residents and employees are being developed and implemented. Assuring customer satisfaction for residents and employees is becoming a reality in long-term care. There is a need for continued research on residents' and staff views on food and service quality in skilled nursing facilities.

References

Adler, J. (2005, February 20). Food is tops on the menu at retirement buildings. *Chicago Tribune.* Retrieved September 15, 2005 from www.chicagotribune.com

Administration on Aging. (2008). *Older Americans 2008: Key indicators of well-being.* Retrieved May 15, 2008 from http://www.agingstats.gov/chartbook2000/default.htm

Administration on Aging. (2008). *A profile of older Americans: 2008*. Retrieved August 5, 2009 from http://www.AOA.gov/prof/Statistics/profile/2009/profiles2009.asp

Amella, E. (1999). Factors influencing the proportion of food consumed by nursing home residents with dementia. *Journal of the American Geriatrics Society, 47*(7), 879-885.

Amella, E. (2002). Resistance at mealtimes for person with dementia. Journal of Nutrition, Health, and Aging, 6(2), 117-122. Retrieved June 24, 2008 from PsycINFO database.

American Dietetic Association. (2000). Position of the American Dietetic Association: Nutrition, aging and the continuum of care. *Journal of the American Dietetic Association, 100,* 580-595.

American Dietetic Association. (2002). Position of the American Dietetic Association: Liberalized diets for older adults in long-term care. *Journal of the American Dietetic Association, 102*(9), 1316-1323.

American Dietetic Association. (2005). Liberalization of the diet prescription improves quality of life for older adults in long-term care. *Journal of the American Dietetic Association, 105* (12), 1955-1965

American Dietetic Association. (2005). Nutrition across the spectrum of aging. *Journal of the American Dietetic Association, 105* (4) 616-633.

American Healthcare Association. (2005). *Nutrition care alerts: Unintended weight Loss.* Retrieved on October 5, 2005 from http://www.ahca.org/quality/care-alert/care-alerts.pdf

American Healthcare Association & My Innerview Inc. (2006). *2005 national survey of resident and family satisfaction in nursing facilities.* Retrieved on June 30, 2006 from http://www.ahca.org/quality/myinnerview.htm

American Medical Directors Association. (2002). Clinical *practice guideline: Altered nutritional status.* American Medical Directors Association. Columbia, MD.

Andreoli, N., Breuer, L., Marbury, D, Willima, S., & Rosenblut, M. (2007). Serving culture change at mealtimes. *Nursing Homes: Long Term Care Management, 56,* 48-49.

Anonymous. (2005). Long-term care strives for total experience. *Foodservice Director, 18*(7), 26.

Archetti, C., Garey, J., & Bermas, N. (1993). Attitudes of long-term care foodservice staff toward older workers. *Journal of the American Dietetic Association, 93(*3), 326-328.

Ball, M., Whittington, F., Perkins, M., Patterson, V., Hollingworth, C., King, S., & Combs, B. (2000). Quality of life perspectives from assisted-living residents. *Applied Journal of Gerontology, 19*(3), 304-325. Retrieved June 24, 2004 from PsycINFO database.

Barnes, S. (2004). Perceptions and understandings of long-term care: Results of focus groups with older adults, caregivers, and general public. *The Gerontologist, 44*(1), 412.

Beck, A., & Ovesen, L. (2003). Influence of social engagement and dining location on nutritional intake and body mass index of old nursing home residents. *Journal of Nutrition for the Elderly, 22*(4), 1-11.

Becker, B. & Kaldenberg, D. (2000, Winter). *Factors influencing the recommendation of nursing homes.* Marketing Health Services, American Marketing Association.

Bernstein, M., Tucker, K., Ryan, N., O'Neill, E., Clements, K., Nelson, M., Evans, W., & Fiartarone, S. (2002). Higher dietary variety is associated with better nutritional status in frail elderly people. *Journal of the American Dietetic Association, 102*(8), 1096-1104.

Boutin, D. (1999, Fall). Resident dining in long-term care food service administrator adds "fragrance" back into residents' lives. *Healthcare Food Service Trends,* 20-21.

Buzalka, M. (2001). Why residents now love dining at Laurel Lake. *Food Management*, 30-34.

Buzalka, M. (2004). Carts boost satisfaction. *Food Management, 39*(12), 26.

Carrier, N., West, G., & Ouellet, D. (2006). Cognitively impaired residents' risk of malnutrition is influenced by foodservice factors in long-term care. *Journal of Nutrition for the Elderly, 25*(3-4), 73-87.

Case, T., & Gilbert, L. (1997). Dietary and dining expectations of residents of long- term care facilities. *Outcomes Research, 13*(7/8), 703-704.

Castellanos, V., & Andrews, Y. (2002). Inherent flaws in a method of estimating meal intake commonly used in long-term care facilities. *Journal of the American Dietetic Association, 102*(6), 826-831.

Castellanos, V. (2004). Food and nutrition in nursing homes. *Generations, 28*(3), 65-71.

Cavanaugh, B. (2003). Upscale dining drives sales at Hyatt retirement village. *Nation's Restaurant News, 37*(38), 157-158.

Centers for Medicare and Medicaid Services. (1999). Survey *protocol for long-term care facilities: Investigative protocol dining and food service.* (pp. 41-43). Retrieved September 5, 2005 from http://www.cms.hhs.gov/manuals/107_som/som107ap_p_ltcf.pdf

Chao, S., Boldy. D., & Lee, A. (2003). Factors influencing resident satisfaction in residential aged care. *The Gerontologist, 43*(4), 459-472.

Chao, S. & Dwyer, J. (2004). Food and nutrition services in assisted-living facilities: boon or big disappointment for elder nutrition. *Generations, 28*(3), 72-77.

Chao, S., Houser, R., Tennstedt, S., Jacques, P. & Dwyer, J. (2007). Food and nutrition care indicators: Experts' views on quality indicators for food and nutrition services in assisted-living facilities for older adults. *Journal of the American Dietetic Association, 107*(9), 1590-1598.

Chu, J., & Pike, T. (2002). What *top performing retailers know about satisfying customers: Experience is the key.* IBM Institute for Business Value. Retrieved from www.ibm.com/services/strategy

Continuing-care Accreditation Commission. *Accredited Continuing-care Retirement Communities.* Retrieved October 1, 2003, from http://www.ccaconline.org

Cowan, D., Roberts, J., Fitzpatrick, J., While, A., & Baldwin, J. (2004). Nutritional status of older people in long term care setting: Current Status and future directions. *International Journal of Nursing Studies, 4*(3), 225-237.

Crogan, N., & Evans, B. (2001). Guidelines for improving resident dining experiences in long-term care facilities. *Journal for Nurses in Staff Development, 7*(5), 256-259.

Crogan, N., & Pasvogel, A. (2003). The influence of protein-calorie malnutrition on quality of life in nursing homes. *Journals of Gerontology: Series A; Biological Sciences and Medical Sciences, 58*(2), 159-164.

Crogan, N., Evans, B., & Velasquez, D. (2004). Measuring nursing home resident satisfaction with food and food service: Initial testing of the FoodEx-LTC. *Journals of Gerontology: Series A; Biological Sciences and Medical Sciences, 370*(8), 370-378.

Crogan, N., Evans, B., & Schulz, J. (2004). Improving nursing home food service: Uncovering the meaning of food through residents' stories. Journal of Gerontological Nursing, 30(2), 29-36.

Crogan, N., & Evans, B. (2006, November). The shortened Food Expectations -- Long-Term Care Questionnaire: assessing nursing home resident satisfaction with food

and food service. *Journal of Gerontological Nursing, 32*(11), 50-59. Retrieved March 21, 2009, from CINAHL.

Davis, M., Sebastian, J., & Tschetter, J. (1997). Measuring quality of nursing home service: Residents' perspective. Psychological Reports, 81(2), 531-543.

Desai, J., Winter, A., Young, K., Greenwood, C. (2007). Changes in type of foodservice and dining room environment preferentially benefit institutionalized seniors with low body mass indexes. Journal of the American Dietetic Association, 107(5), 808-814.

Desiderio, L. (2001). Menu trends: The new frontier. *ID, 37*(10), 52.

Doll, G. (2003). An *exploratory study of the process of culture change in three Kansas nursing homes, dissertation summary.* Unpublished doctoral dissertation, Kansas State University, Manhattan.

Donoghue, C. & Castle, N. (2009). Leadership styles of nursing home administrators and their association with staff turnover. *The Gerontologist, 49* (2), 166-174.

Dorner, B. (2004). *Healthy weight: Preventing and treating unintentional weight loss*. Akron, OH: Becky Dorner & Associates.

Dorner, B. (2005). New guidance on long-term care issues. *Today's Dietitian*, 48-49.

Dorner, B., Niedert, K., & Welch, P. (2002). Liberalized diets for older adults in long-term care. *Journal of the American Dietetic Association, 102*, 1316-1323.

Doty, M., Koren, J. & Sturla, E. (2008). *Culture change in nursing homes: How far have we come? T*he Commonwealth Fund. Retrieved May 5, 2008 from http://www.commonwealthfund.org/publications/publications_show.htm?doc_id=684709#areaCitation

Dube, L., Trudeau, E., & Belanger, M. (1994). Determining the complexity of patient satisfaction with foodservices. *Journal of the American Dietetic Association, 94*, 394-401.

Dyck, M. (2008). Weight loss prevention in nursing home residents: a pilot study to determine administrative strategies. *Journal of Gerontological Nursing, 28*(8).

Retrieved March 2009 from http://find.galegroup.com.er.lib.k-state.edu/itx/start.do?prodId=EAIM

Edelman, P., Guihan, M., Bryant, B. Munroe, J. (20065). Measuring resident and family member determinants of satisfaction with assisted-living. *The Gerontologist, 46*(5), 599-608.

Ejaz, F., Straker, K., & Swami, S. (2003). Developing a satisfaction survey for families of Ohio's nursing home residents, *The Gerontologist, 43*(4), 447-458.

Evans, B., Crogan, N., & Shultz, J. (2003). Quality dining in the nursing home: The residents' perspective. *Journal of Nutrition for the Elderly, 22*(3), 1-17.

Evans, B., & Crogan, N. (2005). Using the FoodEx-LTC to assess institutional food service practices through nursing home residents' perspectives on nutrition care. *Journals of Gerontology: Series A; Biological Sciences and Medical Sciences, 125*(4), 125-129.

Evans, L. (2002). Nutrition in the hospital—why is it so important? *Working with Older-People, 6*(1). 11-16.

Feder, J., Komisar, H., & Niefeld, M. (2000). Long-term care in the United States: An overview. *Health Affairs, 19*(3), 40-56.

Fitzgerald, M. (1999, Spring). The best of senior healthcare food service. *Healthcare Food Service Trends,* 18-22.

Finley, D., Diekmann, C., Dorner, B. & Lofley, D. (2005). Putting the "wow" in dietetics. *Journal of the American Dietetic Association, 105*(7), 1149-1151.

Foltz-Gray, D. (1998). Let them eat cake. *Contemporary Long-Term Care, 21*(7), 60-65.

Food Service Director Research. (2005, March). Long-term care seeks quick fixes: Facilities show it's not hard to whet senior appetites. *Food Service Director, 18*(3), 1, 7.

Food Service Director Research. (2005, July). Long-term care braces for growth. *Foodservice Director, 18*(7), 24-26.

Friedland, A. (2000). A revolution in the making of senior dining? *Food Management, 35*(11), 44-49.

Fu, Y. & Parks, S. (2001). The relationship between restaurant service quality and consumer loyalty among the elderly. *Journal of Hospitality & Tourism Research, 25*(3), 320-336.

Fukunaga, A., Hiroshi, U., & Kumiko, S. (2005). Influences of aging on taste perception and oral somatic sensation. *Journals of Gerontology: Series A; Biological Sciences and Medical, 125*(4), 109-113.

Gallagher, A. (2004, Fall). *Undernutrition and causes of involuntary weight loss in long-term care.* Global Monitor: Special Meeting Reporter. (Available from www.LTCnutrition.org), 5-9.

Gilmore, S., Robinson, G., Posthauer, M., & Raymond, J. (1995). Clinical indicators associated with unintentional weight loss and pressure ulcers in elderly residents of nursing facilities. *Journal of the American Dietetic Association, 95*(9), 984-992.

Giuffrida, M. (2003). Improve food service management with benchmarking. *Assisted-living Success.* Retrieved October 2, 2003 from http://www.alsuccess.com/articles/341feat2.html

Grant, L. (2008). *Culture change in a for-profit nursing home chain: An evaluation.* The Commonwealth Fund. Retrieved May 5, 2008 from http://www.commonwealthfund.org/publications/publications_show.htm?doc_id=668880

Gronroos, C. (1988). Service quality: The six criteria of good perceived service quality. *Review of Business, 9*(3), 10-13.

Hackes, B., Shanklin, C., Kim, T., & Su, A. (1997). Tray service generates more food waste in dining areas of a continuing-care retirement community. *Journal of the American Dietetic Association, 97*(8), 879-884.

Hoban, S. (2006). Who are customer service reps? Everyone! *Nursing Homes, 54*(2), 39-41.

Hollis, J. & Henry, C. (2007). Dietary variety and its effect on food intake of elderly adults. *Journal of Human Nutrition and Dietetics, 20* (4), 345-351.

Horn, S., Bender, S., Bergstrom, N., Cook, A., Reguson, M., Rimmasch, H., Sharkey, S., Smout, R., Taler, G., & Voss, A. (2002, November). Description of the National Pressure Ulcer Long-Term Care Study. *Journal of the American Geriatrics Society, 50* (11), 1532-5415.

Huang, H. (2004). *Factors affecting satisfaction and residents' utilization of foodservice in assisted-living facilities.* Unpublished doctoral dissertation, Kansas State University, Manhattan.

Huang, H. & Shanklin, C. (2008). An integrated model to measure service management and physical constraints' effect on food consumption in assisted-living facilities. *Journal of the American Dietetic Association, 108* (5), 785-792.

Huffman, G. (2002). Evaluating and treating unintentional weight loss in the elderly. *The American Family Physician, 65*(4), 640-650.

Hutlock, T. (2005). All in the name of good taste. *Nursing Homes, 54(*3), 37-39.

Institute for the Future of Aging Services. (2003). Why *workforce development should be part of the long-term care quality debate.* American Association of Homes and Services for the Aging. Washington, DC.

Institute for the Future of Aging Services. (2003). Modeling *the future supply and demand for long-term care workers.* American Association of Homes and Services for the Aging. Washington, DC.

International Food Information Council. (2001). Exploring the food and health attitudes of older Americans. *Journal of Nutrition for the Elderly, 20*(3), 39-43.

Jackson, R. (2003). Trends in commercial food service. *Health Care Food & Nutrition Focus, 20*(7), 1-7.

Jhaveri, T. (2006, October). Enhancing the dining experience in senior living. *Nursing Homes: Long Term Care Management, 55*(10), 56-60. Retrieved March 18, 2007 from http://web.ebscohost.com,proxy.ohiolink.edu

Kansas Association of Homes & Services for the Aging. (2003). *Keeping frontline workers in long-term care: Research results of an intervention.* Institute for the Future of Aging Services.

Kayser-Jones, J. (2000). Improving the nutritional care of nursing home residents. *Nursing Homes Long-Term Care Management, 49*(10), 56-59.

Keller, H., & Hedley, M. (2002). Nutritional risk needs assessment of community-living seniors: Prevalence of nutrition problems and priorities for action. *Journal of Community Health, 27*(2), 121-134.

Keller, H., Gibbs, A., Boudreau, L., & Goy, R. (2003). Prevention of weight loss in dementia with comprehensive nutritional treatment. *Journal of the American Geriatrics Society, 51*(7), 945-951.

King, P. (1999). Necessity begets a solution for senior/foodservice operator. *Nation's Restaurant News, 33*(18), 18.

King, P. (2002). Renovations bring fine-dining aura to retirement center. *Nation's Restaurant News, 36*(40), 76.

Kitzinger, J. (1995). Qualitative research: Introducing focus groups. *BMJ Journal, 29*(3), 54-65.

Koford, J., & Birkemose, A. (2004). Meals in nursing homes. *Scandinavian Journal of Caring Science, 18,* 128-134.

Kroll, L. (2005). No employee left behind. *Forbes Global, 1*(3), 22.

Lambert, L., Bordreaux, J. Conklin, M., & Yadrick, K. (1999). Are new meal distribution systems worth the effort for improving patient satisfaction with foodservice? *Journal of the American Dietetic Association, 99,* 1112-1114.

Lee, K., Shanklin, C., & Johnson, D. (2003). Development of service quality measurement for foodservice in continuing-care retirement communities. *Foodservice Research International, 14*, 1-21.

Lee, K. (2004). *Residents' perception of foodservice in continuing-care retirement communities. Unpublished doctoral dissertation.* Kansas State University, Manhattan.

Lengyel, C., Zello, G., Smith, J., & Whiting, S. (2003). Evaluation of menu and food service practices of long-term care facilities of a health district in Canada. *Journal of Nutrition for the Elderly, 22(*3), 29-45.

Lengyel, C., Smith, J., Whiting, S., & Zello, G. (2003). A questionnaire to examine food service satisfaction of elderly residents in long-term care facilities. *Journal of Nutrition for the Elderly, 24(*2), 5-18.

Levinson, Y., Dwolatzky, T., Epstein, A., Adler, B., & Epstein, L. (2005). Is it possible to increase weight and maintain the protein status of debilitated elderly residents of nursing homes? *Journals of Gerontology: Series A; Biological Sciences and Medical Sciences, 60*(7), 878-881.

Lippincott/Williams & Wilkins. (2001). Chefs for seniors in assisted-living. *Nutrition Today, 36*(4), 191.

Lipowski, M. (1998). When seniors won't eat…improved nutrition becomes a priority. *Food Management, 33*(8), 30-33.

Litvin, S. & MacLaurin, D. (2001). Consumer attitude and behavior. *Annals of Tourism Research, 28*(3), 821-823.

Lowe, T., Lucas, J., Castle, N., Robinson, G., & Crystal, S. (2003). Consumer satisfaction in long-term care: State Initiatives in nursing homes and assisted-living facilities. *Gerontologist, 43*(6), 883-896.

Mandrik, C. (1998). The focus group kit. *Journal of Consumer Affairs, 3*(2), 436-440.

Marcus, J. (2003). Pleasing palates past their prime. *Today's Dietitian,* 30-33.

Marken, D. (2004). Enhancing the dining experience in long-term care: Dining with dignity program. *Journal of Nutrition for the Elderly, 23*(3), 99-109.

Marsden, J. (1999). Older persons' and family members; perceptions of hominess in assisted-living. *Environment and Behavior, 31* (1), 84.

Matthews, L. (2008). Providing nutrition services to older Americans. *Topics in Clinical Nutrition, 23*(2), 103-119.

Moody, H. (2002). *Aging: Concepts and controversies (4th ed.).* Thousand Oaks: Sage Publications.

Morely, J.E. (2001). Decrease food intake with aging. *Journal of Gerontology, 6*, 81-88.

Mostyn, M., Race, K., Seibert, J., & Johnston, M. (2000 March/April). Quality assessment in nursing home facilities: Measuring customer satisfaction. *American Journal of Medical Quality, 15*(2), 54-61, Retrieved March, 2007 from http://web.ebscohost.com.proxy.com.ohiolink.edu

Naditz, A. (2003). Assisted-living, nursing homes strike sour note with America's elderly. Contemporary Long Term Care, 26 (5), 13.

National Citizens' Coalition for Nursing Home Reform. (2000, June). *Malnutrition and dehydration in nursing homes: Key issues in prevention and treatment.* National Citizens' Coalition for Nursing Home Reform, 24. Retrieved on March 1, 2008.

Nickels, B., & Arnold, C. (2000). Eating habits. *Assisted-living Today, 7*(9), 55-56.

Niedert, K., & Dorner, B. (2004). *Nutrition care of the older adult. (2nd ed.).* Chicago: American Dietetic Association.

Nijs, K., Graaf, C., Siebelink, E., & Blauw, Y. (2006). Effect of family-style meals on energy intake and risk of malnutrition in Dutch nursing home residents: A randomized controlled trial. *The Journals of Gerontology: Series A: Biological Sciences and Medical Sciences, 61A* (9), 935-943.

Norrgard, C. (2001, Annual). Assisted-living. *Clinical Reference Systems*, 134.

O'Connor, J. (2003). Long-term care: A market in transition. *McKnight's Long-Term Care News.* Retrieved October 12, 2003 from www.mcknightsonline.com

Oleck, J., & Stone, A. (1998, July 6). Homes for seniors where the living is easier. *Business Week,* 88-91.

Omnibus Budget Reconciliation Act (OBRA) of 1987. (1987, December 22). Public Law 10-203. Subtitle C: *Nursing Home Reform*.

Pagan, J. (2001). Senior living foodservice. *Contemporary Long Term Care, 24*(10), 25-30.

Paillaud, E., Herbaud, S., Caillet, P., Lejonc, J., Campillio, B., & Boroes, P. (2005). Relations between undernutrition and nosocomial infections in elderly patients. *Age Ageing, 34*(6), 619-625.

Paquet, C., St-Arnaud-McKenzie, D., Kergoat, J., Ferland, G., & Dube, L. (2003). Direct and indirect effects of every day emotion on food intake of elderly patients in institutions. *The Journals of Gerontology, 58A* (2), 153-158.

Parasuraman, A., Zeithaml, V., & Berry, L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing, 49*, 41-50. Retrieved May 5, 2008, from ABI/INFORM Global database

Parasuraman, A., Zeithaml, V., & Berry, L. (1988). SERVQUAL: A multiple-items scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12-40.

Peak, T., & Sinclair, S. (2002). Using customer satisfaction surveys to improve quality of care in nursing homes. *Health and Social Work, 27*(1), 75-79. Retrieved June 24, 2008 from PsycINFO database.

Peaselee, K. (2003). Emerging tastes. *Assisted-living Success*. Retrieved on October 2, 2003 from www.alsuccess.com/articles/141feat2.html

Pfeiffer, N., Rogers, D., Roseman, M., Jarema, L., Reimann, A., & Jones, D. (2005). What's new in long-term care dining? *North Carolina Medical Journal, 66*(4), 287-291.

Popper, R., & Kroll, B. (2003). Food preference and consumption among the elderly. *Food Technology, 57*(7), 32-40.

Position of the American Dietetic Association. (2003). Liberalization of the diet prescription improves quality of life for older adults in long-term care. *Journal of the American Dietetic Association, 105*(12), 1955-1965.

Powers, T. & Bendall-Lyon, D. (2003). Satisfaction score. *Marketing Health Services, 23*(3), 28-32.

Puckett, R. (2004). *Food Service Manual for Health Care Institutions (3rd ed.).* San Francisco: Jossey-Bass

Pyrek, K. (2003). Ambience is everything. *Assisted-living Success.* Retrieved April 21, 2003 from www.alsuccess.com

Rahman, A. & Schnelle, J. (2008). The nursing home culture-change movement: Recent past, present, and future directions for research. *The Gerontologist, 48*(2), 142-148.

Rantz, M., Zwygart-Stauffacher, M., Popejoy, L., Grando, V., Hicks, L., & Conn, V. (1999). Nursing home care quality: A multidimensional theoretical model integrating the views of consumers and providers. *Journal of Nursing Care Quality, 14*(1), 16-37.

Remsburg, R., Luking, A., Baran, P., Radu, C., Pineda, D., Bennett, R., & Taback, M. (2001). Impact of a buffet-style dining program on weight and biochemical indicators of nutritional status in nursing home residents: A pilot study. *Journal of the American Dietetic Association, 101*(12), 1460-1463.

Riell, H. (2002). Recipes, cooking classes and more: Athena Healthcare uses food to help recapture home life. *Food Service Director, 15*(5), 36.

Robbins, D. (2000). *The nursing home resident satisfaction scale: A psychometric evaluation.* Dissertation Abstracts International, 60(8-B), 4248. Retrieved June 24, 2008 from PsycINFO database.

Robinson, G., & Leif, B. (2001). *Nutrition management and restorative dining for older adults: Practice intervention for caregivers.* Chicago: American Dietetic Association.

Robinson, G. & Gallagher, A. (2008). Culture change impacts quality of life for nursing home residents. *Topics in Clinical Nutrition, 23*(2), 120-130.

Rosenthal, B. (2003). Broken and unsustainable: The aging of baby boomers means a cost crisis in long-term care. *Contemporary Long-Term Care, 26*(10, 22-25.

Rousseau, R. (1996). Living to eat, eating to live. *Restaurant & Institutions, 106*(5), 44.search. Retrieved October 1, 2008, from http://www2.aahsa.org/

Roy, R., & Spate, L. (1995, Supplement). Restaurant style service in the long-term care setting: The customer service focus of the future. *Journal of the American Dietetic Association, 95*(9), A-83.

Ruigrok, J., & Sheridan, L. (2006). Life enrichment programme: Enhanced dining experience, a pilot project. *International Journal of Health Care Quality Assurance, 19*(5), 420-429.

Sahyoun, N., Zhang, X., & Serdula, M. (2005). Barriers to the consumption of fruits and vegetables among older adults. *Journal of Nutrition for the Elderly, 24*(4), 5-21.

Salmon, J. (2001). *The contribution of personal control and personal meaning to quality of life in home, assisted-living facility, and nursing home settings*. Dissertation Abstracts International, 63(02A), 710. (No. AA13041123)

Sandow, K. (2002, Summer). Meal service changes increase residential intake. *Gerontological Nutritionist,* American Dietetic Association, Dietetic Practice Group.

Schenkel, R., (2006, December). Restaurant style dining at an affordable price. *Nursing Homes: Long Term Care Management, 55*(12), 42-44. Retrieved March 18, 2007 from http://web.ebscohost.com,proxy.ohiolink.edu

Seo, S. (2004). The *role of relationship quality on residents' behavioral intentions of dining services.* Unpublished doctoral dissertation, Kansas State University, Manhattan.

Seo, S. & Shanklin, C. (2005). Using focus groups to determine specific attributes that influence the evaluation of quality food and service quality in continuing-care retirement communities. *Journal of Foodservice Business Research, 8*(1), 35-51.

Shatenstein, B., & Ferland, G. (2000). Absence of nutritional or clinical consequences of decentralized bulk food portioning in elderly nursing home residents with dementia in Montreal. *Journal of the American Dietetic Association, 100*(11), 1354-1360.

Sheridan, M. (2002). Inviting options: Marketing dining services to senior and families offers golden opportunities. *Restaurants & Institutions, 112* (21), 97-99.

Shultz, J., Crogan, N., & Bronwynne, C. (2005). Organizational issues related to satisfaction with food and food service in the nursing home from the resident's perspective. *Journal of Nutrition for the Elderly, 24(*4), 39-55.

Silver, A., Morley, J. Strome, L., Jones, D., & Vickers, L. (1988). Nutritional status in an academic nursing home. *Journal of the American Geriatric Society, 36*(6), 487-491.

Simmons, S., Alessi, C., & Schnelle, J. (2001). An intervention to increase fluid intake in nursing home residents: Prompting and preference compliance. *Journal of the American Geriatrics Society, 49*(7), 926-933. Retrieved June 24, 2005 from PsycINFO database.

Simmons, S., Cleeton, P., & Porchak, T. (2009). Resident complaints about the nursing home food service: Relationship to cognitive status. *Journal of Gerontology: Psychological Sciences. 64B* (3), 324-327.

Simmons, S., Osterwell, D., & Schnelle, J. (2001). Improving food intake in nursing home residents with feeding assistance: a staffing analysis. *Journals of Gerontology: Series A; Biological Sciences and Medical Sciences, 56A (*12), M790-M794.

Sindenvall, B. (1999). Meal procedures in institutions for elderly people: A theoretical interpretation. *Journal of Advanced Nursing, 30*(2), 319-328.

Spangler, A., & Pettit, R. (2003). Differences in preferences of entrees by elderly congregate meal participants according to age, gender, ethnicity, and education and a factor analysis approach to group entrée preferences. *Journal of Nutrition for the Elderly, 23*(2), 33-53.

Spears, M., & Gregoire, M. (2007). Foodservice *organizations: A managerial and systems approach (6th ed.).* New Jersey: Prentice-Hall.

Spector, P. E. (1985). Measurement of human service staff satisfaction: Development of the Job Satisfaction Survey. *American Journal of Community Psychology, 13*, 693-713.

Splett, P., Roth-Yousey, L., & Vogelzang, J. (2003). Medical nutrition therapy for the prevention and treatment of unintentional weight loss in residential healthcare facilities. *Journal of the American Dietetic Association, 103*(3), 352-363.

Stevens, P. Knutson, B., & Patton, M. (1995). Denser: A tool for measuring service quality in restaurants. *Cornell Hotel and Restaurant Administration Quarterly,* April, 56-60.

Studer, Q. (2004, Summer). *Healthcare service: Moving from good to great.* Marketing Health Services, American Marketing Association.

The Nutrition Screening Initiative. (2002). *Nutrition statement of principle*. Washington, DC: NSI.

Taylor, S. & Cronin, J. (1994). Modeling patient satisfaction and service quality. *Journal of Healthcare Marketing, 14*(1), 34-44.

Thomas, D., Verdery, R., & Gardner, L. (1991). Prospective study of outcomes from protein-energy malnutrition in nursing home residents. *Journal of Parenteral and Enteral Nutrition, 15,* 400-404.

Tobin, M., Whalen, S., & Kravich, J. (1997). Personalizing the foodservice. *Nursing Homes, 46(*6), 97-98.

Trueland, J. (2009, March). Dishing up good practice. *Nursing Older People, 21*(2), 18-21.

United States Department of Health and Human Services & Institute for the Future of Aging Studies (2005). *Measuring long-term care work: A guide to selected instruments to examine direct care worker experiences and outcomes.* Retrieved February 25, 2006 from www.ifas.org

Walters, C., Sorenson, J., Fiala, A., & Wisner, W. (2003). Exploring patient satisfaction with foodservice through focus groups and meal rounds. *Journal of the American Dietetic Association, 103*(10), 1347-1359.

Watkins, C. (2001). Creating production efficiencies. *Food Management, 36*(6), 32.

Weisberg, K. (2005). Green housing seniors. *Foodservice Director, 18(*2), 16.

Weisberg, K. (2005). Buffet impresario: Director proves nursing home buffets can accommodate special diet needs: Rodolfo Rodriguez, Lincoln Park (NJ) *Health Center. Food Service Director, 18*(7), 22-24.

Wellman, N. (Speaker). (2004). A *nutrition mosaic for the new aging reality (CD Recording DA04-35).* Anaheim, CA: American Dietetic Association.

Wendland, B. (2003). Malnutrition in institutionalized seniors: The iatrogenic component. *The Journal of the American Medical Association, 1752*(1),

West, G., Ouellet, D., & Ouellette, S. (2003). Resident and staff ratings of foodservices in long-term care: Implications for autonomy and quality of life. *The Journal of Applied Gerontology, 22*(1), 57-75.

Williford, J., Snell, D., & Houston, S. (1995). Effect of menus selected by residents versus corporate prepared menus on resident nutrient intake. *Journal of the American Dietetic Association, 95(*9), A-97.

Wolfe, W. (2006, July 27). Nursing home costs exceed Medicaid help. *Minneapolis Star Tribune.* Retrieved August 1, 2006, from http://startribune.com

Wright, L., Hickson, M., & Frost, G. (2006). Eating together is important: Using a dining room in an acute elderly medical ward increases energy intake. *The British Dietetic Association, 19*, 23-26.

Yen, P. (2003). Impact of the eating environment. *Geriatric Nursing, 24*(4), 255-2526.

Young, K., Binns, M., & Greenwood, C. (2001). Meal delivery practices do not meet needs of Alzheimer patients with increased cognitive and behavioral difficulties in a long-term care facility. *Journals of Gerontology: Series A; Biological Sciences and Medical Sciences, 56A*(10), M656-M661.

Young, C., & Brewer, P. (2001). Marketing continuing-care retirement communities: A Model of residents' perceptions of quality. *Journal of Hospitality & Leisure Marketing, 9*(1/2), 133-151.

CHAPTER 3 - METHODOLOGY

Introduction

This chapter will discuss the two phases of this research study. Phase I is a case study of a single skilled nursing facility that has transitioned from the traditional foodservice delivery system to the restaurant-style foodservice delivery system. Phase I Research Propositions are listed below.

Phase II of the study included seven facilities that have transitioned from the traditional foodservice delivery system to the restaurant-style foodservice delivery system. Phase II Research Propositions are listed below.

This chapter includes a discussion of the following: the design of the study, description of the population and samples, instrumentation, administrative procedures, data collection, and analyses of the data.

For the purposes of this study, restaurant-style dining is defined as the use of a static menu incorporating multiple choices in all menu categories including appetizer, entree, starch, vegetable, dessert, and beverage (Spears & Gregoire, 2007). The menu offerings may also include daily or weekly specials. Restaurant-style service is defined as wait-service with residents choosing their meal selections at the time of meal delivery (Roy & Spate, 1995; Schultz, & Evans, 2005; West, Ouellet, & Ouellette, 2003).

Part of a successful dining program is positive staff attitude and their relationship with the residents (Buzalka, 2001). This study also investigated foodservice employee job satisfaction and intent to leave and the employees' perception of resident satisfaction with restaurant-style dining in a skilled nursing facility. An Australian study found that staff satisfaction is positively associated with resident satisfaction (Chou, Boldy, & Lee, 2003). According to Walter, Sorenson, and Wismer (2003), very little research has been conducted in skilled nursing facilities regarding foodservices, dining, and employee job satisfaction and perception of resident satisfaction. Results of this study will be useful to administrators, dietetics practitioners, and foodservice management professionals in

determining the most appropriate menu and food delivery system to meet the needs and improve the quality of life for their residents in skilled nursing facilities.

Purposes

The following paragraphs present the purposes of this study. The study was conducted in two phases. These purposes and objectives were addressed in both phases of the research.

The purposes of this study were to:

- explore factors associated with residents' dining experiences in skilled nursing facilities that have transitioned to restaurant-style dining.
- explore how food quality, service quality, and customization influence resident satisfaction.
- explore changes in food and labor costs when transitioning from a traditional foodservice delivery system to a restaurant-style foodservice delivery system.
- investigate changes in unintended weight loss trends when transitioning from a traditional foodservice delivery system to a restaurant-style foodservice delivery system.
- investigate foodservice employee perception of resident satisfaction with food and food services, job satisfaction, and the effect of job satisfaction on intent to leave.

Population and Samples

Phase I: Case Study

The populations for this study were residents and foodservice employees in a privately owned for-profit, 230-bed skilled nursing facility. The facility was opened in 1996 under private ownership and provides the community with long-term care, short-term rehabilitation, an Alzheimer's unit, and short-term respite stays. The facility was a "stand-alone" skilled nursing facility not affiliated with a hospital or a Continuing-Care Retirement Community (CCRC). The first part of the Phase I research involved conducting focus groups with the residents to assist with the instrument development.

The second part of the Phase I research involved administering surveys to both residents and employees.

Phase II: Multi-Site Study

The two populations for this study were residents and foodservice employees of skilled nursing facilities that have incorporated a restaurant-style menu and service. Since there is no listing of skilled nursing facilities based on the type of foodservice system and service delivery, a telephone inquiry survey (Appendix A) was conducted to determine the type of menu and foodservice system used by select facilities. The Centers for Medicare and Medicaid Services nursing home "Compare and Search" tool and the Pennsylvania Department of Health Nursing Care Facility Information were used to obtain a listing of Medicare/Medicaid certified skilled nursing facilities. Skilled nursing facilities within the region of a 100-mile radius of the researcher's university were identified to determine the type of menu and foodservice delivery systems used.

The members of pertinent professional organizations were contacted electronically as additional sources for information regarding foodservices in skilled nursing facilities. The associations contacted were the Consultant Dietitians in Healthcare Facilities (CD-HCF), Management in Food and Nutrition Systems (MFNS), Dietetic Technicians in Practice (DTP), National Society for Healthcare Foodservice Management (HFM), and the American Society for Healthcare Foodservice Administrators (ASHFSA).

There were 305 skilled nursing facilities within the 21-county defined research area. Foodservice management professionals were contacted in 285 facilities; ten facilities within the 100-mile radius met the research criteria of utilizing a restaurant-style menu and service. The total resident population for the ten facilities was1025. A non-probability purposive sampling technique was utilized. All residents able to consume food orally (as determined by the nursing staff) were surveyed. Residents participated on a voluntary basis. All foodservice employees of these facilities constituted a second sample.

Instrument Development

Two questionnaires were developed for this study. The resident questionnaire addressed resident satisfaction with food quality, service quality, and customization. The food service employee questionnaire addressed employee job satisfaction, intention to leave, and the employees' perception of resident satisfaction of food quality and services.

Resident Questionnaire

The resident questionnaire was adapted from questionnaires developed by West, Ouellet, and Ouellette (2003), Huang (2004), Lee (2004), Howells (2007), and Huang and Shanklin (2008) for use with residents in long-term care facilities (Appendix B). The questionnaire contained four sections. The first section contained specific statements regarding resident perception of food quality, service quality, and customization. Food quality attributes included: food temperatures, food taste, food appearance, and consistency of food products. Timeliness of food delivery, prompt correction of errors, and respectful treatment by employees were the characteristics of service quality investigated. Data collected from the focus groups in Phase I was used for instrument refinement.

Customization refers to the residents' ability to choose food items and specify portion sizes from a menu at the time of meal service. All of the statements were rated on a five-point Likert scale from one (strongly disagree) to five (strongly agree). The second section included broad statements regarding overall service, quality, and customization using a five-point Likert scale from one (very dissatisfied) to five (very satisfied). The third section included one overall quality statement using a five-point Likert scale from one (very poor) to five (very good). In addition, a section containing demographic questions were included relating to age, gender, date of admission to the facility, and preferred dining location (community dining room or personal residence).

Foodservice Employee Questionnaire

A three-section questionnaire was developed for administration to all Food and Nutrition employees (Appendix C). Section A contained demographic questions including job title, job status, gender, age, education, and employment date. Section B, Part 1 included statements asking employees to rate their perception of the resident

satisfaction with the menu and foodservice. Section B, Part 2 contained statements regarding job satisfaction, intention to leave, and perceived resident satisfaction of food quality and service. These five items were adapted from the General Job Satisfaction Scale (GJS) and from the Job Diagnostic Survey (JDS) (United States Department of Health and Human Services, 2005) and the Job Satisfaction Survey (Spector, 1985). A five-point Likert scale ranging from strongly disagree (1) to strongly agree (5) was used to measure the constructs. A facility administrator and the Director of Food and Nutrition Services were contacted to arrange an initial meeting to discuss the research project.

Focus groups and individual interviews were conducted with the residents. The researcher conducted the resident focus groups and interviews with the assistance of a research assistant. Ten focus groups consisting of six residents per group were conducted at the pilot facility to gain further insight on resident satisfaction of foodservices. Questions centered on the residents' experiences with food and foodservices; description of a typical mealtime at the facility focusing on the best and worst aspects of mealtimes; and finally, the resident's view on a "perfect" mealtime (Appendix E). The researcher conducted the focus group discussions based on studies conducted by Barnes (2004), Mandrik (1998), Seo and Shanklin (2005) and Walters, Sorenson, and Wismer (2003). The average length of each discussion group session was 37 minutes. Resident participation in the focus groups was determined by resident self-selection and the facility staff. Audio recordings and written documentation were used in order to capture resident comments. The group discussions were evaluated and the resident questionnaire was modified to reflect pertinent contributions.

Pilot Test of the Resident Questionnaire

The survey instrument for Phase I was refined based on focus group insights, and then pilot tested for time of completion, formatting, and clarity. Focus group results supported the structure and content of the original instrument (Howells, 2007). The instrument used in Phase I of the study contained four questions specifically relating to the case study facility. Two different graphical formats were presented to each resident, portrait and landscape. Sixteen residents, in the case study facility, agreed to complete the instrument. Ten residents preferred the landscape orientation and six residents

preferred the portrait orientation. Reliability and validity were also verified. After removing the four facility specific questions from the Phase I survey, the same survey was implemented for the Phase II study. Data from118 completed revised surveys were entered and analyzed for reliability utilizing SPSS for Windows Version 15.0 (SPSS Inc., Chicago). Cronbach's alpha was applied to all constructs to test for internal consistency. Residents were able to complete the survey within 10-15 minutes. The majority of the residents completed the survey prior to participation in a scheduled facility activity.

Project Approval

Prior to conducting this study, approval was obtained from the Institutional Review Boards (IRB) of Kansas State University, Manhattan, Kansas (IRB 3608), and Youngstown State University, Youngstown, Ohio. This research project was submitted to the IRB because it involves institutionalized older persons who are considered a vulnerable population. All participants involved in interviews, focus, and/or survey completion were informed of their rights (including anonymity) and asked to sign a consent form (Appendix D). Participants were informed that participation was voluntary and posed little or no risk.

Data Collection

Administrators of those facilities meeting the research criteria were contacted regarding participating in the research study. If the administrator agreed to participate in the study, the researcher requested an appointment to describe the study and the research process. At this initial meeting, a timeline was established to distribute and collect the resident and foodservice employee questionnaires. Because of the variety of challenges that could be encountered with this vulnerable population, the researcher and research assistant were available to assist the residents, if necessary, with the survey completion. Residents did need some assistance with reading and circling their responses on the surveys. Additional resident surveys were provided to the Administrator or designee to be completed by those residents not able to complete the survey on the collection day.

Self-addressed postage paid envelopes were provided for return of the additional resident surveys.

The employee surveys were distributed to the foodservice workers for all shifts on the site visit day. Employees were asked to complete the survey and return it to the researcher or a common collection site. Surveys for absent workers were given to management to distribute to the workers. The researcher collected available surveys and provided self-addressed postage paid envelopes for return of additional employee surveys.

Data Analysis

Statistical analyses were performed using SPSS for Windows Version 15.0 (SPSS Inc, Chicago). Descriptive statistics (means, standard deviations, and frequency distributions) were compiled and presented as a backdrop for inferential analyses that addressed the research propositions of this study. Qualitative cluster analysis was used to identify trends and themes from the focus group data. The inferential analyses included: paired-sample *t*-tests, ANOVA, regression analysis, factor analysis on the three main factors of quality, service, and customization, correlations, and multiple regressions testing mediation using the three-step process described by Baron and Kenny (1986).

Research Propositions

This research is not based on any previous models. Thus research propositions, rather than hypotheses, were developed for this study due to its exploratory nature. The research propositions addressed the purposes of the study.

Phase I Research Propositions

When transitioning from a traditional non-selective menu system to a restaurant-style dining system in a skilled nursing facility:

RP1. opportunities for residents to make menu selections at meal times leads to a decrease in unintended weight loss.

RP2. overall resident satisfaction with food quality, service quality, and customization increases.

RP3. there will be differences in raw food costs, commercially prepared oral supplements, enteral feedings, and foodservice labor costs.

RP4. foodservice employee ratings of resident satisfaction with food quality, service quality, and customization closely parallel the resident ratings of food quality, service quality, and customization.

RP5. foodservice employee job satisfaction and intent to leave does not change.

Phase II Research Propositions

A model (see Figure 3.1) was developed for the research project. The model depicts the foodservice constructs of food quality, service quality, and customization and the relationship to resident and employee job satisfaction and intent to leave. The research is not based on previous models, thus research propositions, rather than hypotheses, were developed for this study due to its exploratory nature. The research propositions addressed the purposes of the study.

The research propositions depicted in the model are:

In skilled nursing facilities using a restaurant-style dining system:

RP6. residents are satisfied with (a) food quality, (b) service quality, and (c) customization.

RP7. foodservice employee ratings of resident satisfaction with (a) food quality, (b) service quality, and (c) customization closely parallel the resident ratings of food quality, service quality, and customization.

RP8. foodservice employee job satisfaction is negatively associated with intent to leave.

Phase II Model

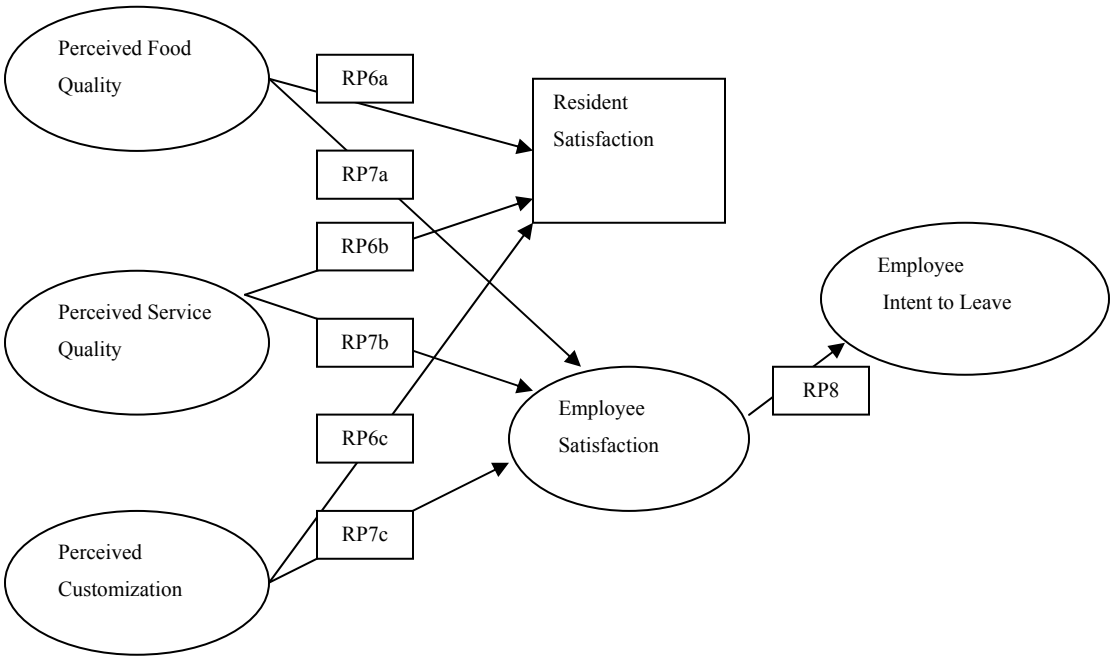

Figure 3.1 Proposed model for food quality, service quality, customization, resident satisfaction, employee satisfaction, and employees' intent to leave

Note: Two data sets were used to test the proposed relationships.

References

Babbie, E. (1995). *The practice of social research (8th Ed.).* Belmont, CA: Wadsworth Publishing Company.

Barnes, S. (2004). Perceptions and understandings of long-term care: Results of focus groups with older adults, caregivers, and public. *The Gerontologist, 44*(1), 412.

Baron, R. & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Baumgartner, T., & Strong, C. (1994). *Conducting and reading research in health and human performance.* Dubuque, IA.: Brown & Benchmark.

Bohrnstedt, G., & Knoke, D. (1994). *Statistics for social data analysis (3rd ed.).* Itasca, IL.: F.E. Peacock Publishers.

Buzalka, M. (December, 2001). Why residents now love dining at Laurel Lake. *Food Management,* 31-34.

Carrier, N., West, G., & Ouellet, D. (2006). Cognitively impaired residents' risk of malnutrition is influenced by foodservice factors in long-term care. *Journal of Nutrition for the Elderly, 25*(3/4), 73-87.

Chambliss, D., & Schutt, R. (2003). *Making sense of the social world: Methods of investigation.* Thousand Oaks, CA.: Sage Publications.

Chou, S., Bold, D., & Lee, A. (2003). Factors influencing resident satisfaction in residential aged care. *The Gerontologist, 43*(4), 459-472.

Cozby, P. (2001). *Methods in behavioral research (8th ed.).* New York: McGraw-Hill.

Crogan, N., Evans, B, & Shultz, J. (2004). improving nursing home food service: Uncovering the meaning of food through residents' stories. *Journal of Gerontological Nursing, 30*(2), 29-36.

Crogan, N., Alvine, C., & Pasvogel, A. (2006). Improving nutrition care for nursing home residents using the INRx process. *Journal of Nutrition for the Elderly, 25*(3/4), 89-103.

Desai, J., Winter, A., Young, K., & Greenwood, C. (2007). Changes in type of foodservice and dining room environment preferentially benefit institutionalized seniors with low body mass indexes. *Journal of the American Dietetic Association, 107*(5), 808-814.

Evans, B., Crogan, N., & Shultz, J. (2003). Quality dining in the nursing home: The residents' perspective. *Journal of Nutrition for the Elderly, 22*(3), 1-17.

Howells, A. (2007). *The impact of perceived quality on assisted-living resident satisfaction with their dining experience.* Unpublished master's thesis, Kansas State University, Manhattan, Kansas.

Huang, H. (2004). Factors affecting satisfaction and residents' utilization of foodservice in assisted-living facilities. Unpublished doctoral dissertation, Kansas State University, Manhattan

Huang, H. & Shanklin, C. (2008). An integrated model to measure service management and physical constraints' effect on food consumption in assisted-living facilities. Journal of the American Dietetic Association, 108 (5), 785-792.

Huck, S. (2004). *Reading statistics and research (4th ed.).* Boston, MA.: Pearson Education.

Leedy, P. & Ormrod, J. (2005*). Practical research: Planning and design (8th ed.).* Upper Saddle River, NJ.: Pearson Prentice Hall.

Lengyel, C., Smith, J., Whiting, S., & Zello, G. (2004). A questionnaire to examine food service satisfaction of elderly residents in long-term care facilities. *Journal of Nutrition for the Elderly, 24*(2), 5-18.

Mandrik, C. (1998). The focus group kit. *Journal of Consumer Affairs, 3*(2), 436-440.

Nursing Homes: Long Term Care Management. (September, 2003). Creating a five-star dining experience. *Nursing Homes: Long Term Care Management, 52*(9), 45-50. Retrieved February 7, 2009 from EBSCO database.

Ott, R., & Longnecker, M. (2001). *An introduction to statistics and data analysis (5th ed.).* Pacific Grove, CA.: Duxbury.

Parasuraman, A., Zeithaml, V.A., & Berry, L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12-37.

Roy, R., & Spate, L. (1995, Supplement). Restaurant-style service in the long-term care setting: The customer service focus of the future. *Journal of the American Dietetic Association, 95*(9), A-83.

Seo, S. & Shanklin, C. (2005). Using focus groups to determine specific attributes that influence the evaluation of quality food and service quality in continuing care retirement communities. *Journal of Foodservice Business Research, 8*(1), 35-51.

Shultz, J., Crogan, N., & Evans, B. (2005). Organizational issues related to satisfaction with food and food service in the nursing home from the resident's perspective. *Journal of Nutrition for the Elderly, 24*(4), 39-55.

Spears, M. & Gregoire, M. (2007). *Foodservice organizations: A managerial and systems approach (6th ed.).* New Jersey: Pearson-Prentice Hall.

Spector, P. (1985). Measurement of human service staff satisfaction: Development of the Job Satisfaction Survey. *American Journal of Community Psychology, 13,* 693-713.

United States Department of Health and Human Services & Institute for the Future of Aging Studies (2005). *Measuring long-term care work: A guide to selected instruments to examine direct care worker experiences and outcomes.* Retrieved from www.ifas.org

Walters, C., Sorenson, J., & Wismer, W. (2003). Exploring patient satisfaction with foodservice through focus groups and meal rounds. *Journal of the American Dietetic Association, 103*(10), 1347-1349.

West, G., Ouellet, D., & Ouellette, S. (2003). Resident and staff ratings of foodservices in long-term care: Implications for autonomy and quality of life. *The Journal of Applied Gerontology, 22*(1), 57-75.

CHAPTER 4 - TRANSITION TO RESTAURANT-STYLE DINING IN A SKILLED NURSING FACILITY: A CASE STUDY

Introduction

The Changing Demographic

Over the next 30 years, the older population is expected to double. The most recent United States census shows the growth of the population age 65 and older to be rising continually. By 2030 nearly one in five U.S. residents will fall into this age category. Growing at an even greater rate is the age 85 and older population. This age group is expected to increase to over 5% of the general population (19.4 million) by the year 2050 (U.S. Census Bureau, 2008).

The older population can be segmented into cohorts: Young-Old: ages 65-74; Old: ages 75-84; Old-Old: ages 85-99; and the Oldest-Old: ages 100 and older. Each cohort has its own identity, needs, and requirements (AOA, 2008; American Association of Retired Persons [AARP], 2005; United States Census Bureau, 2008). Someone who is age 65, born in 1940, has a very different demographic profile and will have very different needs and wants than someone who is age 95, born in 1910. It is important that healthcare professionals and those working with older adults not view these people as one group and assume that because they are over age 65, their population and individual needs are the same (AOA, 2007).

The Hispanic older population is expected to have the greatest growth, out-numbering the non-Hispanic black, Asian, and Pacific Islander groups. The non-Hispanic white older population is estimated to decrease from 66% in 2008 to 46% of the total population in 2050. Programs and services will require a greater level of flexibility to meet the demands of this growing diverse population (AARP, 2008; AOA, 2007; US Census Bureau, 2008).

America is facing a looming challenge. There are more than 77 million Baby Boomers who will require some type of healthcare support in the coming decades (Rosenthal, 2003). It is projected that, because of this surge, the number of nursing home residents is projected to double between 2008 and 2040.

Skilled nursing facilities provide round-the-clock medical care, the most intense level of health care and daily living services. For decades, skilled nursing facilities have played the leading role in providing long-term care services. The federal government estimates that approximately 17,000 skilled nursing facilities provide 1.7 million beds for about 5% of the elderly population (Centers for Medicare and Medicaid Services [CMS], 2005). This low 5% figure may underestimate the importance of nursing facilities. It is estimated that approximately 40% of those age 65 and older will require the services of a nursing home at some point in their lives (Moody, 2002).

Culture Change in Long-Term Care

Over the past decade, long-term care options have improved but are far from providing care for all those in need. The new models of "person-centered care" and "resident-directed care" aim to transform skilled nursing facilities from an institutional setting to a more home-like environment (Doty, Koren, & Sturla, 2008; Rahman & Schnell, 2008). The term "culture change" is being used interchangeably with "transformation of the environment of care" to include not only physical facility change but reformation of the process of care from the institutional model to a home-like model (Pfeiffer, Rogers, Roseman, Jarema, Reimann, & Jones, 2005).

In skilled nursing facilities, culture change must include food and dining services. Providing residents the ability to choose their meal selections, at meal times, can have a positive effect on residents and foodservice operations. Traditionally, food service in skilled nursing facilities is based on utilizing a multi-week cycle menu. Cycle menus are developed to provide a variety of foods to meet the nutritional needs of the residents (Lengyel, Zello, Smith, & Whiting, 2003). Often the menu is non-selective or semi-selective, providing little choice to the resident. Frequently, corporate food distribution and contract management companies provide menu templates that are imposed upon the facility with minimal adaption allowed. Production of meals is usually centralized and

individual food trays are distributed to the residents. Nursing home residents either consume their meals in a congregate dining area or in the privacy of his/her room (Beck & Owen, 2003; Castellanos, 2004; Crogan & Evans, 2001; Desai, Winter, Young & Greenwood, 2007; Dorner, Kniedert & Welch, 2002; Hackes, Shanklin, Kim, & Su, 1997; Marken, 2004).

The Next Generation of Older Adults

Long-term care facility operators should expect the next generation of seniors to have several demands including the following.

- Apartment life instead of institutional care, with technological advances will allow seniors to live independently.
- A more home-like environment with choices of how to live. Maintaining patterns similar to those they knew at home will be a priority for the Baby Boomer generation.
- Baby Boomers will not be attracted to long-term care facilities as they exist today, but rather will demand a myriad of conveniences similar to what they currently use at home.
- Technology will play a major role in long-term care facility selection. Access to the Internet will be expected along with other communication and entertainment technologies.
- Provision of health and wellness facilities complete with the latest workout equipment and indoor pools (AARP, 2005; Norrgard, 2001; Ball, Whittington, Perkins, Patterson, Hollingworth, King & Combs, 2000; Oleck & Stone, 1998; Rosenthal, 2003; Salmon, 2001).

The Baby Boomer generation will expect and demand conveniences, expanded high quality services, and most importantly the ability to choose, particularly in relation to foodservice in long-term care. Traditionally, foodservice in skilled nursing facilities is based on utilizing a multi-week cycle menu. Cycle menus are developed to provide a variety of foods to meet the nutritional needs of the residents (Lengyel, Zello, Smith, & Whiting, 2003). Often the menu is non-selective or semi-selective, providing little choice to the resident. The effect of implementing a restaurant-style menu and meal service on

the overall resident satisfaction in a nursing home and rehabilitation center was explored by Roy and Spate (1995). The design of the system allowed residents to make choices from a selective menu at tableside. The results of the change were recorded on a continuous quality indicator tool. Residents in this facility were extremely satisfied with the change in meal service.

Continuing-care retirement communities (CCRC), providing all levels of long-term care services, have successfully provided selective menus and restaurant-style dining for their residents. Because the CCRC campus usually includes independent, assisted, and skilled nursing facilities, there is the expectation for higher quality foods and services and demands for individualization. Dining facilities frequently are used as a marketing tool (Buzalka, 2004; Cavanaugh, 2003; Schenkel, 2006; Young & Brewer, 2001). King (1999) reported about a long-term care facility that, due to construction, set up a buffet-style foodservice to accommodate residents. Residents in this facility normally dined through tray service in their rooms. With the service delivery change because of construction, the residents, for the first time in several years, were the given the opportunity to choose their food selections. During the 6 months the program was implemented, weight loss among residents diminished. When the new facility opened, buffet service was continued (King, 1999).

Skilled Nursing Facilities Face Challenges

Operational Concerns

Operational issues regarding the cost effective provision of food and dining services are always a concern. Restaurant-style dining will raise questions regarding budgets and staffing. There are no studies to date that have compared the traditional meal service to the restaurant-style service from an operational perspective.

Food Waste

In 1997 a study was conducted to determine the amount of service food waste (SFW) generated in dining areas in a continuing-care retirement community. The study found the traditional tray service produced more waste for three meals than family-style or restaurant-style dining. The authors concluded that resident choice of food items and

portion sizes were a key element to waste reduction. It also was noted that foods served to residents on china by waitstaff, in pleasant surroundings, generated less waste (Hackes, Shanklin, Kim, & Su, 1997).

Worker Shortages

The Institute for the Future of Aging Services (2003) predicted that growth in the long-term care market will continue and foodservice worker shortages may become an issue. Long-term care foodservice workers should be embraced by administrators as "internal customers". Job satisfaction is important, and having employees engaged with their jobs is critical. According to the Gallup Organization, employee engagement is a priority. It is important to build a sense of belonging (Kroll, 2005). No studies regarding employment satisfaction of foodservice workers in long-term care could be found.

Unintended Weight Loss

Unintended weight loss (UWL) also referred to as unintended or unplanned weight loss or unintentional weight loss, is one of the most prevalent nutritional disorders encountered in long-term care (Gallagher, 2004; Niedert & Dorner, 2004; Splett, 2003). UWL is defined by the 1987 Omnibus Budget Reconciliation Act for Medicare and Medicaid (Center for Medicare and Medicaid Services [CMS]) facilities, as a 5% decrease in body weight in 30 days or 10% or greater weight loss in 180 days. Weight loss is common among older adults, especially those who are institutionalized (ADA, 2000, 2002, 2003; Alvine & Pasvogel, 2006; Dorner & Niedert, 2002). Studies have shown that 50% of older adults consume less than the recommended levels of calories and of many essential vitamins and minerals. This is one reason why residents are often found to be undernourished when admitted to a residential facility. There are many causes and variables that affect the incidence of UWL. The majority of nursing home resident studies implicate chronic disease, depression, use of multiple medications, and the overall frailty of the resident as major causes of weight loss. Food, foodservices, and the dining environment must be examined as critical intervention factors (Sandow, 2002).

Attempts by long-term care foodservice operators to improve their residents' appetites and raise customer satisfaction have resulted in decreasing UWL (Bernstein et al., 2002; Desidaro, 2008; Hollis & Henry, 2007; Levinson, Dwolatzky, Epstein, Adler,

& Epstein, 2005). Resident satisfaction with foodservices is a key quality indicator for long-term care facilities (Cavanaugh, 2003; Evans, et al., 2003; Peaslee, 2003; Sheridan, 2002; Young & Brewer, 2001). Many long-term care facilities have heightened their efforts to make foodservice a more important facet of life in their facilities by enhancing the dining environment, increasing menu variety, and diversifying service methods. A paradigm shift from the traditional medical model to a hospitality model where choice is provided is needed (Doty, et al., 2008; Roy & Spate, 1995; Young & Brewer, 2001).

Overall Resident Satisfaction

Managers of food and nutrition services in long-term care are attempting to gauge and understand resident satisfaction. Overall, foodservice directors in both for-profit and not-for-profit settings realize that knowing the customer, identifying their needs, and prioritizing those needs is critical to the success of their operations. Customer satisfaction with food and foodservices is a significant key to residents' quality of life (Case & Gilbert, 1997; Crogan, Evans, Severtsen, & Shultz, 2004; Evans & Crogan, 2005; Howells, 2007; Huang, 2004; Lee, Shanklin, & Johnson, 2003; Lengyel, Smith, Whiting, & Zello, 2004; Shultz, Crogan, & Bronwynne, 2005).

Some attempts have been made to determine the attributes of resident satisfaction with food and foodservices and to develop a foodservice customer satisfaction instrument for the long-term care industry. Lee et al. (2003) developed and administered a survey to independent residents in CCRCs to determine the dimensions of service quality. The researchers found that service quality was one-dimensional, loading primarily on "food". Huang (2004) surveyed assisted-living residents to explore various physical factors associated with aging and the effect on satisfaction with food and foodservices. The results indicated that resident satisfaction was significantly influenced by the resident's age-associated physical factors.

Using Focus Groups to Understand Residents' Needs and Wants

Few dining services studies have utilized focus groups in skilled nursing facilities to solicit input from residents. Use of focus groups is a qualitative research method used to investigate topics where little is known. Small groups of six to twelve people are asked about their attitudes towards specific products or services. Questions are asked in

an interactive group setting where participants are free to talk with other group members (Mandrik, 1998). Lee (2002) conducted focus groups in continuing-care communities (CCRC). Residents verbalized their positive and negative feelings about food and foodservices. Watters, Sorenson, Fiala & Wisner (2003) explored patient perceptions of hospital foodservice (Watters et al., 2003). Seo and Shanklin conducted focus groups in CCRCs to identify residents' perceptions of food quality and service. Common themes were identified in these studies including food taste, food temperatures, food attractiveness, the freshness of foods, preparation, timeliness of service, appearance of staff, staff respectfulness, and food handling skills.

In summary, long-term care facility owners, administrators and foodservice directors must prepare for change if they are to meet the needs and wants of the next generation of clientele. Studying the shift from a traditional foodservice delivery system to a restaurant-style foodservice delivery system in one skilled nursing facility is a way to assess the impact of such a change on operational factors and resident satisfaction.

Phase I: A Case Study

The purpose of Phase I of this research was to study a single skilled nursing facility that had made a successful transition from a traditional foodservice delivery system to a restaurant-style foodservice delivery system. The researcher was familiar with the facility's administrators and foodservice management staff. Foodservice management staff members were interested in determining any operational differences, changes in resident satisfaction, and employee concerns in the transition from the traditional foodservice delivery system to the restaurant-style delivery system. In addition, administrators were interested in developing a reliable foodservice survey for resident satisfaction.

Methodology

The Institutional Review Board of the research institution approved the study protocol. The Director of Food and Nutrition Services at the facility was contacted in advance to discuss the study. The Director of Food and Nutrition received approval from the administration to proceed with the study. The first part of the Phase I research involved conducting focus groups with the residents. The second part of the Phase I research involved administering surveys to both residents and employees.

Population and Samples

The populations for this study were residents and foodservice employees in a privately owned for-profit, 230-bed skilled nursing facility. The facility was opened in 1996 under private ownership and provides the community with long-term care, short-term rehabilitation, an Alzheimer's unit, and short-term respite stays. The facility was a "stand-alone" skilled nursing facility not affiliated with a hospital or a Continuing-Care Retirement Community (CCRC).

The facility transitioned from a non-selective four-week cycle menu to a restaurant-style menu with daily specials and mobile dessert and beverage carts in November of 2004. The foodservice management team included a full-time Registered Dietitian, a full-time Certified Chef, a full-time Dietetic Technician, and several shift supervisors. Foodservice labor consisted of 20 full-time equivalents (FTE). The food and nutrition service was self-operated (not operated by a management company).

The Restaurant-Style Dining Experience

Hours of operation for the Food and Nutrition department were 5:00 a.m. to 7:30 p.m. with breakfast at 7:00 a.m., lunch at 11:00 a.m., and dinner at 5:00 p.m. However, residents were allowed to order food items or meals anytime during foodservice operational hours. Every attempt was made to have the food items on the static menu always available. These food offerings were printed on a two-sided restaurant-style menu. For example, if a resident preferred to order foods from the lunch menu at their dinner meal, and if the items were available, the resident's request was fulfilled.

Upon entering the dining room, residents were greeted by the staff and seated. The main dining room is tastefully appointed with clothed tables, set with appropriate condiments, and a simple centerpiece. There was a combination of square and round tables accommodating four to six residents. Ninety percent of the residents chose to eat in the main dining room (or one of the three smaller dining rooms located in the units) for at least two of their meals. There was no assigned seating but the majority of residents preferred to be seated at the same table with the same companions for all meals. Accommodations were made for those in wheelchairs. Foodservice employees, nursing assistants, and other available staff assist with seating residents and taking beverage and food orders. As meal service begins, a foodservice employee (Host/Hostess) takes meal orders from the residents seated at a table in the dining room and provides them with a choice of beverages. After the residents received the main meal, a dessert cart was brought to the dining room, and residents chose a dessert from a variety of choices. The same procedures were followed for those residents who chose to dine in their rooms. Foodservice employees served the meals with assistance from the nursing staff.

Focus Groups

The researcher and a graduate assistant participated in focus group training provided by an experienced focus group facilitator at the research institution. The focus group training consisted of two, 2-hour sessions conducted by the Director of the Center for Advancement of Teaching and Learning (CATALYST) at the researcher's university. The focus group training covered the following topics: definition and purpose, preparation, developing questions, protocol, facilitation, closure, and analysis of data. The questions for the focus groups were developed based on a review of pertinent literature. The results of the focus groups were used to validate the resident instrument.

Resident Survey Instrument Development

The resident survey was adapted from questionnaires developed by Huang (2004) and Howells (2007) for use with residents in long-term care facilities (Appendix E). The constructs explored in the survey were food quality, service quality, and customization. "Customization" refers to the resident having the opportunity to customize or choose the menu selections he/she prefers. Food quality characteristics included taste, temperature,

consistency in preparation, and presentation. Service quality characteristics included promptness, respect shown by the servers, attention to resident requests, and correction of errors. The data collected from the focus groups with the residents revealed the validity of the instrument. Following a discussion with the facility administration and foodservice management four questions (specific to this facility) relating to the use of beverage and dessert carts were added to the survey. The instrument was pilot-tested with sixteen residents for reliability. Cronbach's alpha was run for each construct. Reliability was acceptable (food quality, α=.70; service quality, α=.76; customization, α=.87.

Employee Survey Instrument Development

Foodservice employees were administered a survey that paralleled the resident food satisfaction survey (Appendix F). In addition, the employee survey contained five questions regarding job satisfaction. The job satisfaction questions were adapted from previously validated and reliable instruments: the General Job Satisfaction Scale (GJS), the Job Diagnostic Survey (JDS) (United States Department of Health and Human Services, 2005) and the Job Satisfaction Survey (Spector, 1985).

Data Collection

Focus Groups

Nursing and occupational therapy staff members facilitated recruitment of residents for participation in the focus groups. Resident participation was voluntary. As much as possible, the focus groups were conducted either before or after a scheduled facility activity. In addition, residents were invited to participate through room-by-room solicitation. If a resident was deemed by staff as unable to respond to simple questions, they were excluded from focus group solicitation.

The focus groups were held in areas not scheduled for other activities to lessen possible distractions. Ten focus groups were assembled over a two-week period with 2-3 focus groups conducted per day. Sixty residents participated, with group size limited to six participants. Participants were informed of the confidentiality and anonymity of their statements and were encouraged to freely express their opinions. Each resident was

given two copies of the consent form; one signed copy for the researcher and one copy for the resident to maintain (Appendix D). The researcher read the form to the participants to ensure they understood the process. In addition, the procedures for the focus group were explained and the residents were encouraged to ask questions before beginning.

Participants were asked four open-ended questions. The four questions were:

1. What do you think about the restaurant menu?
2. What do you like best about the restaurant menu?
3. What do you dislike about the restaurant menu?
4. Describe a perfect mealtime.

All discussions were tape-recorded. The researcher moderated all sessions while a graduate assistant operated the tape recorder and compiled written notes. The sessions were later transcribed, and themes were formed through thematic hierarchical analysis utilizing cluster analysis as described by Guest and McLellan (2003). Qualitative data often presents multiple salient themes. Using the construct and creating codes allows the data to fall into clusters. Patterns can be identified by examining the occurrences and frequencies, allowing the construction of a structured narrative that is grounded in data (Guest & McLellan, 2003).

Resident Survey Administration

Residents were recruited for participation in the survey when they gathered for programmed activities in the facility. Residents were also contacted about the survey in room-to-room visits. Requesting participation at meal times was avoided to prevent resident bias based on the current meal. Consent procedures were approved through the university/institutional affiliated review board (IRB). Residents were provided with a consent form prior to completion of the survey (Appendix D). The survey was a 5-point Likert scale questionnaire with 1 being Very Dissatisfied to 5 being Very Satisfied. The survey was distributed and collected on several days over a one-week period in the facility. The researcher was provided with a facility census report. The census report lists all residents by name and room. The census report was used to track which residents had completed a survey. After the resident completed the survey or was not able to

complete or refused, the name and room were appropriately marked. The completed surveys were anonymous.

Employee Survey Administration

The facility's foodservice employees were asked to complete the survey from the residents' perspective. The survey asked the employees to rate, in their opinion, how satisfied the residents were with the food quality, service, and customization before and after the menu transition. Because foodservice employees have control over the production and service of meals and food items, their beliefs about resident satisfaction are important to investigate (Shultz et al., 2005; West et al., 2003). Foodservice employees were recruited to complete the survey during break periods and before and after shift times. Employees were offered a fast food discount coupon as an incentive. Data collection was completed over a one-month period in order to obtain data from the majority of foodservice employees. Surveys and return postage envelopes were given to the foodservice manager for absent employees.

Financial Records

Archived purchase records for food (bakery, dairy, grocery, meat, produce), oral supplements (liquid meal replacements), enteral feeding formulas (tube feedings), and foodservice labor expenses were requested from the Director of Food and Nutrition Services. Data included in the study were from the pre-transition (January 2004-December 2004) and the post-transition (January 2005 – December 2006) periods. Additionally, the per patient day (PPD) costs, a common benchmark statistic utilized in long-term care foodservice operations, was requested for the same periods. The calculation of the PPD costs, as defined by the National Society for Healthcare Foodservice Management (www.hfm.org), is comprised of the total food costs per month (monthly invoice totals) divided by the number of resident days per month. Resident days are the number of occupied beds per day by month (e.g. 100 residents per day times 28 days in the month equals 2800 resident days).

Unintended Weight Loss

Unintended weight loss (UWL) and protein-energy malnutrition (PEM) are prevalent among skilled nursing facility residents (Gallagher, 2004; Niedert & Dorner, 2004; Splett, 2003). Research has not identified whether organizational factors such as the type of foodservice system has any effect on the incidence of UWL (Carrie, West & Ouellet, 2006). In order to analyze the incidence of unintended weight loss pre- and post-transition, monthly unintended weight loss percentage statistics reported to the Center for Medicare and Medicaid Services (CMS) through the Online Survey Certification and Reporting System (OSCAR) were requested. Nursing staff is responsible for weighing and charting resident weights. The study institution has a policy and procedures statement in place regarding resident weighing. Resident weights are recorded monthly unless there are medical or nutritional indicators that require the resident to be weighed more frequently.

Data Analysis

Focus group sessions were transcribed, and themes were formed through thematic hierarchical analysis utilizing cluster analysis as described by Guest and McLellan (2003).

Statistical analyses for the resident and employee questionnaires were performed using SPSS for Windows Version 15.0 (SPSS Inc., Chicago). Descriptive statistics were compiled for resident and employee data, financial data, and unintended weight loss data. These data were presented as a backdrop to the inferential analyses that addressed the purposes of this study. Cronbach's alpha was used to test for internal reliability. Paired-sample *t*-tests were applied to the pre- and post-change data. Multiple regression analysis was used to find the degree to which each independent variable contributed to resident satisfaction.

Results

Focus Groups

Ten focus groups were conducted over a two-week period. Sixty residents (26%) participated in one of ten group discussions. All focus groups were conducted at 10:00

a.m., 10:30 a.m., 1:00 p.m., 1:30 p.m., or 3:00 p.m.; days of the week varied. Residents were solicited for participation before or after facility events. Residents not present at the group events were invited to participate on an individual basis. Residents' seemed genuinely surprised to be invited and eager to participate. Groups were predominately female (n=53, 88%), with only seven male participants (n=7). The mean age was 80.5±5.25 years. The mean length of stay in this facility for focus group participants was 4.25±3.15 years. The majority of the participants (n=41, 82%) consumed their meals in the main dining room.

The average length of the focus group discussions was 37 minutes. Each group was convened in an area with the least activity to minimize disruptions. Areas used to conduct the focus groups were empty dining rooms, the beauty shop, the chapel, or vacant activity rooms. The focus groups participants were assembled with the support of nursing and occupational therapy staff members. Most residents were in wheelchairs so each group gathered around a large table that could accommodate six wheelchairs. A microphone was place in the center of the table allowing all comments to be recorded.

The sessions began with an explanation of the focus group process and completion of the consent forms. The researcher explained that the questions being asked were concerning the menu, the foodservice in the facility, and an explanation of the system as restaurant-style dining. The first question was "What do you think about the restaurant menu?" The majority of responses indicated they liked being able to choose from a variety of foods. Comments centered on their ability to order their favorite foods everyday. One resident commented, "They ask you what you would like, like a restaurant—that's nice." Other comments included, "I like to pick and choose"; "They have two menus you can pick from, but they also have the original menu you can order from"; "You don't have to have as much food in front of you"; "Now we have a menu on our table"; "I eat what I like. If I don't like it, I don't order it"; "It's greatly improved from a year ago. We can choose what we want."

The second question asked was, "What do you like best about the restaurant menu?" Many responses addressed choice, taste, variety, staff attentiveness to requests, flexibility, and longer meal periods. A resident commented that she has lived in the

facility for more than five years and the menu change was, "…one of the best things that has happened here." Examples of comments from other participants included:

"It's very good when you can give everyone a choice."

"All in all the food is good around here. I'll write to it!"

"They have enough variety. There's enough for me anyway."

"I like the sandwiches. They are always on the menu."

"Lots of different soups that I can pick from."

"If I want to have a hot dog every day, I can."

"Before they used to tell us what they were going to give us. Now we have a menu."

Thirdly, the residents were asked, "What do you dislike about the restaurant menu? This question elicited responses regarding food quality, service, staff, meal timing, and portion sizes. No negative comments were made regarding the ability to choose their own foods. A comment from one resident stated, "Personally, I know that many times when they bring the food up from the kitchen, the aides sometimes instead of right away serving, they stand around and chit-chat and your food gets cold." Another resident acknowledged this comment by adding, "The service on 300 (small dining room), is fair depending on the girls. They get a new one in and they seem to talk to each other too much instead of putting the food in front of you." In contrast to those comments, one resident stated, "I don't think they have too much problem with that in the main dining room."

Interestingly, a comment was made regarding the menu presentation, "Certain things, maybe I miss them because I don't know the names (of the food items); I refuse and don't enjoy it like I should. Do you understand what I mean?"

The conversation shifted to food temperatures as one resident stated, "Most of breakfast is cold." This statement was followed by, "The coffee is lukewarm." When I get my breakfast, it is ice cold." I like oatmeal in the morning but I like it hot. It is never hot. I like it hot! I like milk in my hot cereal, but I like it hot!"

Staff hygiene and food safety concerns were also verbalized. One resident commented that, "The aides will scratch their heads while waiting to serve in the dining room." From this comment, others acknowledged they expect the servers to be clean and neat. A resident stated, "I like their uniforms clean. Some are dirty and look slovenly."

Food ordering and accuracy was discussed. Comments were made regarding placing an order and not getting what they expected. One resident's comment reiterated the need for clarity and simplification in menu presentation, "Sometimes they don't know how to follow directions. They don't understand exactly what you ordered and you get something you don't want. Like you ask for white toasted bread, and instead you get a grilled sandwich. I ask them. I say, 'Exactly what's in it?'" Several residents would like to see more pictures on the menu. A resident commented, "Sometimes when you order something ahead of time and you come in here you don't get what you ordered."

Attributes of service were also mentioned, "In the dining room, they should walk around and see what people want. They should be more concerned about the patients rather than talking." Waiting for meals is another issue. A resident stated that, "I know at a lot of nursing homes there is a shortage of aids. There's times when people are sitting around waiting to eat (get fed) and that really gets to me." Residents stated that there should be more time for eating, "Before we even finish, they are sweeping the floor and clearing the tables." Portion sizes were also addressed. Residents stated that even though they asked for smaller portions the amount of food served to them was still too large. "They give too big of portions here. It's a sin! There's so much waste."

The final statement asked the resident to think about the perfect mealtime. The statement was, "Describe the perfect mealtime." A resident stated that, "I would like water set on the table just like a restaurant." The majority of residents made very positive comments regarding their dining experience:

"I think the food here is very good. If something is good, why change it?"

"For me, it is my time to socialize."

"I like everything I get."

"They make the best spaghetti and chili."

"They make good chicken soup. And it's hot!"

"It's kind of perfect now!"

"Make good food and get it to us hot."

"I like being able to choose my own food."

"I don't know, maybe if they came to my room and cooked it right there!"

"I'm very well set."

"Get exactly what you order, smaller portion, exactly what you can eat."

"On the whole, I think if you asked for just about anything, if they have it you'll get it."

"I went to a restaurant yesterday, and believe me, that food was not different than what I got here. The fruit bowl, everything, they had different types of salad, the chicken tasted the same."

"You can always call them up and complain if it's wrong."

"They serve us in all these places. I just think for the way they do it, it's wonderful what they do."

"They use these little carts, you know, to transport everything between the kitchen and the ultimate area that they serve it. I have never seen one spilled. The traffic here is tremendous, but they contend with it very well."

"The most important thing for me is the food. It should be served hot. It's what you expect when you sit down to dinner, or lunch, it's something nice and warm. You know, it's what they used to call old-fashioned comfort food."

Analysis of Focus Groups

Residents in this skilled nursing facility were given the opportunity to express their opinions of the food and dining services using focus groups. All residents expressing an interest to participate were allowed to join one of the groups. The ten focus groups were arranged so as not to interfere with daily activities or special group functions. Residents were recruited at the conclusion of group activities and in-between meal times. The researcher obtained a census list to provide an invitation to participate for those residents that eat in their rooms or did not attend special group functions.

The three constructs discussed in the focus groups were food quality, service quality, and customization. Table 4.1 summarizes the categories (codes) and lists the descriptions of each code. Residents commented on all aspects of food quality, service

quality, and customization. Food quality comments that were discussed by the residents included taste of foods, food temperatures, preparation, quality and methods, freshness of foods, consistent quality, seasoning, textures, the attractiveness of presentation, and food safety.

Service quality attributes discussed were: wait time for meals, menu presentation, food ordering and accuracy of delivery, providing enough time to eat, providing water on the tables in all dining areas, staff attentiveness, staff friendliness, staff appearance, staff respect for the resident. In this skilled nursing facility customization attributes included in the discussion were the ability to choose foods, ordering foods not on the menu, portion sizes, menu readability, meal times-flexibility, food choices and variety, foods for special diets, and dining environment.

Regarding food quality, residents frequently mentioned taste, food temperatures, preparation quality, and methods. Wait time, food ordering and accuracy, and having enough time to eat were mentioned regularly. Overall, a majority of comments were made regarding the ability to choose their own foods and order items not on the menu. Additionally, residents commented on the socialization aspects of dining as being important. As is consistent with this generation, comments were made regarding "not wanting to complain" and acceptance and gratitude for what they have. While conducting focus groups in this facility, the researcher noted that when the focus group was held immediately following a meal the conversation was directed toward that meal. The researcher did not attempt to divert the conversation, at that time, but allowed it to be discussed freely. Eventually, the group was directed back to general conversation regarding all mealtimes, foods, and foodservices. Table 4.2 lists the categorical hierarchy of responses from the ten focus groups.

Resident Survey

Resident Profile

Of the 230 residents in the nursing facility, 118 (52%) completed the Resident Foodservice Evaluation. Table 4.3 describes the resident participants. The majority (78.8%) of the residents was female; males made up 21.2% of the sample. The average

age of respondents was 81.59 years. The length of stay of these respondents ranged from one week to six years with the average being 28.99 months.

The foodservice operates a conventional-style kitchen with 75 percent of the food items prepared "from scratch". The static menu contained food items that are favorites of the residents. The Food and Nutrition staff developed the menu based on input from the residents, information obtained from Resident Council meeting minutes, and feedback from the nursing home staff. Additionally, the facility offers a "special menu of the day" for each meal. The menu is developed a week in advance of preparation in order to utilize special offers from purveyors and seasonal foods. The weekly menu is posted outside the dining room. The static menu is available at all mealtimes. The static menu is one-page, two-sided document that is part of the table setting. If a resident prefers to order foods from the lunch meal at the dinner meal, and if the items are available, the residents' requests will be fulfilled. Most (59.3%) of the residents eat their meals in a dining room versus their personal room (9.3%). About one-third (31.4%) of the residents vary their meal location between the dining room and their personal room. Upon entering the dining room, residents are greeted by the staff and seated. The main dining room is tastefully appointed with clothed tables, set with appropriate condiments, and a simple centerpiece. There is a combination of square and round tables accommodating four to six residents. The dining tables are adjusted to accommodate residents seated in wheel chairs. There is no assigned seating but the majority of residents prefer to be seated at the same table with the same residents for all meals. Foodservice employees, nursing assistants, and other available staff assist with seating residents and taking beverage and food orders.

Table 4.1 Cluster Analysis Codes with Descriptions

Code	Description
Food Quality	
Taste	The sense by which flavor is perceived.
Hot food temperatures	Sensations of a temperature higher than the human body.
Preparation quality	Perception of excellence
Preparation methods	The way food was prepared
Freshness	Recentcy in preparation
Cold food temperature	Sensations of a temperature lower than the human body.
Quality the same each time served	Consistency
Seasoning	Level of zest
Texture	Form, shape, consistency
Attractiveness of food	Pleasant presentation
Safe food	Without adulteration
Service Quality	
Wait time until service	Period of time from inception of the order
Menu presentation	The introduction of foods
Food ordering and accuracy	Amount of errors
Enough time to eat	Perception of hurriedness
Water set on the tables	Necessary table settings
Staff attentiveness	Paying attention; responsiveness
Staff friendliness	Feeling friendly
Staff appearance	Being properly attired
Staff respect	Perception of consideration
Customization	
Ability to choose	The right or power to choose
Order food not on the menu	Made to order
Portion size	Amount served
Menu readability	To determine a meaning of a food item
Meal times – flexibility	Control of personal schedule
Food choices	Number of items available
Food variety	Different forms
Foods for special diets	Expression of foods for medical purposes
Dining environment	Surroundings during mealtime

Table 4.2 Categorical Hierarchy of Responses from the Ten Focus Groups

Code	Frequency of Responses
Food Quality (417, 41%)	
Taste	76
Hot food temperatures	72
Preparation quality	51
Preparation methods	49
Freshness	48
Cold food temperature	35
Quality the same each time served	25
Seasoning	22
Texture	19
Attractiveness of food	10
Safe food	10
Customization (338, 33%)	
Ability to choose	86
Order food not on the menu	62
Portion size	61
Menu readability	42
Meal times – flexibility	27
Food choices	24
Food variety	21
Foods for special diets	15
Service Quality (240, 23%)	
Wait time	45
Food ordering and accuracy	39
Enough time to eat	37
Table settings	33
Staff attentiveness	30
Staff friendliness	29
Staff appearance	18
Staff respect	09
Others (34, 3%)	
Socialization	20
Dining environment	14

Note: 60 participants; total responses (1029)

Table 4.3 Resident Participants Profile

Demographic Variables	n	%
Gender (N=118)		
Male	25	21.2
Female	93	78.8
Range in Age (N=118)*		
35-59	9	07.6
60-69	11	09.3
70-79	14	11.9
80-89	53	44.9
90-99	30	25.4
100-109	1	0.85
*Length of Stay in the Facility by Months** (N=118)*		
0-12	21	17.8
13-24	32	27.1
25-36	36	30.5
37-48	14	11.9
49-60	7	05.9
61-72	7	05.9
73-84	1	0.85
Dining Location (N=118)		
Personal Room	11	09.3
Dining Room	70	59.3
Combination	37	31.3

*Age: *M*=81.59, SD=11.51
**Length of stay in months: *M*=28.99, SD = 17.06

Resident Satisfaction

Resident satisfaction with food and foodservices in this study was investigated through a 23-item survey, posing statements about quality, service, and customization. The eighteen items indicated a high level of resident satisfaction (4.16±0.76) and demonstrated homogeneity among the respondents. Table 4.4 shows the numerical ranking from highest to lowest using the mean ratings of the 18 items. The statement, "Being able to choose my own food is important", had the highest level of satisfaction ratings (4.59±0.57). Additionally, within the top five items with the highest mean ratings, three statements related to customization. The residents also rated service as being very important. Being treated respectfully by employees had the third highest rating overall (4.42±0.56), followed by foodservice providing beverages before the arrival of the main meal (4.41±0.71). Interestingly, of the top ten items with the highest mean ratings, only one food quality indicator (food tastes good, 4.31±0.73) was listed.

Additional satisfaction ratings are summarized in Table 4.5. The four additional satisfaction ratings given by the residents uses another 5-point metric (1 = *Very Dissatisfied* to 5 = *Very Satisfied*). All four of the ratings averaged over 4.0 on the five-point scale suggesting acceptable levels of satisfaction. When asked to rate the overall quality of the foodservice, almost all resident rated the food as either "very good (43.2%)" or "good (51.7%)" on a scale from 1 = *Very Poor* to 5 = *Very Good*.

Table 4.4 Resident Satisfaction with Food and Foodservices

Satisfaction Rating (N = 118)	*M*	*SD*	Low	High
Being able to choose my own food is important	4.59	0.57	3	5
I like choosing my dessert from the dessert cart	4.58	0.65	3	5
The employees treat me with respect	4.42	0.56	3	5
I like having beverages served from the beverage cart before my meal arrives	4.41	0.73	2	5
The menu provides choices	4.36	0.67	2	5
The employees respect my needs	4.33	0.61	2	5
I am satisfied with the number of choices on the beverage cart	4.32	0.71	2	5
Foods taste good	4.31	0.73	2	5
I am satisfied with the number of choices on the dessert cart	4.27	0.76	2	5
The foods are served attractively	4.13	0.71	2	5
Cold foods are served cold	4.08	0.79	2	5
A variety of foods are offered	4.08	0.71	2	5
The quality of the food is the same each time it is served	4.05	0.76	2	5
Food is served in the time promised	4.05	0.97	2	5
The foodservice corrects anything that is wrong quickly	3.98	0.97	1	5
I am able to order foods not on the menu	3.93	0.82	1	5
Portion sizes are satisfactory	3.53	1.04	1	5
Hot foods are served hot	3.41	0.94	1	5

Note: Ratings based on five-point metric: 1 = *Strongly Disagree* to 5 = *Strongly Agree*

Table 4.5 Resident Overall Satisfaction with Food and Foodservices

Satisfaction Rating (N=118)	*M*	*SD*	Low	High
Being able to select from a menu, I feel…	4.41	0.64	3	5
With the overall dining experience, I feel…	4.24	0.58	3	5
With the service provided, I feel…	4.16	0.65	2	5
With food served, I feel…	4.15	0.67	2	5

Note: Ratings based on five-point metric: 1 = *Very Dissatisfied* to 5 = *Very Satisfied*.

Foodservice Employee Survey

Employee Profile

Appendix G contains information about the demographic profile of the foodservice employees in the skilled nursing case study facility. Of the 30 foodservice employees in the facility, 25 completed the questionnaire for a response rate of 83.3%. There were nine males and 16 females. Employee ages ranged from 20-52 years with a mean age of 35.20. Fourteen of the employees classified themselves as "aides". "Cook/baker" and "supervisor" were also predominant job titles within the study group. Eighteen employee participants were employed full-time and seven were part-time. Thirteen employee participants were high school graduates with another four having some high school education. Six employees indicated some college education and two employees were college graduates. Employment (in years) for the foodservice employees ranged from 3-15.67 years with a mean employment length of 6.28 years.

Foodservice Employee Perception of Resident Satisfaction

The 25 foodservice employees who completed the satisfaction questionnaire were employed during the transition from the traditional cycle menu to the restaurant-style menu. The foodservice employee instrument paralleled the resident satisfaction survey. The survey asked the employees to rate how satisfied the residents were with food quality, service quality, and customization before and after the menu transition. Table 4.6 lists the statements posed mean ratings were used to numerically rank order from highest to lowest based on the employees' perceptions of resident satisfaction with food and foodservices. "Before" refers to how the employees perceived resident satisfaction before the menu the transition, while "after" refers to how employees perceived resident satisfaction after the transition to restaurant-style dining. The statements with the highest level of perceived satisfaction before the transition were, "Employees are respectful (*M*=4.08)" and, "Cold food temperatures (*M*= 3.84)." The items with lowest levels of perceived resident satisfaction were, "Being able to choose their own foods (*M*=2.20)" and, "Food choices (*M*=2.28)."

The highest levels of perceived resident satisfaction after the menu change were, "Being able to choose their own foods (*M*=4.52) and "Dessert choices (*M*= 4.44)." The lowest ratings of perceived resident satisfaction were "Hot food temperatures (*M*=3.76)" and, "Food served in the time promised (*M*=3.92)."

A score measuring the change in satisfaction was calculated by subtracting the pre-implementation rating from the post-implementation rating (Table 4.6). Statements with the highest favorable change from before to after the menu implantation were, "Being able to choose their own foods (*M*=2.32) and "Food choices (*M*=2.24)." The least change in satisfaction were, "Cold food temperatures (*M*=0.16)," and, "Taste of the food (*M*=0.36)."

To analyze the level of change in resident satisfaction perceived by the foodservice employees, the Paired-Samples *t* -Test was used (Table 4.7). Inspection of Table 4.7 reveals that all 12 ratings had higher mean ratings after menu implementation with 9 of 12 ratings being significantly higher at the $p < .05$ level. Cold food temperatures, hot food temperatures, and promised meal delivery time showed no significant level of change.

Foodservice Employee Job Satisfaction

Table 4.8 displays the changes in foodservice employee satisfaction ratings from before and after the menu implementation. As before, the Paired-Samples *t*- Test was used (*N*=25). None of the five comparisons were significantly different at the $p < .05$ level.

Overall, the ratings for job satisfaction indicated that the foodservice employees are satisfied with their work at the facility (4.24 ±0.72). There was a slight increase in the mean rating from pre- to post-menu change for, "Generally speaking, I am very satisfied with this job (pre-3.96±0.89; post-4.12±0.78). The level of change was not significant. The employees remained neutral (pre- and post-transition) regarding opinions of their co-workers satisfaction with their work. Changing the menu and service delivery system did not change job satisfaction or intent to leave.

Table 4.6 Employee Perceptions of Resident satisfaction Before and After the Menu Delivery System Change (N=25)

Statement	Before[a]					After[b]					Change[c]				
	M	SD	Low	High	Rank	M	SD	Low	High	Rank	M	SD	Low	High	Rank
Employees are respectful	4.08	0.70	2	5	1	4.40	0.58	3	5	3	0.44	0.71	-1	2	9
Cold food temperatures	3.84	0.80	2	5	2	4.00	0.71	2	5	10	0.16	0.94	-2	2	12
Taste of the food	3.84	0.69	3	5	3	4.20	0.58	3	5	9	0.36	0.70	-1	2	11
Portion sizes are satisfactory	3.80	0.71	3	5	4	4.20	0.58	3	5	8	0.40	0.76	-1	2	10
Food served in the time promised	3.56	1.00	1	5	5	3.92	0.81	1	5	11	0.96	1.14	-1	3	6
Beverage choices	3.48	0.87	2	5	6	4.20	0.65	3	5	7	0.72	0.89	-1	2	7
Hot food temperatures	3.32	0.99	2	5	7	3.76	0.78	2	5	12	0.44	1.16	-2	2	8
Dessert choices	3.20	0.82	2	5	8	4.44	0.58	3	5	2	1.24	1.05	0	3	5
Menu variety	2.40	0.91	1	4	9	4.32	0.56	3	5	4	1.92	1.04	0	4	4
Being able to order foods not on the menu	2.32	1.18	1	5	10	4.28	0.68	3	5	6	1.96	1.46	-1	4	3
Food choices	2.28	1.21	1	5	11	4.28	0.68	3	5	5	2.24	1.30	0	4	2
Being able to choose their own foods	2.20	1.00	1	4	12	4.52	0.51	3	5	1	2.32	1.22	0	4	1

Note: Ratings based on a five-point metric: 1 = *Very Dissatisfied* to 5 = *Very Satisfied*

[a] "Before" refers to the traditional menu.

[b] "After" refers to the transition to the restaurant-style menu.

[c] Change Ratings = "After change" satisfaction rating minus "Before change" satisfaction rating

Table 4.7 Pre and Post Changes in Employee Perceptions of Resident Satisfaction (N = 25) Paired-Samples *t* Test

Rating	Time[ab]	*M*	*SD*	Change	*t*	df	*p*
Being able to choose their own foods	Pre	2.20	1.00	2.32	-9.546	24	.000
	Post	4.52	0.51				
Menu variety	Pre	2.40	0.91	1.92	-9.252	24	.000
	Post	4.32	0.56				
Being able to order foods not on the menu	Pre	2.32	1.18	1.96	-6.725	24	.001
	Post	4.28	0.68				
Taste of the food	Pre	3.84	0.69	0.36	-2.571	24	.017
	Post	4.20	0.58				
Cold food temperatures	Pre	3.84	0.80	0.16	-.848	24	.405
	Post	4.00	0.71				
Hot food temperatures	Pre	3.32	0.99	0.44	-1.901	24	.069
	Post	3.76	0.78				
Dessert choices	Pre	3.20	0.82	1.24	-5.894	24	.000
	Post	4.44	0.58				
Beverage choices	Pre	3.48	0.87	0.72	-4.042	24	.000
	Post	4.20	0.65				
Portions sizes are satisfactory	Pre	3.80	0.71	0.40	-2.619	24	.015
	Post	4.20	0.58				
Food choices	Pre	2.28	1.21	2.00	-9.258	24	.000
	Post	4.28	0.68				
Food served in the time promised	Pre	3.56	1.00	0.36	-1.398	24	.175
	Post	3.92	0.81				
Employees are respectful	Pre	4.08	0.70	0.32	-2.317	24	.029
	Post	4.40	0.58				

Note: Ratings based on a five-point metric: 1 = *Very Dissatisfied* to 5 = *Very Satisfied*

[a] "Pre" refers to the traditional menu.

[b] "Post" refers to the transition to the restaurant-style menu.

Table 4.8 Changes in Employee Job Satisfaction.

(N = 25) Paired-Samples *t* Test

Rating	Time[ab]	*M*	*SD*	Change	*t*	df	*p*
Generally speaking, I am very satisfied with this job	Pre	3.96	0.89	0.16	-1.281	24	.212
	Post	4.12	0.78				
I frequently think of quitting this job	Pre	2.52	1.29	0.04	.272	24	.788
	Post	2.48	1.19				
I am generally satisfied with the kind of work I do in this job	Pre	4.24	0.72	0.08	-.527	24	.603
	Post	4.32	0.80				
Most people on this job are very satisfied with the job	Pre	3.28	1.02	0.00	.000	24	1.00
	Post	3.28	0.98				
People on this job often think of quitting	Pre	2.92	1.00	0.16	-1.00	24	.327
	Post	3.08	1.04				

Note: Ratings based on a five-point metric: 1 = *Strongly Disagree* to 5 = *Strongly Agree*

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[a] "Pre" refers to the traditional menu.

[b] "Post" refers to the transition to the restaurant-style menu.

Financial

Foodservice operational data for the study period (12 months, pre-menu change; 24 months post-menu change) was coded into common categories of dairy, bread, produce, meat, and grocery (staple food items such as flour, sugar, grains, etc.). Additionally, data were collected for expenditures related to liquid meal replacements and tube feedings. This facility participates in group purchasing. Their prime vendor contract for the second post-transition year was increased by 2%. Table 4.9 displays the minimum, maximum, mean, and standard deviation for the food categories before and after the menu change. Most notably, there was a 57.9% decrease in expenditures for oral meal replacements. Oral meal replacements are commercially manufactured products that can be substituted for meals or given as a supplement. These products were not included in the per patient day (PPD) food costs. Dairy (30%), meat (23.8%), bread (42.2%), and commercial tube feeding formulas (21.3%) also experienced reductions over the 24-month period. Interestingly, produce purchases increased an overall 29.2%. The inclusion of menu selections incorporating more fresh fruits and vegetables was a frequent positive comment from the residents who participated in the focus groups.

Table 4.10 displays the means, dollar variance between the means, and the percent change among these variables. The following categories experienced decreases in expenditures: Dairy (-30%), bread (-42.2%), meat (23.8%), oral meal replacements (-57.9%), and tube feeding products (-21.3%). Grocery remained about the same showing a slight increase (+0.71%). Produce purchases increased by 29.2%.

The costs per patient day (PPD) data and the number of resident days were collected during the study period. The PPD is a common benchmark used in long-term care facilities to monitor food costs. The PPD figure is calculated by totaling the food costs per month and dividing by the number of resident days per month. In this case, the five categories included in the calculation were dairy, bread, produce, meat, and grocery. An independent-samples *t*- test comparing the mean scores of the pre- and post-menu changes found a significant difference between the means of the pre-menu change PPD and the post-menu change PPD ($t(34) = 1.74$, $p<.10$). The mean PPD pre-menu change

was $5.21(*SD* = 0.61); post-menu change was $4.94 (*SD* = 0.32). The post –menu change was 5.95% lower than the pre-menu change.

Another critical area for resource expenditure is human resources. Data were collected for the study period on foodservice employees' total paid hours and paid dollars for pre-post menu change. Payroll hours and total paid dollars for foodservice employees during the study period are listed in Tables 4.11 and 4.12. During the study period, paid hours decreased post-menu change (-2.4%) while paid dollars increased (+6.7%). Information regarding employee merit increases or cost of living adjustments was not available. The foodservice employees sample revealed a mean length of employment to be 6.28 years. A significant effect (F (1, 34) = 33.52, p<.001) for pay dollars and pay hours (F (1, 34) = 6.02, p<.05) was observed. Expenditures in both areas were affected by the menu change.

Unintended Weight Loss

Unintended weight loss (UWL) cases are reported to the CMS monthly. Unintended weight loss or involuntary weight loss is a quality indicator that all skilled nursing facilities are mandated to report. CMS defines "clinically significant weight loss" as 5% of usual body weight over a period of 30 days or 10% weight loss over 180 days (CMS, 2009; Dyck, 2008; Gallagher, 2004). The researcher recognizes that unintended weight loss is multi-dimensional. Residents in skilled nursing facilities experience many chronic disease processes that require multiple medications and treatments, which can adversely affect the biochemical, physical, and emotional aspects of proper nutrition. The data in this study were utilized to determine trends in monthly weight loss percentages pre- and post-menu change.

Table 4.9 Minimum, Maximum, Mean, and Standard Deviation for Monthly Food Costs
Pre-Menu Change (N=12 months) and Post-Menu Change (N=24 months)

Food Category	Menu[ab]	Minimum	Maximum	*M*	*SD*
Dairy	Pre	$1444.63	$4080.75	$3168.71	$747.75
	Post	1876.50	2830.76	2213.12	236.60
Bread	Pre	948.17	2203.08	1521.45	385.60
	Post	229.64	1318.10	879.18	235.97
Produce	Pre	590.47	2012.03	1125.33	379.20
	Post	1153.76	1801.02	1454.19	153.94
Meat	Pre	2938.88	5634.56	4073.58	815.39
	Post	1562.63	4327.08	3100.97	853.04
Grocery	Pre	12170.59	19487.52	16226.26	2484.32
	Post	13889.41	19160.62	16241.26	1740.13
Oral Meal Replacements	Pre	1430.69	2917.79	2351.38	449.89
	Post	599.34	1602.54	989.52	235.70
Tube Feeding	Pre	2492.42	6765.77	3862.33	1108.55
	Post	1895.90	4530.77	3039.15	764.64

Note: The facility experienced a 2% prime vendor contract increase in the second year post-menu change.

[a] "Pre" refers to the traditional menu.

[b] "Post" refers to the transition to the restaurant-style menu.

Table 4.10 Mean Difference and Mean Percent Change for Monthly Food Costs Changes
Pre-Menu Change (N=12months) and Post-Menu Change (N=24 months)

Food Category	Menu[ab]	*M*	$Variance	Mean Percent Change
Dairy	Pre	$3168.71	$-959.59	-30.0%
	Post	2213.12		
Bread	Pre	1521.45	-642.27	-42.2
	Post	879.18		
Produce	Pre	1125.33	328.86	+29.2
	Post	1454.19		
Meat	Pre	4073.58	-972.61	-23.8
	Post	3100.97		
Grocery	Pre	16226.26	115.00	+0.71
	Post	16341.26		
Oral Meal Replacements	Pre	2351.38	-1361.86	-57.9
	Post	989.52		
Tube Feeding	Pre	3862.33	-823.18	-21.3
	Post	3039.15		

[a] "Pre" refers to the traditional menu.

[b] "Post" refers to the transition to the restaurant-style menu.

Table 4.11 Minimum, Maximum, Mean, and Standard Deviation for Human Resources
Pre-Menu Change (N=12 months) and Post-Menu Change (N=24 months)

Food Category	Menu[ab]	Minimum	Maximum	*M*	*SD*	Dollar Variance	Mean Percent Change
Paid Dollars	Pre	$35453.25	$39070.63	$37176.63	1110.51	2481.69	6.7%
	Post	37125.73	41899.36	39658.32	1258.09		
Paid Hours*	Pre	4011.50	4499.55	4169.19	140.38	-99.26	-2.4
	Post	3862.25	4244.00	4069.93	99.60		

**Note*: Measurement in hours
[a] "Pre" refers to the traditional menu.

[b] "Post" refers to the transition to the restaurant-style menu.

The pre-menu change mean weight loss percentage for the case study was 11.12%. When compared to the state and national percentages for that period, the study site was approximately 1% higher than the norm. During the first year post-menu change, the UWL mean percentage for the facility dropped to 7.7%, which is 3.4% below the state average of 10.1% and 3.6% below the national average of 10.3%. Over the remaining post-menu change months the downward trend continued. The mean overall 2–year post-menu change UWL percent was 7.8% (state, 9.9%; national, 10.0%) indicating a relatively stable decrease in incidence of UWL.

Statistically, a paired-sample *t*-test was calculated comparing the mean percentages pre-and post-menu change. No statistically significant difference was found ($t(34) = .86$, $p>.05$). The mean of the post-menu change ($M = 9.05$, $SD = 2.81$) was not significantly different from the pre-menu ($M = 9.28$, $SD = 5.10$).

The incidence of UWL, in terms of percentages, decreased from the pre-menu transition to the post-menu transition. This is a specific area of concern from CMS as it is a quality indicator that state surveyors investigate during facility visits. Adequate nutrition and hydration are key components of well-being for nursing home residents. Any measures that may improve this statistic should be investigated. The study period did experience a downward trend in cases of UWL.

Discussion and Implications

The use of focus groups in the long-term care setting provides a valuable tool for foodservices. As demonstrated by Case and Gilbert (1997), Huang (2004), Lee (2004), Seo & Shanklin (2005), and Howells (2007) in prior research, long-term care residents at all levels of care have food and dining service expectations. It is also very clear that skilled care residents have dining requirements that are no different from any other individual's 'normal' dining expectations. In other words, just because seniors are in an institutional setting does not mean that dining should be any less satisfying than if they were in their own homes. Resident satisfaction with dining services may also affect resident satisfaction with the overall facility. In this facility, restaurant-style dining improved resident satisfaction with the facility. Administrators can use focus groups to glean information and opinions from residents regarding food and dining as well as other aspects of the facility.

Foodservice professionals in long-term care can make a significant impact on culture-change and person-centered care to improve the quality of life for residents. The attributes discussed in this study can be used as a template for other institutions to identify what is important to their residents. It has been noted in previous studies that not all institutions and residents are alike. Focus groups provide an attractive method to determine what is important to a specific facility's residents. Seo and Shanklin (2005) identified various food quality and service attributes important to residents through focus groups. Many of the same attributes from previous studies were expressed by residents in this study. Food temperatures, taste of foods, staff appearance, and overall food quality were items that paralleled findings from previous studies (Evans, et al., 2003; Howells, 2007; Huang, 2004). Operationalizing resident concerns may not be difficult. Training and in-service of staff assigned to the dining area could focus on service skills, personal hygiene, and food safety. Residents in the study wanted water placed on the tables, a simple request to fulfill. Time studies and re-arrangement of staff duties could be investigated. In addition, the residents at this facility indicated preference for simplicity in menu presentation such as eliminating culinary jargon and using more

pictures. Administrators and food and nutrition professionals could use the information from focus groups to develop surveys for use in their facilities. Special attention must be given to identifying and attending to the expectations of residents in skilled nursing facilities. Focus groups provide an avenue for residents to express their concerns with food and foodservices.

Resident Satisfaction

Overall, the residents were very satisfied with restaurant-style dining. The residents expressed, through focus groups and the survey, a strong desire for the ability to choose their own foods at meal times. The desire for some small amount of control in their lives was evidenced through the data analyses. The expanded menu variety and the increased number of choices in food categories were positively acknowledged by the residents. Residents expressed satisfaction with having the ability to select beverages and desserts from mobile carts. Sensory attributes, such as being able to see the food items, may enhance resident food consumption as reported by Shatenstein and Ferland (2000). Residents were concerned with service related attributes. Residents were very aware of foodservice employee issues such as respect, attentiveness to their needs, and employee appearance. Resident satisfaction with food and foodservices should be measured routinely in skilled nursing facilities.

Unintended Weight Loss

Unintended weight loss has been identified in the literature as a multi-dimensional wide-spread problem in skilled nursing facilities. The complexity of medical issues experienced by most skilled nursing facility residents creates a conundrum. Some attempts to solve this issue have been directed toward foodservices. Providing mealtime food selections, through expanded menus, buffet service, or restaurant-style dining has been reported to reduce unintended weight loss (Buzlka, 2004). The study facility experienced a downward trend in monthly reports of unintended weight loss following a foodservice system change that promoted resident choice and an expanded menu of foods suggested by residents. Additionally, the use (purchases) of commercially prepared supplements and meal replacements decreased by 57.9% post-menu change,

Foodservice Employees' Perceptions of Resident Satisfaction

Foodservice employees in skilled nursing facilities are integral to the success of the department and resident satisfaction. Because of the importance of their work and that their control the foodservices in skilled nursing facilities, it is essential that foodservice management be aware of foodservice employee perceptions of resident satisfaction. The comparison of resident and foodservice employee ratings of attributes from the surveys demonstrated that foodservice workers (in the study facility) are aware of resident opinions and concerns regarding foodservice. Employees should be encouraged to communicate resident satisfaction issues with management.

Foodservice Employee Job Satisfaction and Intent to Leave

Most of the reported literature and statistics concerning long-term care employees involves nursing. Donoghue and Castle (2009) found that consensus management reduces employee turnover and improves engagement with the facility. Foodservice employees are a unique group; they provide an extremely important service for the residents and the facility. Foodservice employee job satisfaction did not change significantly when transitioning from the traditional foodservice system to the restaurant-style system. Overall, employees were satisfied with the type of work they performed and do not intend to leave as evidenced through the survey ratings and the average length of employment for full-time employees. Further research into foodservice employee job satisfaction in long-term care is needed.

Financial

Pre- and post menu transition operational data were analyzed. There were notable differences in mean costs from pre-to-post menu transitioning. Specifically, the largest variations (decreases in expenditures) among the food cost groups were seen in oral meal replacements (-57.9%), dairy (-30.0%), bread (-42.2), and meat (-23.8%). Produce purchases increased from pre-to post menu transition. The static menu offerings included more items requiring the use of fresh fruits and vegetables (e.g. fresh fruit cup, fruit and cheese plates). The residents requested the inclusion of additional menu items utilizing more fresh fruits and vegetables. The grocery category experienced a slight increase in the mean from pre-to post transition (+0.71%). Overall, the mean PPD costs decreased

from $5.21 pre-transition to $4.90 post-transition. There was a significant difference between the PPD means pre- and post-menu transition. Another notable area that experienced a decrease in expenditures were tube feeding (enteral) formula purchases (-21.3%) and oral meal replacements (-57.9%). The noted changes in food expenditures could be due to less foodservice waste. Residents were selecting food items rather than being served a tray of unwanted food. Hackes et al. (1997) found that the traditional tray service produced more foodservice waste. Even though this study did not report waste pre- and post menu change, reduced foodservice waste would influence monthly food costs. Resident selection of more fresh fruits and vegetables could have an impact on purchasing. Routine purchasing and inventory practices may need to be changed as resident selections affect the historical foodservice cycles. Weisberg (2005) reported a 5% decrease in food costs after implementing buffet service. The reduction in purchases of commercial oral supplements is important. It is possible that residents are consuming more food items thus not requiring the meal replacements.

In addition, the mean payroll dollars for foodservice employees increased but paid hours decreased. The majority of the employees in this facility have been employed for more that five years (M = 6.28 years). This study did not include individual pay scales or pay rates. Considering the average length of employment, merit increases or cost of living adjustments could have been implemented thus increasing cost of hours paid.

Generally, in this study, food costs decreased with the transition to restaurant-style dining. The facility could experience considerable savings.

Conclusions

Results indicate that a selective restaurant-style menu is a viable alternative to the traditional non-selective menu in a skilled long-term care facility. Data indicated many positive outcomes related to resident satisfaction, specifically resident choice of food selection.

Using focus groups in skilled nursing facilities is not without challenges. For example, in order for residents to participate they need a level of cognition that would allow them to understand and respond to the questions. It may be difficult to stay ‘on

task' as residents enjoy discussing their concerns especially when food is the topic. Other physical constraints such as the inability to hear or speak may inhibit the residents' desire to participate. Overall, focus groups appear to be a viable tool for extracting information that could be used to improve or strengthen dining services in a skilled nursing facility.

A skilled nursing facility could possibly realize cost savings, an improved quality measure of unintended weight loss (UWL), and an increase in resident satisfaction with food and foodservices by transitioning foodservices to a restaurant-style system. Foodservice employees indicated that they believe the residents prefer the restaurant-style menu. From their perception, residents prefer to make their own meal selections and enjoy the freedom of choice at meal times. There was no statistically significant difference in employee job satisfaction ratings between the traditional menu and the restaurant-style menu and service. Foodservice employees should be encouraged to heighten their awareness of resident issues regarding food and foodservices.

It is important for food and nutrition professionals to recognize that resident choice of food selections has an impact on resident satisfaction with food, foodservices, and the overall quality of life for the resident. The role of food and nutrition services in promoting and supporting culture change in skilled nursing facilities is vital. In addition, an overall economic impact could be realized.

The study is limited and the results cannot be generalized to other skilled nursing facilities because it is a single sample in a Midwestern state. Thus, further research with larger samples in various demographic settings is implicit.

Implications for Future Research

The purpose of this case study was to explore resident satisfaction, employee perception of resident satisfaction, employee job satisfaction and intent to leave, and foodservice operations in a skilled nursing facility that transitioned from the traditional, non-selective menu and foodservice system to restaurant-style dining.

The results of this case study are enlightening. It is possible that skilled nursing facilities could successfully transition their foodservices to incorporate restaurant-style

dining. This case study was an opportunity to investigate and explore any changes that that occurred before and after the transition to restaurant-style dining.

The introduction to this case study discussed the culture-change movement in skilled nursing facilities. Resident satisfaction with food and foodservices is an essential part of this nation-wide shift from the medical model to the "home-like" model (Doty et al., 2008). Foodservice management professionals have the opportunity to influence the lives of residents in skilled nursing facilities by embracing person-centered care. Future studies should investigate skilled nursing facilities where foodservice has successfully engaged the culture-change philosophy in day-to-day operations. Utilizing focus groups to gather resident concerns and insights regarding food and foodservices has been successful. There is a need to establish a reliable and valid survey instrument for use with residents in long-term care foodservice.

Operational implications should be investigated. Foodservice waste studies could be conducted to validate operational change. Budget limitations are always an issue in long-term care. Further comparative studies examining the differences between the traditional skilled nursing facility foodservice systems and alternate systems incorporating resident choice should be conducted.

Unintended weight loss continues to plague residents in skilled nursing facilities. Foodservice systems should be included as one possible method to improve the UWL statistics. When residents are able to choose their own food selections and are offered food items that are desirable, food consumption may increase. Foodservice delivery methods should be considered as one avenue to reducing UWL.

Finally, there is a definite gap in the literature regarding long-term care foodservice employee satisfaction. Future research should include foodservice employee job satisfaction and data collection on length of employment and job turnover in the long-term care industry. The long-term care industry and professional organizations should support initiatives to investigate this segment of long-term care and its association with resident satisfaction with foodservices and the facility.

References

Administration on Aging. (2008). Older Americans 2008: Key indicators of well-being. Retrieved May 15, 2009 from http://www.agingstats.gov/chartbook2000/default.htm

Administration on Aging. (2007). A profile of older Americans: 2007. US Department of Health and Human Services. Retrieved March 2009 from http://www..gov/prof/statistics/profile/2007/2007profile.pdf

American Association of Retired Persons. www.aarp.org

American Dietetic Association. (2000). Position of the American Dietetic Association: Nutrition, aging and the continuum of care. *Journal of the American Dietetic Association, 100*, 580-595.

American Dietetic Association. (2002). Position of the American Dietetic Association: Liberalized diets for older adults in long-term care. *Journal of the American Dietetic Association, 102*(9), 1316-1323.

American Dietetic Association. (2003). Liberalization of the diet prescription improves quality of life for older adults in long-term care. *Journal of the American Dietetic Association, 105*(12), 1955-1965.

American Medical Directors Association. (2002). Clinical *practice guideline: Altered nutritional status.* American Medical Directors Association.

Andreoli, N., Breuer, L., Marbury, D, William, S., & Rosenblut, M. (2007). Serving culture change at mealtimes. *Nursing Homes: Long Term Care Management, 56,* 48-49.

Archetti, C., Garey, J., & Bermas, N. (1993). Attitudes of long-term care foodservice staff toward older workers. *Journal of the American Dietetic Association, 93*(3),

326-328.

Ball, M., Whittington, F., Perkins, M., Patterson, V., Hollingworth, C., King, S., & Combs, B. (2000). Quality of life perspectives from assisted-living residents. *Applied Journal of Gerontology, 19*(3), 304-325. Retrieved June 24, 2009 from PsycINFO database.

Barnes, S. (2004). Perceptions and understandings of long-term care: Results of focus groups with older adults, caregivers, and public. *The Gerontologist, 44*(1), 412.

Beck, A., & Ovesen, L. (2003). Influence of social engagement and dining location on nutritional intake and body mass index of old nursing home residents. *Journal of Nutrition for the Elderly, 22*(4), 1-11.

Becker, B. & Kaldenberg, D. (2000, Winter). Factors influencing the recommendation of nursing homes. *Marketing Health Services*, American Marketing Association.

Bernstein, M., Tucker, K., Ryan, N., O'Neill, E., Clements, K., Nelson, M., Evans, W., & Fiartarone, S. (2002). Higher dietary variety is associated with better nutritional status in frail elderly people. *Journal of the American Dietetic Association, 102*(8), 1096-1104.

Buzalka, M. (December, 2001). Why residents now love dining at Laurel Lake. *Food Management*, 31-34.

Buzalka, M. (2004). Carts boost satisfaction. *Food Management, 39*(12), 26.

Carrier, N., West, G., & Ouellet, D. (2006). Cognitively impaired residents' risk of malnutrition is influenced by foodservice factors in long-term care. *Journal of Nutrition for the Elderly, 25*(3/4), 73-87.

Castellanos, V. (2004). Food and nutrition in nursing homes. *Generations, 28*(3), 65-71.

Centers for Medicare and Medicaid Services. (1999). Survey protocol for long-term care facilities: Investigative protocol dining and food service. (pp. 41-43). Retrieved September 5, 2008 from http://www.cms.hhs.gov/manuals/107_som/som107ap_p_ltcf.pdf

Centers for Medicare and Medicaid Services. (2005). 8th scope of work contract. Retrieved October 1, 2008 from http://www.cms.hhs.gov/QualityImprovementOrgs/downloads/8thSOW.pdf

Centers for Medicare and Medicaid Services. (2009).

Chao, S., Bold, D., & Lee, A. (2003). Factors influencing resident satisfaction in residential aged care. *The Gerontologist, 43*(4), 459-472.

Chao, S. & Dwyer, J. (2004). Food and nutrition services in assisted-living facilities: Boon or big disappointment for elder nutrition. *Generations, 28*(3), 72-77.

Chao, S., Houser, R., Tennstedt, S., Jacques, P. & Dwyer, J. (2007). Food and nutrition care indicators: Experts' views on quality indicators for food and nutrition services in assisted-living facilities for older adults. *Journal of the American Dietetic Association, (107)* 9, 1590-1598.

Chou, S. Boldy, D., & Lee, A. (2003). Factors influencing resident satisfaction in residential aged care. *The Gerontologist, 43*(4), 459-472.

Cowan, D., Roberts, J., Fitzpatrick, J., While, A., & Baldwin, J. (2004). Nutritional status of older people in long term care setting: Current Status and future directions. *International Journal of Nursing Studies, 4*(3), 225-237.

Crogan, N., & Evans, B. (2001). Guidelines for improving resident dining experiences in long-term care facilities. *Journal for Nurses in Staff Development,*

7(5), 256-259.

Crogan, N., Evans, B., & Shultz, J. (2004). Improving nursing home food service: Uncovering the meaning of food through residents' stories. *Journal of Gerontological Nursing, 30(*2), 29-36.

Crogan, N., Alvine, C., & Pasvogel, A. (2006). Improving nutrition care for nursing home residents using the INRx process. *Journal of Nutrition for the Elderly, 25*(3/4), 89-103.

Crogan, N., & Evans, B. (2006, November). The shortened Food Expectations -- Long-Term Care Questionnaire: assessing nursing home resident satisfaction with food and food service. *Journal of Gerontological Nursing*, *32*(11), 50-59. Retrieved March 21, 2009, from CINAHL with Full Text database.

Desai, J., Winter, A., Young, K., Greenwood, C. (2007). Changes in type of foodservice and dining room environment preferentially benefit institutionalized seniors with low body mass indexes. *Journal of the American Dietetic Association, 107*(5), 808-814.

Donoghue, C. & Castle, N. (2009). Leadership styles of nursing home administrators and their association with staff turnover. *The Gerontologist, 49* (2), 166-174.

Dorner, B., Niedert, K., & Welch, P. (2002). Liberalized diets for older adults in long-term care. *Journal of the American Dietetic Association, 102*, 1316-1323.

Doty, M., Koren, J. & Sturla, E. (2008). *Culture change in nursing homes: How far have we come?* The Commonwealth Fund. Retrieved May 5, 2009 from http://www.commonwealthfund.org/publications/publications_show.htm?doc_id=684709#areaCitation

Dube, L., Trudeau, E., & Belanger, M. (1994). Determining the complexity of patient satisfaction with foodservices. *Journal of the American Dietetic Association, 94*, 394-401.

Dyck, M. (2008). Weight loss prevention in nursing home residents: a pilot study to determine administrative strategies. *Journal of Gerontological Nursing 34,28*(8). Retrieved on March 1, 2009 from Expanded Academic ASAP.

Ejaz, F., Straker, K. & Swami, S. (2003). Developing a satisfaction survey for families of Ohio's nursing home residents, *The Gerontologist, 43*(4), 447-458.

Evans, B., Crogan, N., & Shultz, J. (2003). Quality dining in the nursing home: The residents' perspective. *Journal of Nutrition for the Elderly, 22*(3), 1-17.

Finley, D., Diekmann, C., Dorner, B. & Lofley, D. (2005). Putting the "wow" in dietetics. *Journal of the American Dietetic Association, 105*(7), 1149-1151.

Food Service Director Research. (2005, July). Long-term care braces for growth. *Foodservice Director, 18*(7), 24-26.

Gallagher, A. (2004, Fall). Undernutrition and causes of involuntary weight loss in long-term care. Global Monitor: Special Meeting Reporter. (Available from www.LTCnutrition.org), 5-9.

Grant, L. (2008). *Culture change in a for-profit nursing home chain: An evaluation.* The Commonwealth Fund. Retrieved May 5, 2009 from http://www.commonwealthfund.org/publications/publications_show.htm?doc_id=668880

Gronroos, C. (1988). Service quality: The six criteria of good perceived service quality. *Review of Business, 9*(3),10-13.

Hackes, B., Shanklin, C., Kim, T., & Su, A. (1997). Tray service generates more food waste in dining areas of a continuing-care retirement community. *Journal of the American Dietetic Association, 97*(8), 879-884.

Hoban, S. (2006). Who are customer service reps? Everyone! *Nursing Homes,54*(2), 39-41.

Howells, A. (2007). *The impact of perceived quality on assisted-living residents' satisfaction wit their dining experience.* Unpublished Master's Thesis, Kansas State University, Manhattan.

Hollis, J. & Henry, J. (2007). Dietary variety and its effect on food intake of elderly adults. *Journal of Human Nutrition and Diet, 20,* (4), 345-351.

Horn, S., Bender, S., Bergstrom, N., Cook, A., Reguson, M., Rimmasch, H., Sharkey, S., Smout, R., Taler, G., & Voss, A. (2002, November). Description of the National Pressure Ulcer Long-Term Care Study. *Journal of the American Geriatrics Society, 50* (11), 1532-5415

Huang, H. (2004). *Factors affecting satisfaction and residents' utilization of foodservice in assisted-living facilities*. Unpublished doctoral dissertation, Kansas State University, Manhattan.

Hutlock, T. (2005). All in the name of good taste. *Nursing Homes, 54*(3), 37-39.

Institute for the Future of Aging Services. (2003). Why workforce development should be part of the long-term care quality debate. *American Association of Homes and Services for the Aging.* Washington, DC.

Institute for the Future of Aging Services. (2003). Modeling the future supply and demand for long-term care workers. *American Association of Homes and Services for the Aging.* Washington, DC.

Jhaveri, T. (2006, October). Enhancing the dining experience in senior living. *Nursing Homes: Long Term Care Management, 55*(10), 56-60. Retrieved March 18, 2007 from http://web.ebscohost.com.proxy.ohiolink.edu

Kayser-Jones, J. (2000). Improving the nutritional care of nursing home residents. *Nursing Homes Long-Term Care Management, 49*(10, 56-59.

Keller, H., Gibbs, A., Boudreau, L., & Goy, R. (2003). Prevention of weight loss in dementia with comprehensive nutritional treatment. *Journal of the American Geriatrics Society, 51*(7), 945-951.

King, P. (1999). Necessity begets a solution for senior/foodservice operator. *Nation's Restaurant News, 33*(18), 18.

Kitzinger, J. (1995). Qualitative research: Introducing focus groups. *BMJ Journal, 29*(3), 54-65.

Kroll, L. (2005). No employee left behind. *Forbes Global, 1(*3), 22.

Lee, K., Shanklin, C., & Johnson, D. (2003). Development of service quality measurement for foodservice in continuing-care retirement communities. *Foodservice Research International, 14*, 1-21.

Lee, K. (2004). *Residents' perception of foodservice in continuing-care retirement communities.* Unpublished doctoral dissertation, Kansas State University, Manhattan.

Lengyel, C., Smith, J., Whiting, S., & Zello, G. (2003). A questionnaire to examine food service satisfaction of elderly residents in long-term care facilities. *Journal of Nutrition for the Elderly, 24*(2), 5-18.

Levinson, Y., Dwolatzky, T., Epstein, A., Adler, B., & Epstein, L. (2005). Is it possible to increase weight and maintain the protein status of debilitated elderly residents of nursing homes? *Journal of Gerontology: Series A; Biological Sciences and Medical Sciences, 60*(7), 878-881.

Lipowski, M. (1998). When seniors won't eat…improved nutrition becomes a priority. *Food Management, 33*(8), 30-33.

Loeb, S., Penrod, J., & Hupcey, J. (2006). Focus groups with older adults: Tactics for success. *Journal of Gerontological Nursing, 32*(3), 32-38.

Lowe, T., Lucas, J., Castle, N., Robinson, G. & Crystal, S. (2003). Consumer satisfaction in long-term care: State Initiatives in nursing homes and assisted living facilities. *Gerontologist, 43*(6), 883-896.

Mandrik, C. (1998). The focus group kit. *Journal of Consumer Affairs, 3*(2), 436-440.

Marken, D. (2004). Enhancing the dining experience in long-term care: Dining with dignity program. *Journal of Nutrition for the Elderly, 23*(3), 99-109.

Matthews, L. (2008). Providing nutrition services to older Americans. *Topics in Clinical Nutrition, 23*(2), 103-119.

Moody, H. (2002). *Aging: Concepts and controversies (4th ed.).* Thousand Oaks: Sage Publications.

National Citizens' Coalition for Nursing Home Reform. (2000, June). *Malnutrition and dehydration in nursing homes: Key issues in prevention and treatment*. National Citizens' Coalition for Nursing Home Reform, 24. Retrieved on March 1, 2009.

Nijs, K., Graaf, C., Siebelink, E., & Blauw, Y. (2006). Effect of family-style meals on energy intake and risk of malnutrition in Dutch nursing home residents: A randomized controlled trial. *The Journals of Gerontology: Series A: Biological Sciences and Medical Sciences, 61A*(9), 935-943.

Norrgard, C. (2001, Annual). Assisted-living. *Clinical Reference Systems*, 134.

Nursing Homes: Long Term Care Management. (September, 2003). Creating a five-star dining experience. *Nursing Homes: Long Term Care Management, 52*(9), 45-50. Retrieved February 7, 2008 from EBSCO database.

O'Connor, J. (2003). Long-term care: A market in transition. *McKnight's Long-Term Care News.* Retrieved October 12, 2008 from www.mcknightsonline.com

Parasuraman, A., Zeithaml, V.A., & Berry, L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. Journal of Retailing, *64(1),* 12-37.

Peak, T., & Sinclair, S. (2002). Using customer satisfaction surveys to improve quality of care in nursing homes. *Health and Social Work, 27*(1), 75-79. Retrieved June 24, 2005 from PsycINFO database.

Peaselee, K. (2003). Emerging tastes. *Assisted-living Success.* Retrieved on October 2, 2003 from www.alsuccess.com/articles/141feat2.html

Pfeiffer, N., Rogers, D., Roseman, M., Jarema, L., Reimann, A., & Jones, D. (2005). What's new in long-term care dining? *North Carolina Medical Journal, 66*(4), 287-291.

Popper, R., & Kroll, B. (2003). Food preference and consumption among the elderly. *Food Technology, 57*(7), 32-40.

Rahman, A. & Schnelle, J. (2008). The nursing home culture-change movement: Recent past, present, and future directions for research. *The Gerontologist, 48*(2), 142-148.

Remsburg, R., Luking, A., Baran, P., Radu, C., Pineda, D., Bennett, R., & Taback, M. (2001). Impact of a buffet-style dining program on weight and biochemical indicators of nutritional status in nursing home residents: A pilot study. *Journal of the American Dietetic Association, 101*(12), 1460-1463.

Robinson, G. & Gallagher, A. (2008). Culture change impacts quality of life for nursing home residents. *Topics in Clinical Nutrition, 23*(2), 120-130.

Rosenthal, B. (2003). Broken and unsustainable: The aging of baby boomers means a cost crisis in long-term care. *Contemporary Long-Term Care, 26*(10), 22-25.

Roy, R., & Spate, L. (1995, Supplement). Restaurant-style service in the long-term care setting: The customer service focus of the future. *Journal of the American Dietetic Association, 95*(9), A-83.

Ruigrok, J., & Sheridan, L. (2006). Life enrichment programme: Enhanced dining experience, a pilot project. *International Journal of Health Care Quality Assurance, 19*(5), 420-429.

Salmon, J. (2001). The contribution of personal control and personal meaning to quality of life in home, assisted-living facility, and nursing home settings. Dissertation Abstracts International, 63(02A), 710. (No. AA13041123).

Sandow, K. (2002, Summer). Meal service changes increase residential intake. *Gerontological Nutritionist*, American Dietetic Association, Dietetic Practice Group.

Schenkel, R., (2006, December). Restaurant-style dining at an affordable price. *Nursing Homes: Long Term Care Management, 55*(12), 42-44. Retrieved March 18, 2007 from http://web.ebscohost.com,proxy.ohiolink.edu

Seo, S. & Shanklin, C. (2005). Using focus groups to determine specific attributes that influence the evaluation of quality food and service quality in continuing care retirement communities. *Journal of Foodservice Business Research, 8*(1), 35-51.

Shatenstein, B., & Ferland, G. (2000). Absence of nutritional or clinical consequences of decentralized bulk food portioning in elderly nursing home residents with dementia in Montreal. *Journal of the American Dietetic Association, 100*(11),

1354-1360.

Sheridan, M. (2002). Inviting options: Marketing dining services to senior and families offers golden opportunities. *Restaurants & Institutions, 112* (21), 97-99.

Shultz, J., , N., & Evans, B. (2005). Organizational issues related to satisfaction with food and food service in the nursing home from the resident's perspective. *Journal of Nutrition for the Elderly, 24(*4), 39-55.

Simmons, S., Alessi, C., & Schnelle, J. (2001). An intervention to increase fluid intake in nursing home residents: Prompting and preference compliance. *Journal of the American Geriatrics Society, 49(*7), 926-933. Retrieved June 24, 2009 from PsycINFO database.

Simmons, S., Cleeton, P., & Porchak, T. (2009). Resident complaints about the nursing home food service: Relationship to cognitive status. *Journal of Gerontology: Psychological Sciences. 64B*(3), 324-327.

Spangler, A., & Pettit, R. (2003). Differences in preferences of entrees by elderly congregate meal participants according to age, gender, ethnicity and education and a factor analysis approach to group entrée preferences. *Journal of Nutrition for the Elderly, 23*(2), 33-53.

Spector, P. E. (1985). Measurement of human service staff satisfaction: Development of the Job Satisfaction Survey. *American Journal of Community Psychology*, *13*, 693-713.

Splett, P., Roth-Yousey, L., & Vogelzang, J. (2003). Medical nutrition therapy for the prevention and treatment of weight loss in residential healthcare facilities. *Journal of the American Dietetic Association, 103*(3), 352-363.

Trueland, J. (2009, March). Dishing up good practice. *Nursing Older People, 21*(2), 18-21.

United States Census Bureau. (2008). An older and more diverse nation by mid-century. http://www.census.gov/PressRelease/www/releases/archives/population/01249.html.

United States Department of Health and Human Services & Institute for the Future of Aging Studies (2005). *Measuring long-term care work: A guide to selected instruments to examine direct care worker experiences and outcomes*. Retrieved February 25, 2009 from www.ifas.org

Watters, C., Sorenson, J., & Wismer, W. (2003). Exploring patient satisfaction with foodservice through focus groups and meal rounds. *Journal of the American Dietetic Association, 103*(10), 1347-1349.

Weisberg, K. (2005). Buffet impresario: Director proves nursing home buffets can accommodate special diet needs: Rodolfo Rodriguez, Lincoln Park (NJ) Health Center. *Food Service Director, 18*(7), 22-24.

West, G., Ouellet, D., & Ouellette, S. (2003). Resident and staff ratings of foodservices in long-term care: Implications for autonomy and quality of life. *The Journal of Applied Gerontology, 22*(1), 57-75.

Young, C., & Brewer, P. (2001). Marketing continuing-care retirement communities: A Model of residents' perceptions of quality. *Journal of Hospitality & Leisure Marketing, 9*(1/2), 133-151.

CHAPTER 5 - RESTAURANT-STYLE DINING IN SKILLED NURSING FACILITIES: RESIDENT AND EMPLOYEE SATISFACTION

Introduction

Older Adults and Long-Term Care

The rapid growth of the older population (> age 65) in the United States will continue over the next 50 years. Considering the upward pattern of growth, the demographics of aging will continue to change. The aging "Baby Boomers", those born between 1946 and 1964, will accelerate the growth of the aging population (O'Connor, 2003; Administration on Aging [AOA], 2008). Relative to the rest of the population the number and proportion of older people are increasing. Growing at even a greater rate is the age 85 and older population, this age group is expected to increase to over 5% (19.4 million) of the general population by the year 2050 (U.S. Census Bureau, 2001). Globally, the United Nations predicts that one out of every five persons will be over the age of 60 years by the year 2050. Even though the health status of this group is improving with self-reported disabilities decreasing 6.5% from 1982 to 1999 the size of this age group is of special concern because of the need for more intense services (Administration on Aging [AOA], 2008).

Food, Dining, and Nutrition in Long-Term Care

Nutritious food that is served by caring staff in pleasant surroundings contributes to the overall quality of life for residents in skilled nursing facilities (Crogan & Pasvogel, 2003). New models of care are sweeping across the nursing home industry. There is awareness that the current institutional model will not improve the quality of life for residents (Grant, 2008). Culture change and person-centered care are emerging trends in the long-term care arena. Culture change in long-term care, as described by Haran

(2006), is the transformation of an institution into a home, providing residents with more control in a home-like setting. The resident, not the institution, becomes the focal point. Food and foodservices has a major role in culture change promotion.

Good nutritional status has been documented to reduce the susceptibility to infections, reduce incidence of hospitalizations, and lower the death rate associated with co-existing illness (American Medical Directors, 2002; National Citizens' Coalition for Nursing Home Reform, 2000). One of the quality-of-care indicators, unintentional weight loss (UWL) or involuntary weight loss following admission into a residential healthcare facility is a growing concern (Splett, 2003). Up to 85 percent of the nearly 1.6 million residents in American nursing homes have protein undernutrition and involuntary weight loss (American Medical Directors, 2002; Remsburg, Luking, Baran, Radu, Pineda, Bennett, & Tayback, 2001). Several studies have indicated that there are reversible factors associated with undernutrition. These factors include inadequate staffing, poor food quality and service, lack of resident choice; and suboptimal dining room environment (Remsburg, et al., 2001).

Many long-term care facilities have heightened their efforts to make foodservice a more important facet of lives in their residents by enhancing dining areas, increasing menu variety, and diversifying service methods (Boutin, 1999; Buzalka, 2004; Castellanos, 2004; Desai, J., Winter, A., Young, K., & Greenwood, C., 2007; Pfeiffer, N, Rogers, D., Roseman, M., Jarema, L., Reimann, A., & Jones, D., 2005). Restaurant-style dining was successfully implemented in a skilled nursing facility as reported by Roy and Spate in 1995. Additionally, alternate food service methods, including buffet-style and family-style dining, have been pilot-tested and implemented in skilled nursing facilities (King, 1999; Remsburg, et al., 2001; Shatenstein & Ferland, 2000). However, the traditional tray service and semi-selective menu are still dominate in the industry (Welsh, 2005).

Previous research has been conducted to explore what factors in food and dining services have an effect on resident satisfaction. Resident perceptions of quality, service, and customization and the relationship to resident satisfaction have been researched in long-term settings. Huang (2004) surveyed assisted-living residents and found that service quality scores were often higher than food quality scores and the service scores

had a significant impact on resident satisfaction. Seo (2004) also found that residents in continuing-care retirement communities (CCRCs) scored service attributes higher than food quality attributes. Lee, Shanklin, & Johnson (2003) and Lee (2002) also surveyed residents in CCRCs and found that both quality and service attributes were important to resident satisfaction with food and dining services.

Research regarding choice and customization of meals has been conducted in skilled nursing facilities. Evans et al. (2003) and Evans and Crogan (2005) found that choosing foods and where to dine were important to residents. Dube, L., Trudeau, E., and Belanger, M. (1994) reported that food quality was the best indicator of satisfaction followed by customization in acute care patients.

Foodservice Employees in Long-Term Care

The population is aging and the birthrate is declining which sets the scenario for a shortage of foodservice workers in both the commercial and healthcare foodservice markets (Archetti, Garey, & Bermas, 1993). Recruiting, hiring and retaining direct care workers in long-term care will be problematic. The Institute for the Future of Aging Services (IFAS, 2003, 2007) predicts that the growth in the long-term care market will continue and if unemployment numbers drop, the worker shortage will be compounded. In March 2008, the U.S. Senate passed the Caring for an Aging America Act of 2008. This bill would provide a number of incentives to attract professional and direct health care workers to the long-term care field (ASA, 2008).

Most of the research conducted with long-term care employees has been conducted with nurses and nursing assistants. Job satisfaction in the broad sense can be viewed as how favorably employees view their work. Because work satisfaction has been positively linked to productivity and negatively linked to absenteeism and turnover, it can contribute to the effectiveness of the nursing facility (Grieshaber, Parker, & Deering, 1995). The Kansas Association for Homes and Services for the Aging (KAHSA) study (2003) was developed to find ways to reduce the amount of turnover of the nursing staff (registered nurses and nurse aids). Noting the obvious financial causes and results of high turnover, the study also targeted the administrative and organizational

culture and interpersonal practices in the workplace. The findings from this study showed that attitudes could be changed even in the most difficult of work situations. The study also noted that a supportive work environment is critical for behavior change (KAHSA, 2003). Additional research regarding long-term care employees has clearly documented that high turnover and inadequate staffing contribute to lower quality of care and lower resident satisfaction (& Evans, 2001; Doll, 2003; Ejaz, Straker, & Swami, 2003; Feder, Komisar, & Niefeld, 2000; Kayser-Jones, 2000; Lowe, Lucas, Castle, Robinson, & Crystal, 2003). Because foodservice employees control and perform technical and service tasks, their opinions regarding resident satisfaction should be considered (West, et al., 2003). To date, a survey specifically measuring long-term care foodservice employee job satisfaction has not been found in the literature.

Measuring Resident Satisfaction in Long-Term Care Facilities

Lengyel, Smith, Whiting, and Zello (2004) developed an instrument that measured resident satisfaction with food, eating, and food service delivery in relation to three common quality of life indicators: autonomy, security, and interpersonal relations. The survey of twenty-five questions used the metric of "yes", "sometimes", and "no". Lee et al. (2003), Huang (2004), and Howells (2007) all developed foodservice resident satisfaction surveys for assisted-living and CCRC residents that were based on the SERVQUAL instrument (Parasuraman, 1988). No surveys were found for residents in skilled nursing facilities.

The following paragraphs represent the purposes and research propositions identified for this study.

Purposes

The purposes of this study were to:

- explore factors associated with residents' dining experiences in skilled nursing facilities that have transitioned to restaurant-style dining.
- explore how food quality, service quality, and customization influence resident satisfaction.
- investigate foodservice employee perception of resident satisfaction with food and food services, job satisfaction, and the effect of job satisfaction on intent to leave.

Research Propositions

A model (see Figure 5.1) was developed for the research project. The model depicts the foodservice constructs of food quality, service quality, and customization and the relationship to resident and employee job satisfaction and intent to leave. The research is not based on previous models, thus research propositions, rather than hypotheses, were developed for this study due to its exploratory nature. The research propositions addressed the purposes of the study.

The research propositions depicted in the model are:

In skilled nursing facilities using a restaurant-style dining system:

RP6. residents are satisfied with (a) food quality, (b) service quality, and (c) customization.

RP7. foodservice employee ratings of resident satisfaction with (a) food quality, (b) service quality, and (c) customization closely parallel the resident ratings of food quality, service quality, and customization.

RP8. foodservice employee job satisfaction is negatively associated with intent to leave.

Phase II Model

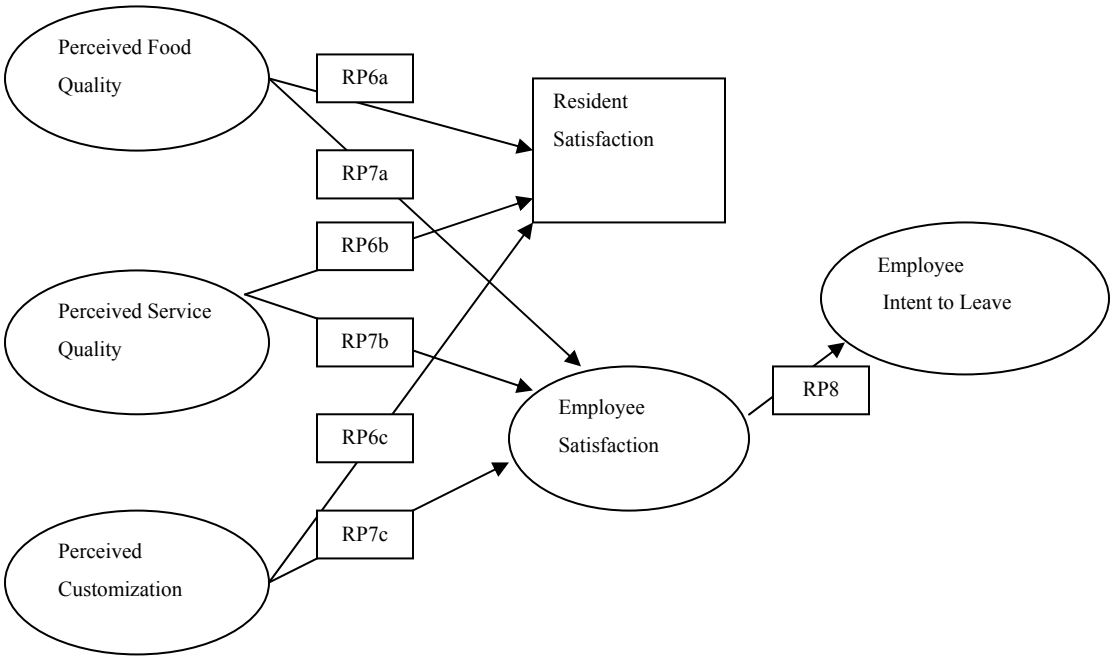

Figure 5.1 Proposed model for food quality, service quality, customization, resident satisfaction, employee satisfaction, and employees' intent to leave.

Note: Two data sets were used to test the proposed relationships.

Methodology

Population and Sample

The population and samples for this study were residents and foodservice employees of skilled nursing facilities that have incorporated a restaurant-style menu and service. Because there was no listing of skilled nursing facilities based on the type of foodservice system and service delivery, a telephone inquiry survey was conducted to determine the type of menu and foodservice system used by the facilities in the study population. The research facilities were located in the northeastern part of Ohio and along the western border of the state of Pennsylvania. The Centers for Medicare and Medicaid Services Nursing Home Compare and Search and the Pennsylvania Department of Health Nursing Care Facility Information were used to obtain a listing of Medicare/Medicaid certified skilled nursing facilities. Skilled nursing facilities within a 100 miles radius of the research institution were surveyed regarding the type of menu and foodservice delivery systems used. Additionally, organizations whose membership consists of professionals who are employed in the fields of dietetics, foodservice management, culinary arts, and hospitality management were sent email inquiries regarding the type of menu and foodservice system utilized in their facilities.

The members of pertinent professional organizations were contacted electronically as additional sources for information regarding foodservices in skilled nursing facilities. The associations contacted were the Consultant Dietitians in Healthcare Facilities (CD-HCF), Management in Food and Nutrition Systems (MFNS), Dietetic Technicians in Practice (DTP), National Society for Healthcare Foodservice Management (HFM), and the American Society for Healthcare Foodservice Administrators (ASHFSA).

There are 305 skilled nursing facilities within the 21 county research areas. All foodservice management professionals, except 20 foodservice managers, were contacted. Ten facilities within the 100 miles radius met the research criteria. The total resident population for the ten facilities was 1025. The researcher contacted the 10 administrators of the identified facilities to introduce the study and schedule an appointment to visit the facility and obtain approval for participation. Seven facilities agreed to participate. The

purposive sampling technique was used in this study. Within the seven facilities that agreed to participate in the study, 115 foodservice employees constituted the employee population.

Instrument Development

Two questionnaires were developed and pilot-tested for this study. The resident questionnaire addressed resident satisfaction of food quality, service quality, and customization. The food service employee questionnaire addressed employee job satisfaction, intention to leave, and the employee perception of resident satisfaction of food quality, service quality, and customization.

Resident Questionnaire

The resident questionnaire was adapted from questionnaires developed by West, Ouellet, and Ouellette (2003), Huang (2004), Howells (2007), and Huang and Shanklin (2008) for use with residents in long-term care facilities (Appendix C). The instruments developed by Huang (2004), Howells (2007), and Huang and Shanklin (2008) has been previously tested for reliability and validity with assisted-living residents. The questionnaire contained four sections. The first section contains specific statements regarding resident perception of food quality, service quality, and customization. Food quality attributes included food temperatures, food taste, food appearance, and consistency of food products. Timeliness of food delivery, prompt correction of errors, and respectful treatment by employees are the characteristics of service quality. Customization refers to the resident's ability to choose food items and specify portion sizes from a menu at the time of meal service. All of the statements were rated on a five-point Likert scale from one (strongly disagree) to five (strongly agree). The second section included broad statements to assess overall satisfaction with service quality, food quality, and customization using a five-point Likert scale from one (very dissatisfied) to five (very satisfied). The third section included one overall quality statement using a five-point Likert scale from one (very poor) to five (very good). In addition, a section containing demographic questions including age, gender, date of admission to the facility, and preferred dining location comprised a fourth section.

The survey instrument was pilot-tested for reliability and validity with 118 residents. The survey was administered to the residents prior to participation in a community activity or physical therapy. Data from the completed surveys was entered and analyzed for reliability utilizing SPSS for Windows Version 15.0 (SPSS Inc., Chicago). Cronbach's alpha was applied to all constructs to test for internal consistency (food quality, α=.75; service quality, α=.71; customization α=.76). The final resident survey is in Appendix B.

Foodservice Employee Questionnaire

A questionnaire was administered to all Food and Nutrition employees in the study group (Appendix C). Section A contained demographic questions including job title, job status, gender, age, education, and employment date. Section B, Part 1 included statements asking employees to rate the resident satisfaction with the menu and foodservice. Section B, Part 2 contained statements regarding job satisfaction, intention to leave, and perceived resident satisfaction of food quality and service. These five items were adapted from the General Job Satisfaction Scale (GJS) and from the Job Diagnostic Survey (JDS), (United States Department of Health and Human Services, 2005). A five-point Likert scale ranging from strongly disagree (1) to strongly agree (5) was used to measure the constructs. The survey was pilot-tested with 25 foodservice employees. Reliability was computed using Cronbach's alpha (food quality, α = 0.71; service quality, α=.67; customization, α=.69).

Data Collection

The administrator of each facility was contacted to introduce the research study and schedule an appointment to discuss the project with the researcher. During the meeting with the administrators, a date and time was set to return to the facility to distribute the surveys. The administrators delegated specific employees as contact persons for the project. On the designated data collection date, the researcher and research assistant traveled to the facility. Upon arrival, the contact person greeted us and

provided a workspace. The researcher and research assistant distributed the surveys to the residents and were available to provide assistance when necessary. All available resident surveys were retrieved on the data collection date. Residents not able to complete the survey on the data collection date were provided with a self-addressed postage paid envelope to return the survey.

Foodservice employee surveys were distributed to all scheduled foodservice employees during the data collection date. Surveys and return postage paid envelopes were given to the managers to distribute to the employees not in attendance on the data collection date. A small incentive (discount food coupon) was provided for those employees completing the survey. All data were collected from the seven facilities in a one-month period.

Facility Profiles

Table 5.1 presents a profile of the seven research facilities. All seven facilities were located in urban metropolitan areas. Five of the seven facilities were owned and managed by the same corporation. The remaining two facilities were owned and operated by another corporation. All facilities are for-profit private institutions. The composite number of Medicare/Medicaid licensed beds was 720 with the average number of beds per facility being 103. The occupancy range was from 50-160 residents. The percent of occupancy range was from 87-100 percent. The total number of foodservice employees was 115 with an average of 16 foodservice employees per facility. All facilities provided restaurant-style dining incorporating a restaurant-style (static) menu with a seasonal cycle menu varying from 1-4 weeks in length. All menus were developed by a Registered Dietitian, Chef, or Certified Dietary Manager. A Registered Dietitian approved all menus. All facilities provide three meals per day and three in-between meal snacks. Residents were allowed to request food at anytime during the day in all of the facilities. The average operational hours for the foodservices were 6am-8pm Sunday through Saturday. If there was a request from the resident outside of the hours of operation, the nursing staff fulfilled the request. The budgeted food cost per resident day

Table 5.1 Profile of Participating Facilities

	Facility #1	Facility #2	Facility #3	Facility #4	Facility #5	Facility #6	Facility #7
Licensed Beds	160	128	100	131	52	79	70
Number of Residents	160	125	96	115	50	70	69
Percent Occupancy	100	98	96	88	96	87	99
Resident Participation	118	55	43*	87	38	52	40
Number of Foodservice Employees	30	18	15	25	10	10	7
Employee Participation	29	16	13	21	8	9	7
Length of Cycle	1 week	4 week	4 week	4 week	4 week	4 week	1 week
Person Responsible for Menu Planning	Chef	CDM[a]	CDM[a]	Manager	CDM[a]	CNA[c]	Chef
Budget Food Cost Per Resident Day	$4.58	$4.75-5.75	$4.75-5.75	$4.75-5.75	$4.75-5.75	$4.75-5.75	$4.58

a Certified Dietary Manager b Registered Dietitian c Certified Nurse Assistant

*The low participation rate was due to the facility closing and residents being transferred to another corporate facility.

ranged from $4.58-5.75. All the foodservices were self-operated (no contractual foodservice management companies).

Table 5.2 describes the resident participants in the seven skilled nursing facilities. Of the 685 residents in the seven facilities, 433 completed the survey for a response rate of 63.2%. The majority (75.1%) of the residents was female; males made up 24.9% of the sample. The average overall age for was 78.9 ±10.53 years. The length of stay ranged from 2 weeks to 9 years. The average length of stay was 22.21±17.15 months. Most (78.1%) of the residents consume their meals in a dining room versus their personal room (21.9%).

Table 5.2 Descriptions of Resident Participants in Skilled Nursing Facilities

Demographic Variables	**n**	**%**
Gender (N=433)		
Male	108	24.9
Female	325	75.1
Range in Age (N=433)		
35-59	17	3.9
60-69	44	10.2
70-79	123	28.4
80-89	175	40.4
90-99	71	16.4
100-109	3	0.7
Length of Stay in the Facility by Months (N=433)		
0-12	139	32.1
13-24	150	34.6
25-36	84	19.4
37-48	32	7.3
49-60	12	2.8
61-72	10	2.3
73-84	3	0.7
85-96	0	0
97-108	3	0.7
Most Frequent Dining Location (N=433)		
Personal Room	95	21.9
Dining Room	338	78.1

Table 5.3 illustrates the demographic profile of the foodservice employees in the seven facilities. Of the 115 employees in the seven facilities, 103 completed the questionnaire for a response rate of 89.5%. There were 21(20.4%) males and 82 (79.6%) females. Employee ages ranged from 17-68 years with a mean age of 34.75±.14.92. The majority (57.3%) of the participants classified themselves as Aides. Cooks (15.5%) and supervisors (11.7%) were also predominant job titles within the study group. Many long-term care foodservice workers are cross-trained. Fifty-six (54.4%) employee participants were full-time and 47 (45.6%) were part-time. Fifty-nine (57.3%) employee participants were high school graduates with another 22 (21.4%) having some high school education. Eighteen (17.5%) employees indicated they had some college education while 4 (3.9%) employees were college graduates. Employment (in years) for the foodservice participants ranged from 0.20-30.92 years with a mean response of 5.17±4.95 years.

Data Analyses

Statistical analyses were performed using SPSS for Windows Version 15.0 (SPSS Inc, Chicago). Descriptive statistics were compiled for inferential analyses that addressed the research propositions of this study. Differences in satisfaction regarding food quality, service quality, customization, and overall dining were analyzed using *t*-tests and ANOVA. Further analyses included factor analysis on the three main factors of quality, service, and customization. Multiple regression was used to determine the degree to which each independent variable contributed to employee satisfaction. Multiple regression was used to test for mediation using the three-step process described by Baron & Kenny (1986).

Table 5.3 Description of Foodservice Employee Participants in Skilled Nursing Facilities

Demographic Variable	N	%
Job Title (N=103)		
Aid	59	57.3
Aid, Dishwasher	2	2.0
Baker	1	1.0
Cook	16	15.5
Cook Assistant	1	1.0
Cook, Aid, Dishwasher	1	1.0
Dietetic Technician	1	1.0
Dishwasher	1	1.0
Expeditor	1	1.0
Hostess	1	1.0
Manager	1	1.0
Prep Cook	3	3.0
Supervisor	12	11.7
Supervisor, Cook	2	2.0
Job Status (N=103)		
Full Time	47	45.6
Part Time	56	54.4
Gender (N=103)		
Male	21	20.4
Female	82	79.6
Range in Age (N=95)		
16-20	23	24.2
21-29	20	20.1
30-39	13	13.7
40-49	19	20.0
50-59	13	13.7
60-69	7	7.4
Education (N=103)		
Some High School	22	21.4
High School Graduate	59	57.3
Some College	18	17.5
College Graduate	4	3.9
Length of Employment in Years (N=101)		
0-.99	11	11.0
1-4.99	25	24.8
11-15.99	6	6.0
16-20.99	1	0.99
21-25.99	2	2.0
26-30.99	1	0.99

Results

Resident Satisfaction

Table 5.4 illustrates the survey results for the food attributes and overall dining satisfaction. Table 5.5 displays the composite mean scores for food quality, service quality, customization, and overall satisfaction. The results are important due to the value of mealtimes for residents' physical and emotional well-being.

Customization

Customization was measured with statements pertaining to resident choice, menu choices and variety, ordering foods not on the menu, and food portion sizes. Residents' mean rating of 4.05 ± 0.78 indicates a high level of satisfaction with being able to choose menu selections at mealtime and the variety offered. Howells (2007) and Huang (2004) reported low customization scores in assisted living. "Being able to choose own foods" was rated the highest (4.50±0.65). The next highest rated items were "the menu provided choices" (4.23±0.67) and "a variety of foods are offered" (4.04±0.73). Portion sizes were rated the lowest (3.61±0.96) indicating a resident concern. Portion sizes were reported lower in Howells (2007). Evans et al., (2003) and Evans and Crogan (2005) reported that choosing foods at mealtimes was important for residents. West et al. (2003) reported resident choice and autonomy as significant factors in long-term care. Customization items were ranked high in importance by residents but rated low. Resident choice of meal selections at meal times is important to resident autonomy and a sense of some control of activities of daily living.

No statistical differences were found when computing ANOVA to detect any mean differences in customization and age, length of stay, and gender.

Table 5.4 Resident Ratings of Food Attributes in Skilled Nursing Facilities (n = 433)

Questions	N	Min	Max	M	SD
Customization*					
Being able to choose my own foods	433	2.00	5.00	4.50	0.65
The menu provides choices	433	2.00	5.00	4.23	0.67
I am able to order foods not on the menu	432	1.00	5.00	3.88	0.91
A variety of foods are offered	433	2.00	5.00	4.04	0.73
Portion sizes are satisfactory	433	1.00	5.00	3.61	0.96
Food Quality*					
Foods taste good	429	1.00	5.00	4.01	0.87
Cold foods are served cold	431	2.00	5.00	4.05	0.74
Hot foods are served hot	432	1.00	5.00	3.36	0.99
The quality of the food is the same each time it is	430	1.00	5.00	3.79	0.85
The foods are served attractively	432	2.00	5.00	3.90	0.77
Service Quality*					
Food served in the time promised	432	2.00	5.00	3.76	0.94
The employees respect my needs	433	2.00	5.00	4.23	0.65
The employees treat me with respect	433	2.00	5.00	4.39	0.63
The foodservice corrects anything that is wrong	433	1.00	5.00	4.02	0.85
Satisfaction**					
With the food served, I feel	432	2.00	5.00	3.95	0.77
With the service provided, I feel	432	2.00	5.00	4.08	0.64
With the overall dining experience, I feel	431	2.00	5.00	4.07	0.67
Being able to select from a menu, I feel	433	2.00	5.00	4.03	0.66

* Measurement items were rated on a 5-point scale 1-Strongly Disagree – 5-Strongly Agree

** Measurement items were rated on a 5-point scale 1-Very Dissatisfied – 5-Very Satisfied

Table 5.5 Composite Mean Scores for Quality Attributes

Quality Attribute	Mean	SD	Range
Customization*	4.05	0.78	1.60-5.00
Food Quality*	3.84	0.84	1.40-5.00
Service Quality*	4.10	0.77	1.75-5.00
Overall Satisfaction**	4.03	0.69	2.00-5.00

* Measurement items were rated on a 5-point scale 1-Strongly Disagree – 5-Strongly Agree
** Measurement items were rated on a 5-point scale 1-Very Dissatisfied – 5-Very Satisfied

Food Quality

Food quality was measured with statements pertaining to taste, temperature, preparation consistency, and presentation. Residents' overall mean food quality rating of 3.84 ± 0.84 indicates an acceptable level of satisfaction. The food quality composite mean was the lowest among the attributes. Howells (2007) and Huang (2004) also reported lower food quality ratings among the attributes. The highest mean ratings were given to "cold foods are served cold" (4.05± 0.74) and "food tastes good" (4.01±0.87). The lowest rating was given to "hot foods are served hot" (3.36± 0.99). An area of concern that should be addressed by the foodservice director is the temperatures of hot foods at the time of service.

ANOVA was computed to determine any significant differences in the food quality composite mean and length of stay, gender, and age. There was a significant finding with food quality and gender. Males ($p<.05$) were significantly more satisfied with food quality than females. No other demographic attributes were significant with food quality.

Service Quality

Service quality was measured with statements pertaining to service time, acknowledged needs, employee respect, and correction of errors. Residents' mean rating of 4.10 ± 0.77 indicates a high level of satisfaction with the service provided. The highest rated attribute was "the employees treat me with respect" (4.39±0.63) followed by "the employees respect my needs" (4.23±0.65). These rating coincide with item ratings reported by Howells (2007), Huang (2005), West et al. (2003), and Evans and Crogan

(2005), and Crogan et al. (2006). The lowest rating was "food served in the time promised" (3.76±0.94). Service time from the point of taking the food order to time of delivery could be improved.

Overall Satisfaction

Overall satisfaction was measured with broad statements addressing satisfaction with food quality, service, dining experience, and choice or meal selections (Table 5.4). Residents' mean rating of 4.03 ± 0.69 indicates a high level of satisfaction with food and foodservices

ANOVA was computed to assess mean differences in overall satisfaction with food and foodservices between facilities using the measurement of "Overall, the quality of the foodservice is..." Measurement for the variable was rated on a scale with 1 being Very Poor to 5 being Very Good. The mean overall quality of the foodservice for all facilities was rated high (4.17 ± 0.69). A significant difference was found among the food quality means of the seven facilities ($F(6,426) = 4.01$, $p = .001$). Multiple comparisons were used to determine the differences among the facilities. Only facility one ($M = 4.36$) demonstrated a significant difference ($p < .05$) with facility number five ($M = 3.87$) and facility six ($M = 3.96$) for food quality. No other facility differences were noted.

To examine construct validity, a factor analysis was conducted with the 18 questions from the Resident Food Service Evaluation. The original data was run for the factor analysis. A principal component analysis with varimax rotation was run. The solution based on eigenvalues >1, produced a 4-factor solution, accounting for 54.34% of the variance in the data (Table 5.6). For interpretation purposes, items with a factor loadings greater than 0.40 were considered to load on that factor. In general, the factors that emerged corresponded conceptually to the intended research. The rotated pattern matrix suggests that Customization (CU) is the first factor with CU1-3 forming a relatively strong factor with loadings greater than 0.6. CU4 is weaker but did not load higher on any other factor. Food Quality (FQ) is the next factor, with loadings ranging from 0.505-0.731 for factors FQ1-FQ4 and SQ1 loading at 0.711. The third factor is service quality (SQ). SQ2-4 loadings ranged from 0.628-0.743. The fourth factor is

satisfaction (SA) which included broad overall statements of general satisfaction. SA1-4 loadings ranged from 0.653-0.775. FQ5 has a weak loading of (0.468) and did not load any higher on any other factor. CU5, portion sizes also loaded on Satisfaction (0.754). CU5 was not eliminated due to the importance of portion control in long-term care. The remaining variable loadings range was 0.679 – 0.775. Thus, with the few exceptions noted, the results generally support the factor solution suggested in this research (see Table 5.6).

Four subscales were created: customization (CU), food quality (FQ), service quality (SQ), and satisfaction (SA). Resident customization was computed from part 1 questions 1-4 and 11; food quality from part 1 questions 5-8 and 10; service from part 1 questions 9, and 12-14; and satisfaction from part 2 questions 1-4.

Among the correlations for the resident sub-scores, all correlations were positive and statistically significant. Internal consistency of the measurement instrument was tested by conducting Cronbach's alpha using the survey questions above for each subscale (Table 5.7).

Table 5.6 Rotated Component Matrix (Varimax)

	Component			
	1 Quality	2 Customization	3 Service	4 Satisfaction
CU1 Being able to choose my own food is important.		**.713**		
CU2 The menu provides choices.		**.742**		
CU3 I am able to order foods not on the menu.		**.625**		
CU4 A variety of foods are offered.		**.457**		
FQ1 Foods taste good.	**.595**			
FQ2 Cold foods are served cold.	**.505**			
FQ3 Hot foods are served hot.	**.731**			
FQ4 The quality of the food is the same each time it is served.	**.576**			
SQ1 Food is served in the time promised.	**.711**			
FQ5 The foods are served attractively.				**.468**
CU5 Portion sizes are satisfactory.				**.754**
SQ2 The employees respect my needs.			**.743**	
SQ3 The employees treat me with respect.			**.722**	
SQ4 The foodservice corrects anything that is wrong quickly.			**.628**	
SA1 With the food served, I feel				**.679**
SA2 with the service provided, I feel				**.775**
SA3 With the overall dining experience, I feel				**.724**
SA4 Being able to select from a menu, I feel				**.653**

Note: Only loadings > 0.40 are displayed (Hair, 1998).

Table 5.7 Resident Internal Consistency and Intercorrelations of Measures (N = 433).

Variables	*Alpha*	1 Customization	2 Quality	3 Service	4 Satisfaction
1. Customization	.72	--			
2. Food Quality	.63	.39***	--		
3. Service Quality	.76	.29***	.54***	--	
4. Satisfaction	.70	.33***	.49***	.42***	--

Note: ***$p < .001$

Further, correlations were conducted to examine if relationships exist between perceived food quality, service, customization, and resident satisfaction with restaurant-style dining. The results suggest that there are significant relationships that exist between perceived food quality, service, customization, and resident satisfaction with restaurant-style dining. The correlations suggest that as food quality, service, and customization increases resident satisfaction also increases. Results of the correlation of perceived food quality and resident satisfaction with restaurant-style dining *(r* (419) = .84, $p < .001$), suggests that a significant relationship exists. These results suggest that as food quality increases, resident satisfaction also increases. Perceived service quality and customization revealed similar relationships. A significant relationship exists between perceived service quality and resident satisfaction with restaurant-style dining, *r* (419), = .79, $p < .001$. Results suggest that as service quality increases resident satisfaction also increases. A significant relationship exists between food customization and resident satisfaction with restaurant-style dining, *r* (419), = .69, $p < .001$, suggesting that as food customization increases resident satisfaction also increases.

A regression was conducted with all three predictors in the one model. The regression model with resident customization, quality, and service predicting satisfaction was statistically significant, F (3, 413) = 58.05, $p < .001$ (R^2=.30). All three predictors

were statistically significant (Table 5.9); for each 1-unit increase in customization, quality, and service, satisfaction increased by .153, .300, and .201 units, respectively.

Table 5.8 Multiple Regression on Perceived Customization, Quality, and Service Predicting Resident Satisfaction

Predictors	B	SE	β	t	Sig.
Customization	.153	.048	.143	3.159	.002
Quality	.300	.048	.322	6.241	.001
Service	.201	.047	.210	4.252	.001

The data support research propositions RP6 a-c. Residents are satisfied with (a) food quality, (b) service quality, and (c) customization.

Foodservice Employees' Perception of Resident Satisfaction

Employees' perceptions of resident satisfaction (EPRS) using customization, quality, and service on employee satisfaction are displayed in Tables 5.9-5.11. The mean rating (4.12 ± 0.73) indicates that employees perceived a high level of resident satisfaction with the food and foodservices provided. Further comparisons with resident ratings are displayed in Table 5.12. The results are important due to the value of determining employee perceptions regarding resident satisfaction of the services provided.

Customization

Customization was measured with statements pertaining to choice of foods, menu variety, ordering foods not on the menu, portion sizes and food choice (Table 5.9). Employees' mean customization rating of 4.11±0.80 indicates a high level of perceived satisfaction with customization. The highest rated items were, "being able to choose their own foods" (4.59±0.71) and "menu offers a variety of foods" (4.25± 0.74). The lowest ratings were "being able to choose items not on the menu" (3.93± 0.85) and "portion sizes are satisfactory" (3.66±1.01). West et al. (2003) reported autonomy items were not highly rated by employees.

Table 5.9 Employee Perception of Resident Satisfaction: Ratings of Customization (N = 103)

Questions	N	Min	Max	M	SD
Being able to choose their own foods	103	1.00	5.00	4.59	0.71
Menu offers a variety of foods	103	1.00	5.00	4.25	0.74
Being able to order foods not on the menu	103	1.00	5.00	3.93	0.85
Portion sizes are satisfactory	103	2.00	5.00	3.66	1.01
Food choices	103	2.00	5.00	4.14	0.69

Food Quality

Food quality was measured with statements pertaining to taste and temperature (Table 5.10). Employees' mean rating of 3.05 ± 0.69 indicates an average level of perceived resident satisfaction with the food quality. The highest rated item was "cold food temperature" (4.17±0.61) followed by "taste of food" (4.13±0.61). The lowest rated item was "hot food temperature" (3.86±0.88).

Table 5.10 Employee Perception of Resident Satisfaction: Ratings of Food Quality (N = 103)

Questions	N	Min	Max	M	SD
Taste of the food	103	2.00	5.00	4.13	0.61
Cold food temperatures	103	2.00	5.00	4.17	0.57
Hot food temperatures	103	2.00	5.00	3.86	0.88

Service Quality

Service quality was measured with statements pertaining to service delivery time and employee respect (Table 5.11). Employees' mean rating of 4.25 ± 0.62 indicates a high level of perceived satisfaction with the service quality. The highest rated item was "employees are respectful" (4.44±0.57). "Food served in the time promised" was rated 4.06±0.67. Service items referring to respectful treatment and respecting residents' needs have been reported high by West et al. (2003).

Table 5.11 Employee Perception of Resident Satisfaction: Ratings of Service Quality
(N = 103)

Questions	N	Min	Max	M	SD
Food served in the time promised**	103	1.0	5.00	4.06	0.67
Employees are respectful***	103	3.00	5.00	4.44	0.57

Resident and Employee Perception of Satisfaction Ratings

In order to compare resident ratings and the employees' perceived resident ratings for food quality, service quality, and customization Table 5.12 was created. Resident mean ratings of food quality, service quality, customization, and satisfaction are numerically ranked by means in descending order from the highest rated (1) to the lowest rated (19). The foodservice employees mean ratings of items paralleling the residents are listed in descending order. Ratings among residents varied from 3.36 to 4.50 on a scale of 1-5 with 1-Strongly Disagree to 5 –Strongly Agree. Foodservice employee ratings varied from 3.66 to 4.59 on a scale of 1-5, with 1 being Very Dissatisfied to 5 being Very Satisfied. In general, the highest satisfaction ratings for residents were items relating to customization or autonomy. Being able to choose foods from a menu at meal times was rated 4.50 on a scale of 1-5. Additional customization items such as menu choices and variety were rated 4.23 and 4.04, respectively. Service quality items, such as employee respect (4.39 ±0.63) and correcting foodservice mistakes at mealtimes (4.02±0.85), were rated very high by the residents. Regarding food quality items, cold foods temperatures (4.05±0.74) and the taste of foods (4.01±0.87) were the only items receiving mean ratings >4, on a scale of 1 to 5. Three of the lowest rated items were hot food temperatures, portion sizes, and promised food delivery time. Overall, the residents appear to be very satisfied with restaurant-style dining.

Foodservice employee mean ratings of perceived resident satisfaction of food quality, service quality, customization, and overall satisfaction are listed in Table 5.12. Foodservice employees rated items in customization and service in the top five highest mean ratings. "Being able to choose foods from a menu at mealtimes" and "employee respect" were the two top-ranked (by numerical means) items by the foodservice employees and the residents. Interestingly, the lowest ranked satisfaction items paralleled the resident rankings for the same items. Like the residents, foodservice employees believe that portions sizes and the temperature of hot foods at delivery were least satisfying.

The results of the t-tests presented statistical significance for only three of the 10 compared items. Hot food temperatures, promised food delivery times, and food variety were the only significant items ($p<.001$). Overall, foodservice employees' perception of

resident satisfaction is quite consistent with the resident ratings of satisfaction with restaurant-style dining and service in skilled nursing facilities.

The data support research propositions RP7 a-c. Foodservice employee ratings of resident satisfaction with (a) food quality, (b) service quality, and (c) customization closely parallel the resident ratings of food quality, service quality, and customization.

Table 5.12 Resident and Foodservice Employee Mean Importance Ratings, Mean Rank Orders, and *t*-Tests for Mean Equality

	Residents (N = 433)			Foodservice Employees (N = 103)			Difference ($x_{FE} - x_{RES}$)	*t*-Test (*p* value)
	M	*SD*	Rank	*M*	*SD*	Rank		
Being able to choose my own food is important	4.50	0.65	1	4.59	0.71	1	0.09	.78
The employees treat me with respect	4.39	0.63	2	4.44	0.57	2	0.05	.53
The menu provides choices	4.23	0.67	3	4.14	0.69	5	-0.09	.77
The employees respect my needs	4.23	0.65	4	*	*	*	*	*
Overall, the quality of the foodservice is	4.16	0.69	5	*	*	*	*	*
With the service provided, I feel	4.08	0.64	6	*	*	*	*	*
With the overall dining experience, I feel	4.07	0.67	7	*	*	*	*	*
Cold foods are served cold	4.05	0.74	8	4.17	0.57	4	0.02	.87
A variety of foods are offered	4.04	0.73	9	4.25	0.74	3	0.21	.00
Being able to select from a menu, I feel	4.03	0.66	10	*	*	*	*	*
The foodservice corrects anything that is wrong quickly	4.02	0.85	11	*	*	*	*	*
Foods taste good	4.01	0.87	12	4.13	0.61	6	0.12	.81
With the food served, I feel	3.95	0.77	13	*	*	*	*	*
The foods are served attractively	3.90	0.77	14	*	*	*	*	*
I am able to order foods not on the menu	3.88	0.91	15	3.93	0.85	8	0.03	.38
The quality of the food is the same each time it is served	3.79	0.85	16	*	*	*	*	*
Food is served in the time promised	3.76	0.94	17	4.06	0.67	7	0.03	.00
Portion sizes are satisfactory	3.61	0.96	18	3.66	1.01	10	0.05	.36
Hot foods are served hot	3.36	0.99	19	3.86	0.88	9	0.50	.00

* Item not listed on employee survey.

Foodservice Employee Job Satisfaction

Table 5.13 illustrates the mean ratings of the foodservice employees' job satisfaction. ANOVA was computed to examine the facility-to-facility differences on the five research variables (food quality, service quality, customization, satisfaction, and intent to leave). No statistically significant differences were found; therefore, facility scores were collapsed. The highest rated item was "generally speaking I am very satisfied with this job" (4.21± 0.71). "I am generally satisfied with the kind of work I do in this job" was the next highest (4.09± 0.77). A mean of 3.47± 0.85 for "most people on this job are very satisfied with the job" indicates that even though individuals are satisfied with their work, they believe their co-workers are slightly less satisfied. Two questions were stated in a negative format. The composite mean for these two statements was 2.34 ±1.03 indicating employees disagree with intent to leave.

Table 5.13 Descriptive Statistics for the Employee Job Satisfaction (N = 103)

Questions	N	Min	Max	M	SD
Generally speaking, I am very satisfied with this job.	103	2.00	5.00	4.21	0.71
I frequently think of quitting this job.*	103	1.00	5.00	2.07	1.04
I am generally satisfied with the kind of work I do in this job.	103	1.00	5.00	4.09	0.77
Most people on this job are very satisfied with the job.	103	1.00	5.00	3.47	0.85
People on this job often think of quitting.*	103	1.00	5.00	2.60	1.02

Note: Reverse stated.

Employee satisfaction scores were computed for customization from survey part one questions 1-3, 7 and 8; food quality from part one questions 4-6, service from part 1 questions 9 and 10, satisfaction part two questions 1, 3 and 4, and intent to leave from part two questions 2 and 5. Internal consistency was tested by conducting Cronbach's alpha using the survey questions above for each subscale. The alpha for each variable is listed (Table 5.14).

Correlations were then conducted among the four scales for employees (Table 5.14). All sub-scores were positively statistically related, except between employee satisfaction and quality.

Table 5.14 Employee Internal Consistency and Intercorrelations of Measures (N = 103)

Variables	*Alpha*	1 Customization	2 Quality	3 Service	4 Satisfaction
1. Customization	.72	--			
2. Quality	.60	.52***	--		
3. Service	.65	.44***	.39***	--	
4. Satisfaction	.62	.29**	.12	.41***	--

Note: $^{**}p < .01$, $^{***}p < .001$

A regression was computed with all three predictors in one model. The regression model with employee perception of resident satisfaction predicting satisfaction was statistically significant, $F(3, 99) = 7.84$, $p < .001$ (R^2=.19). Service was the only statistically significant predictor (Table 5.15); for each 1-unit increase in service, satisfaction increased by .468 units.

Table 5.15 Multiple Regression with Customization, Quality, and Service Predicting Employee Satisfaction

(N = 103)

Variables	B	SE	β	t	Sig.
Food Quality	-.133	.121	-.118	-1.091	.278
Service Quality	.468	.128	.375	3.649	.001
Customization	.226	.137	.183	1.648	.102

A correlation was computed to examine if a relationship exists between employees' satisfaction and intent to leave. The results suggest that a significant relationship exists between employees' satisfaction and intent to leave, r (103) = -.54, p < .001.

A linear regression was conducted to assess if employees' satisfaction predicts their intent to leave. Results of the regression indicate that employees' satisfaction does significantly predict intent to leave, F (1, 101) = 42.33, p < .001. Employees' satisfaction accounted for 29.5% of the variance for intent to leave. Table 5.16 presents the beta coefficients for employees' satisfaction predicting intent to leave, where for every 1-unit increase in satisfaction, employee's intent to leave scores decreased by .843 units.

Table 5.16 Regression with Satisfaction Predicting Intent to Leave

Variable	B	SE	β	t	Sig.
Satisfaction	-.854	.131	-.543	-6.506	.000

The data support research proposition RP8. Foodservice employee job satisfaction is negatively associated with intent to leave.

Mediation Analyses

Mediation analysis (a variable that intervenes between a cause and effect variable) using guidelines established by Baron and Kenny (1986) was conducted to assess if employee job satisfaction (M) mediates the relationship between the three independent variables (perceived food quality, service, and customization) and employee intent to leave. For mediation to be supported, step 1 regressing the dependent variable on the independent variable, (step 2) the independent variable statistically predicts the mediator variable, (step 3) regressing the dependent variable on both the independent variable and on the mediator. The independent variable no longer predicts the dependent variable once the mediator has been introduced in the model.

In Tables 6.17 and 6.19 the first mediating hypotheses, steps 1 were non-significant, thus, mediation was not supported in these models. In Table 6.18, the second mediating hypothesis with satisfaction mediating the relationship between service and intent to leave, steps 1-3 were met, indicating that complete mediation is supported.

Table 5.17 Three Regressions Examining if Employee Satisfaction Mediates the Relationship between Perceived Food Quality and Intent to Leave

	Criterion	Predictor	B	SE	β	t	Sig.
Regression 1	Intent to Leave	Quality	-.244	.174	-.138	-1.401	.164
Regression 2	Employees' Satisfaction	Quality	.137	.111	.122	1.23	.221
Regression 3	Intent to Leave	Satisfaction	-.840	.132	-.535	-6.344	.000
		Quality	-.129	.149	-.073	-.867	.388

Table 5.18 Three Regressions Examining if Employees' Satisfaction Mediates the Relationship between Perceived Service Quality and Intent to Leave

	Criterion	Predictor	B	SE	β	t	Sig.
Regression 1	Intent to Leave	Service	-.403	.191	-.206	-2.111	.037
Regression 2	Employees' Satisfaction	Service	.512	.113	.410	4.519	.000
Regression 3	Intent to Leave	Satisfaction	-.867	.145	-.552	-5.998	.001
		Service	.041	.180	.021	.225	.822

Table 5.19 Three Regressions Examining if Employees' Satisfaction Mediates the Relationship between Perceived Customization and Intent to Leave

	Criterion	Predictor	B	SE	β	t	Sig.
Regression 1	Intent to Leave	Customization	-.342	.190	-.177	-1.804	.074
Regression 2	Employees' Satisfaction	Customization	.354	.118	.287	3.009	.003
Regression 3	Intent to Leave	Satisfaction	-.843	.138	-.537	-6.130	.001
		Customization	-.044	.170	-.023	-.259	.797

Discussion and Implications

The focus of this study was to determine resident satisfaction of restaurant-style dining in skilled nursing facilities. The study aimed to (1) assess the effect of a restaurant-style menu on resident satisfaction of food quality, service quality, and customization; (2) to evaluate the effect of restaurant-style dining on foodservice employee job satisfaction and intention to leave; (3) to investigate the relationship between employee satisfaction and the employees' perception of resident satisfaction with restaurant dining services in skilled nursing facilities.

Seven skilled nursing facilities that had transitioned to restaurant-style dining were recruited for this study. Residents and foodservice employees comprised the two study groups. A resident satisfaction survey utilized in prior research in long-term care was adapted for this project. The foodservice employee survey paralleled the resident survey in order to obtain their perceptions of restaurant-style dining from the residents'

perspective. In addition, five questions addressing job satisfaction and intent to leave were added to the survey.

Resident Satisfaction

Resident satisfaction with dining services was ascertained through the administration of a measurement tool previously developed for long-term care that has shown to be reliable and valid. Food quality, service quality, and customization have been identified as constructs that measure satisfaction with food and foodservices. Previous studies (Evans & Crogan, 2005; Howells, 2007; Huang, 2004; West et al., 2003) have identified similar constructs to measure resident satisfaction with food and foodservices in long-term care. Residents in this study rated their satisfaction highest for service quality, customization, followed by food quality. This finding is consistent with Howells (2007) with assisted living residents. Service quality attributes were rated slightly higher than customization. Residents were more satisfied with the level of service and the ability to choose food items prior to mealtimes than the quality of the food. Overall, the respondents displayed a high level of agreement with the survey statements and are very satisfied with food and foodservices.

Even though food quality had the lowest ratings, residents desire good tasting food that is consistently prepared, and served to them at appropriate temperatures. Food quality had the highest correlation to resident satisfaction. Items of concern were hot food temperatures, consistency in the quality of production of food items, and the attractiveness of the presentation of the meals. Employees should be included in the communication, discussion, and problem solving of resident concerns with food and foodservices. Foodservice employees can function both as direct and indirect care workers. They know the residents concerns and should be able to voice those concerns to management. Foodservice professionals should educate the foodservice workers regarding the importance of providing foods at the proper temperatures. Temperatures of foods are food safety concerns for this highly susceptible population. Many foodservice employees are long-term employees. It is easy to become complacent. Education should be provided for employees on the use of standardized recipes and presentation techniques. Monitoring and evaluation of production standards are parts of a continuous

quality improvement program. Engaging employees in operational concerns is part of the educational process.

The majority of the residents expressed a significantly high level of satisfaction with the ability to choose their food selections at meal times with an expanded offering of food choices. Restaurant-style dining is a viable option for skilled nursing facilities. Foodservice professionals should be proactive to foodservice systems changes being promoted by professional organizations and regulatory agencies. Any change that allows the resident to make even one or two choices at mealtimes will improve resident satisfaction. Providing a limited static menu with resident favorites, along with the cycle menu is one way of providing resident choice. Foodservice professionals could provide buffet service one day per week or one meal per day. This option allows the resident to choose the food items and portion sizes. Portion sizes are important to residents. The generation currently residing in skilled nursing facilities was raised in the "depression era" when food waste was more of an ethical issue. Guidelines for portion sizes should be established, communicated to the foodservice employees, and monitored.

Service quality was rated the highest. Employees respecting the resident and their needs are most important to the resident. Foodservice employees could benefit from specialized education from a gerontologist or a social worker. This could be provided in the form of on-site in-service training presented by a member of the facility staff or a professional from a local agency working with older adults. Aspects of proper service should be included in employee training. There are many resources available for service training. Good service delivery does not just happen, it must be taught. Residents expressed concerns regarding meal delivery times. Monitoring and recording service delivery will give insight to resident issues. Service delivery times should not be promised unless the system is able to accommodate them. The source of resident concerns is the first step in determining a solution.

The "overall quality of the foodservice" was rated high. The majority of the residents, regardless of demographics, are consistent in their opinions regarding food and food services. Resident satisfaction was investigated further utilizing correlations to determine if there are any relationships between food quality, service quality, customization, and resident satisfaction. The results found very strong reliable

correlations for all three factors. Food quality had the strongest correlation followed by service and customization. Even though residents prefer to choose their meals and expect timely delivery, food quality appears to have a strong relationship to satisfaction. It is evident that improving food quality, service quality, and customization resident satisfaction with foodservices may be improved.

Resident satisfaction of food and foodservices should be investigated using a reliable and validated survey. Periodic administration of the survey would provide data to determine residents' concerns and detect trends.

Employee Perception of Resident Satisfaction

Employee perception of resident satisfaction was measured through the administration of a survey that paralleled the resident survey. The same factors (food quality, service quality, and customization) were analyzed. Employees perceive that residents are satisfied (overall) with the products and services provided by the foodservice. Further analysis of the factors revealed very similar ratings when compared to the resident ratings. Food quality had the lowest rating by the employees. Some of the same concerns expressed by residents were perceived by the employees. Hot food temperatures had the lowest mean. Customization had a high mean score. Employee responses were very similar to resident responses. Both employees and residents rated "Being able to choose my own foods" the highest. The employees and residents rated menu variety, menu choices, and portion sizes similarly. Portion sizes for both employees and residents was rated the lowest. Service quality ratings were rated the highest by employees and residents.

Foodservice employees control the activities of the foodservice. It is important for the staff to understand residents' preferences. Periodic surveys of employee opinions and concerns regarding their work and perceptions of resident satisfaction could provide insight for foodservice managers. West et al. (2003) reported that when staff overestimates resident satisfaction of their services this may lead to lethargy and apathy toward change. Engaging employees' opinions will give them a sense of belonging and pride in their work. Foodservice employees' perceptions of resident satisfaction should

parallel those of the residents. Foodservice managers should encourage heightened awareness of resident concerns regarding food quality, service quality, and customization.

Employee Job Satisfaction

The final section of the employee survey contained five questions relating to job satisfaction. Employees are generally not planning to leave their positions nor do they believe that their co-workers are intending to leave. The item with the highest mean score was, "Generally speaking, I am very satisfied with this job" (mean 4.21).

The results of a regression analysis using the factors of food quality, service quality, and customization revealed that service quality was the only significant predictor of employee satisfaction. Service is of primary importance in restaurant-style dining. It may be more important for those employees with job responsibilities that require more frequent personal contact with the residents. Food quality and customization were not significant predictors of job satisfaction. On the other hand, employee satisfaction does significantly predict intent to leave. In other words, job satisfaction may reduce job turnover among foodservice employees in skilled nursing facilities.

A mediation analysis was conducted to further analyze if employee job satisfaction mediates the relationship between employee intent to leave and the three variables of food quality, service quality, and customization. Mediation was not supported for food quality and customization. Mediation was supported for service quality. In other words, employee job satisfaction mediates the relationship between the employees' perception of resident service and their intent to leave the position. Employee satisfaction did not mediate the relationship between their perceptions of residents' opinion of food quality and customization and on their intent to leave the position. Foodservice employee job satisfaction should be routinely monitored to determine employee job concerns.

Conclusions

This study explored and analyzed resident satisfaction with restaurant-style dining in skilled nursing facilities. In addition, the research investigated foodservice employees' perception of resident satisfaction with restaurant-style dining. Lastly, foodservice employee job satisfaction and intent to leave was evaluated. Foodservice should be an integral part of person-centered care and the culture- change movement in skilled nursing facilities. Residents are very satisfied with restaurant-style dining. Food quality, service quality, and customization are significant predictors of resident satisfaction with food and foodservices. Employees' perception of resident satisfaction modeled closely to the opinions of the residents. Foodservice employees' opinions of resident satisfaction with food and foodservices should be investigated periodically.

Foodservice employees were satisfied with their jobs and the services they provided. The majority of the foodservice workers had no intent to leave. Moreover, employee job satisfaction had an effect on how employees perceived their work and their intention to leave the job. Foodservice employees' opinions of resident satisfaction should be explored because they control the foodservice. Employees' over- or under-estimization of resident satisfaction may have an effect on job performance.

Determining resident satisfaction with food and foodservices in skilled nursing facilities is multifaceted. Many direct and indirect factors could affect resident satisfaction with food and foodservices. The use of a validated foodservice survey to assess resident satisfaction will contribute to the overall quality of care provided to the residents. Resident and employee satisfaction data could become part of a Continuous Quality Improvement Program. Restaurant-style dining contributes significantly to the culture change process by allowing residents to have some control of their activities of daily living contributes to autonomy. Foodservice managers should take a proactive position regarding changes in foodservice operations in skilled nursing facilities. Resident and employee satisfaction with food and foodservices could be a strong marketing tool for the facility.

This study cannot be generalized across the skilled nursing industry because of the small sample size, the population is from a limited geographic region, and the convenience sampling method was utilized eliminating any randomness. Additionally, there are further limitations experienced in long-term care research. Residents are plagued with many chronic conditions that may impede their ability to complete a survey. Administration times of the survey may be a limitation. Following meals is not recommended in order to lessen any bias. Some residents may fatigue easily or have physical disabilities that prevent them from participating.

Further research regarding resident and employee satisfaction with food and foodservices in skilled nursing facilities should be conducted. State and regional studies of additional facilities that have transitioned to restaurant-style dining should be conducted.

References

American Society on Aging (2008). Caring for an aging America act of 2008. ASA *Connection,* Retrieved on April 1, 2009 from http://www.agingconference.org/asav2/asaconnection/enews/08june/top.cfm

Barnes, S. (2004). Perceptions and understandings of long-term care: Results of focus groups with older adults, caregivers, and public. *The* Gerontologist, 44(1), 412.

Baron, R. & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Baumgartner, T., & Strong, C. (1994). *Conducting and reading research in health and human performance.* Dubuque, IA.: Brown & Benchmark.

Bohrnstedt, G., & Knoke, D. (1994). *Statistics for social data analysis (3rd ed.).* Itasca, IL.: F.E. Peacock Publishers.

Buzalka, M. (December, 2001). Why residents now love dining at Laurel Lake. *Food Management*, 31-34.

Carrier, N., West, G., & Ouellet, D. (2006). Cognitively impaired resident risk of malnutrition is influenced by foodservice factors in long-term care. *Journal of Nutrition for the Elderly, 25*(3/4), 73-87.

Chambliss, D., & Schutt, R. (2003). *Making sense of the social world: Methods of investigation.* Thousand Oaks, CA.: Sage Publications.

Chou, S., Bold, D., & Lee, A. (2003). Factors influencing resident satisfaction in

residential aged care. The Gerontologist, 43(4), 459-472.

Cozby, P. (2001). *Methods in behavioral research (8th ed.).* New York: McGraw-Hill.

Crogan, N., Evans, B, & Shultz, J. (2004). improving nursing home food service: Uncovering the meaning of food through resident stories. *Journal of Gerontological Nursing, 30(*2), 29-36.

Crogan, N., Alvine, C., & Pasvogel, A. (2006). Improving nutrition care for nursing home residents using the INRx process. *Journal of Nutrition for the Elderly, 25*(3/4), 89-103.

Desai, J., Winter, A., Young, K., & Greenwood, C. (2007). Changes in type of foodservice and dining room environment preferentially benefit institutionalized seniors with low body mass indexes. *Journal of the American Dietetic Association, 107*(5), 808-814.

Evans, B., & Crogan, N. (2005). Using the FoodEx-LTC to assess institutional food service practices through nursing home residents' perspective on nutrition care. *Journals of Gerontology: Series A; Biological Sciences and Medical Sciences, 125*(4), 125-129.

Evans, B., Crogan, N., & Shultz, J. (2003). Quality dining in the nursing home: The resident perspective. *Journal of Nutrition for the Elderly, 22*(3), 1-17.

Grieshaber, L., Parker, P, & Deering, J. (1995). Job satisfaction of nursing assistants in long-term care. The Health Care Supervisor, 13(4), 18-28.

Hair, J., Anderson, R., Tatham, R., & Black, W. (1998). *Multivariate data analysis* (5th ed.). New Jersey: Pearson Education, Inc.

Howells, A. (2007). *The impact of perceived quality on assisted-living resident satisfaction with their dining experience.* Unpublished master's thesis, Kansas State University, Manhattan, Kansas.

Huang, H. (2004). *Factors affecting satisfaction and resident utilization of foodservice in assisted-living facilities*. Unpublished doctoral dissertation, Kansas State University, Manhattan, KS.

Huang, H. & Shanklin, C. (2008). An integrated model to measure service management and physical constraints' effect on food consumption in assisted-living facilities. *Journal of the American Dietetic Association, 108* (5), 785-792.

Huck, S. (2004). *Reading statistics and research (4th ed.).* Boston, MA.: Pearson Education.

Leedy, P. & Ormrod, J. (2005). *Practical research: Planning and design (8th ed.).* Upper Saddle River, NJ.: Pearson Prentice Hall.

Lengyel, C., Smith, J., Whiting, S., & Zello, G. (2004). A questionnaire to examine food service satisfaction of elderly residents in long-term care facilities. *Journal of Nutrition for the Elderly, 24*(2), 5-18.

Mandrik, C. (1998). The focus group kit. *Journal of Consumer Affairs, 3*(2), 436-440.

Nursing Homes: Long Term Care Management. (September, 2003). Creating a five-star dining experience. *Nursing Homes: Long Term Care Management, 52*(9), 45-50. Retrieved February 7, 2009 from EBSCO database.

Parasuraman, A., Zeithaml, V., & Berry, L. (1988). SERVQUAL: A multiple-items scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12-40.

Roy, R., & Spate, L. (1995, Supplement). Restaurant-style service in the long-term care setting: The customer service focus of the future. *Journal of the American Dietetic Association, 95*(9), A-83.

Seo, S. & Shanklin, C. (2005). Using focus groups to determine specific attributes that influence the evaluation of quality food and service quality in continuing care retirement communities. *Journal of Foodservice Business Research, 8*(1), 35-51.

Shultz, J., Crogan, N., & Evans, B. (2005). Organizational issues related to satisfaction with food and food service in the nursing home from the resident's perspective. *Journal of Nutrition for the Elderly, 24(*4), 39-55.

Spears, M. & Gregoire, M. (2007). *Foodservice organizations: A managerial and systems approach.* New Jersey: Pearson-Prentice Hall.

United States Department of Health and Human Services & Institute for the Future of Aging Studies (2005). Measuring long-term care work: A guide to selected instruments to examine direct care worker experiences and outcomes. Retrieved from www.ifas.org

Walters, C., Sorenson, J., & Wismer, W. (2003). Exploring patient satisfaction with foodservice through focus groups and meal rounds. *Journal of the American Dietetic Association, 103*(10), 1347-1349.

West, G., Ouellet, D., & Ouellette, S. (2003). Resident and staff ratings of foodservices in long-term care: Implications for autonomy and quality of life. *The Journal of Applied Gerontology, 22*(1), 57-75.

CHAPTER 6 - SUMMARY AND CONCLUSIONS

Summary of Studies

Food and foodservices in long-term care have been targeted as an area for improvement. With the growing older population and the advent of Baby Boomers entering into the long-term care arena, there is a growing demand for change in services and products and the provision of menu choice. Optimal nutrition for residents in skilled nursing facilities is well-documented as a necessity for the health of institutionalized older adults. Traditional tray service in long-term care and rehabilitation facilities has been a source of negative customer feedback. A review of the literature revealed very few studies evaluating resident satisfaction with restaurant-style dining in skilled nursing facilities. Some initial studies of resident satisfaction with foodservices in assisted- and independent-living have been reported. No studies on foodservice employees' job satisfaction and their perception of resident satisfaction with restaurant-style dining in long-term care were found in the literature.

The study was conducted in two phases. Research propositions were developed to assess the study needs. Phase I was comprised of a single skilled nursing facility that had successfully transitioned from the traditional non-selective menus and foodservice delivery system to a restaurant-style menu and foodservice delivery system. In Phase I, focus groups were conducted with residents to gain insights into resident satisfaction. In addition, the study investigated foodservice employees' perceptions of resident satisfaction with food and foodservices, foodservice employee job satisfaction, and the possible effect on employees' intent to leave. Phase I included exploration of archived operational data and month unintended weight loss record to determine any changes from the traditional non-selective foodservice delivery system to the restaurant-style system.

Phase II (multi-site) of the study explored factors associated with residents' dining experiences in skilled nursing facilities that have transitioned from a traditional foodservice delivery system to restaurant-style dining. The research propositions and model (see Figure 5.1) were developed to assess the effect of restaurant-style dining on resident satisfaction with food quality, service quality, and customization as it relates to overall resident satisfaction with food and foodservices. Foodservice employees' beliefs

regarding resident satisfaction with foodservices and the relationship between those beliefs and job satisfaction were also investigated.

Summary of Major Findings

Phase I

Using Focus Groups to Gain Residents' Perspective of Restaurant-Style Dining in a Skilled Nursing Facility

Ten focus groups were conducted over a two-week period in one facility. A total of 60 (26%) residents participated. Residents were asked four open-ended questions. The four questions were:

1. What do you think about the restaurant menu?
2. What do you like best about the restaurant menu?
3. What do you dislike about the restaurant menu?
4. Describe the perfect mealtime.

All discussions were recorded and transcribed. The groups were predominately female (88%) with only seven male participants. The mean age was 80 years. The mean length of stay in the facility for participants was 4.25 years. The majority (82%) of participants consumed their meals in the main dining room. The average length of the focus group discussions was 37 minutes.

Following the focus groups, the recordings were transcribed and the data coded to one of the following constructs: food quality, service quality, or customization. Food quality comments that were discussed by the residents included taste of foods, food temperatures, preparation, food quality and methods of preparation, freshness of foods, consistent quality, seasoning, textures, the attractiveness of presentation, and food safety.

Service quality attributes discussed included wait time for meals, menu presentation, food ordering and accuracy of delivery, provision of enough time to eat, provision of water on the tables in all dining areas, staff attentiveness, staff friendliness, staff appearance, and staff respect for the resident.

Customization attributes included in the discussion were the ability to choose foods, ordering foods not on the menu, portion sizes, menu readability, flexibility of meal times, food choices and variety, foods for special diets, and dining environment.

The frequency of responses for each construct varied. The majority of responses were made regarding food quality with 417 comments received (41%). Many residents commented on the "taste" of food items (76 comments). Comments regarding food temperatures, specifically, hot food temperatures had the second highest frequency (72 comments). Other areas generating frequent discussion were preparation quality and methods and the freshness of foods.

Discussion of customization yielded 338 (33%) comments. The majority of these comments were regarding the ability to choose food selections (86 comments). In addition, the ability to order foods not on the menu and portion sizes generated 62 and 61 comments respectively. Interestingly, there were 42 comments made concerning the readability of the menu, with participants requesting simple descriptions of food items, explanations of accompanying food items, and more pictures of plate presentations on the menu.

Service comments accounted for 23% (240) of the total comments. Wait time was the most frequently mentioned (45 comments). Other frequently mentioned items were food ordering and accuracy, having enough time to eat, and table settings (i.e. water glasses).

Responses not falling into one of the main codes were listed in an "other" category. Resident comments in this section included socialization and dining room environment.

The use of focus groups in the long-term care setting provides a valuable tool for foodservice managers. As demonstrated by Huang (2004), Lee (2004), Seo and Shanklin (2005), and Howells (2007) in prior research, long-term care residents (at all levels of care) have food and dining service expectations. Foodservice professionals in long-term care can make a significant impact on culture change and person-centered care to improve the quality of life for residents. The attributes discussed in this study can be used as a template for other institutions to identify what is important to their residents.

Restaurant-Style Dining in a Skilled Nursing Facility: A Case Study

The case study of one facility compared pre- and post-operational data, incidence of unintended weight loss, resident satisfaction with food and foodservices, foodservice employee perception of resident satisfaction with food and dining services, and foodservice employee job satisfaction in a skilled nursing facility. Currently, no studies have been reported in the literature comparing the traditional skilled nursing facility food production and service system with a restaurant-style menu and table service system. This study provides the long-term care industry with valuable data comparing a traditional cycle menu and delivery system with a restaurant-style production and delivery system in a skilled nursing facility.

The population for this study was a privately owned for-profit, 230-bed skilled nursing facility. The facility transitioned from a traditional non-selective four-week cycle menu to a self-selective restaurant-style menu with daily menu specials in November, 2004. The Department of Food and Nutrition Services is self-operated (not operated by a management company).

As described earlier in this summary, surveys were used to collect resident and employee data. Financial and Unintended Weight Loss (UWL) data were collected twelve months pre-transition and twenty-four months post- transition to the restaurant-style menu. Data came from monthly foodservice operational purchasing reports and the Quality Measure/Indicator Monthly Trend Report: Weight Loss submitted to the Center for Medicare and Medicaid Services (CMS) through the Online Survey Certification and Reporting System (OSCAR). Data analysis is described earlier in this summary.

Of the 230 residents in the nursing facility 118 (52%) completed the Resident Foodservice Evaluation. The majority (78.8%) of the residents were female with males making up 21.2% of the sample. The average age of respondents was 81.59years. The average length of stay was 2.5 years. Most (59.3%) of the residents ate their meals in the dining room versus in their own room (9.3%). About one-third (31.4%) of the residents varied their meal location between the dining room and their personal room.

Of the 30 foodservice employees in the facility, 25 completed the questionnaire for a response rate of 83.3%. There were 9 (36%) males and 16 (64%) females. Employee mean age was 35 years. The majority, 14 (56.0%) of the employees classified

themselves as Aides. Other positions titles identified were, cooks, supervisors, expeditors, and dietetic technician.

Eighteen (72.0%) employee participants were employed full-time and 7 (28.0%) were part-time. Thirteen (52.0%) employee participants were high school graduates with another 4 (16.0%) having some high school education. Six (24.0%) employees indicated some college education and 2 (8.0%) employees were college graduates. Mean length of employment was 6.28 years.

Resident Satisfaction

Research Proposition 2: Overall resident satisfaction with food quality, service quality, and customization increases.

Overall, residents were very satisfied with restaurant-style dining. The majority (94.9%) rated the overall quality of the foodservice as "good" or "very good". The 4 additional ratings relating to satisfaction of quality, service, and customization with a mean of 4.24 further indicated overall agreement that food and foodservices were meeting their needs. Customization had the highest mean scores and rankings for the residents. "Being able to choose my own food is important" had the highest level of satisfaction (M=4.59). Additionally, statements regarding the ability to choose their own foods or make decisions regarding meal choices and variety provided on the menu scored high. Service statements were also rated high by the residents. "Being treated respectfully by employees" was ranked third overall (M=4.42) followed by "foodservice provides beverages before the main meal arrives" *(*M=4.41) based on mean ratings. Interestingly, of the top ten ranked items, only one quality indicator ("food tastes good", M=4.31) was listed.

Employee Perception of Resident Satisfaction

Research Proposition 4: Foodservice employee ratings of resident satisfaction with food quality, service quality, and customization closely parallel the resident ratings of food quality, service quality, and customization.

The foodservice employees' perception of resident satisfaction was measured in a similar survey. The majority of theses foodservice workers were long-term employees (employment in the facility >5 years), and thus know the residents very well. They were

asked to rate resident satisfaction with food quality, service, and customization before and after the menu transition (1 year post transition). Employee ratings of perceived resident satisfaction before the menu transition revealed quality and service factors rated the highest. Foodservice employees indicated that they believe the residents feel respected by the employees (*M*=4.08). This was the only item to receive a mean score above 4 on a scale of 1 to 5 with 1 being "strongly disagree" and 5 being "strongly agree". They also rated the temperature of cold food items and the taste of the foods as acceptable. The foodservice employees also believe that the residents find the portion sizes acceptable. Survey items that rated below 3 on the scale of 1-5 were menu variety, being able to order foods not on the menu, food choices, and being able to choose their own foods. The employee ratings of perceived resident satisfaction with food and foodservices before the menu transition agree with archival data retrieved from pre-transition Resident Council meetings and satisfaction surveys from the facility.

Employee ratings of perceived resident satisfaction after the menu transition revealed customization and service factors rated the highest. The overall mean was 4.21±0.64, which is comparable to the residents' rating of 4.16±0.76. Foodservice employees cited "being able to choose their own foods" (*M*=4.52) as the item that related to the factor that provides the residents with the greatest amount of satisfaction with foodservices. The employees also rated dessert choices, menu variety, food choices, and being able to order foods not on the menu at 4.28 and greater. These ratings parallel the top 5 rankings based on mean ratings from the resident survey.

The level of change from pre- and post transition from the employees perspective was analyzed for significance in matched pairs. Five survey items relating to customization (choice) were all significant at the $p = .001$ level (dessert choices, menu variety, food choices, being able to order foods not on the menu, and being able to choose their own foods). Additional significant changes from pre-transition to post-transition were the taste of the food, beverage choices, portions sizes, and employee respectfulness ($p < .05$). The employees generally agreed that resident attitudes concerning hot food temperatures and meal delivery times had not changed significantly from the traditional menu system to the restaurant-style menu system.

Foodservice Employee Job Satisfaction

Research Proposition 5: Foodservice employee job satisfaction and intent to leave does not change.

Overall, the ratings for job satisfaction indicated that the foodservice employees were satisfied with their work at the facility (M=4.24). There was a slight increase in the mean rating from pre- to post-menu change for "Generally speaking, I am very satisfied with this job (pre-*M*=3.96; post *M*=4.12). The level of change was not significant. The employees remained neutral (pre- and post transition) regarding opinions of their co-workers satisfaction with their work. Changing the menu and service delivery system did not change job satisfaction or intent to leave.

Generally, there appears to be some relationship between employee job satisfaction and the employees' perception of resident satisfaction with food and food services. Employees' perceptions of resident satisfaction with customization of the resident menu, appears to be the strongest correlation of resident satisfaction with services that foodservice employees provide.

Financial

Research Proposition 3: There will be differences in raw food costs, commercially prepared oral supplements, enteral feedings, and foodservice labor costs.

Pre- and post menu transition operational data were analyzed. There were significant differences in mean costs from pre-to-post menu transitioning. Specifically, the largest variations (decreases in expenditures) among the food cost groups were seen in dairy (-30.0%), bread (-42.2%), and meat (-23.8%). Produce purchases increased from pre-to post menu transition. The static menu offerings included more items requiring the use of fresh fruits and vegetables (e.g. fresh fruit cup, fruit and cheese plates). The residents requested the inclusion of additional menu items utilizing more fresh fruits and vegetables. The grocery category experienced a slight increase in the mean from pre-to post transition (+0.71%). Overall, the mean food costs Per Patient Day (PPD) decreased

from $5.21 pre-transition to $4.90 post-transition. There was a significant difference between the PPD means pre- and post-menu transition.

Another notable area that experienced a decrease in expenditures were tube feeding (enteral) formula purchases (-21.3%) and oral meal replacements (-57.9%). Both categories were statistically significant ($p = <.001$).

In addition, the mean payroll dollars increased but paid hours decreased. The majority of the employees in this facility have been employed for more than five years ($M = 6.28$ years).

Incidence of Unintended Weight Loss

Research Proposition 1: Opportunities for residents to make menu selections at meal times leads to a decrease in unintended weight loss.

The incidence of UWL, in terms of percentages, decreased from the pre-menu to the post-menu transition with an overall decrease of 3.4%. There was no statistically significant difference between pre-transition and post-transition mean percentages. This is a specific area of concern from the Centers for Medicare and Medicaid Services (CMS) as it is a quality indicator that state surveyors investigate during facility visits. Adequate nutrition and hydration are key components of well-being for nursing home residents. Any measures that may improve this statistic should be investigated. The study period showed a downward trend in cases of UWL.

Phase II

Restaurant-Style Dining in Skilled Nursing Facilities: Resident and Employee Satisfaction

Of the 685 residents in the seven facilities making up the study population, 433 (63%) comprised the sample for resident participation. The same 7 facilities provided the employee sample for the study. Of the 115 foodservice employees, 103 (89%) made up the sample for employee participants. All but two of the facilities were under the same corporation. All facilities were classified as for-profit institutions and the foodservices were self-operated.

The resident profile for this multi-institutional study was similar to the resident profile in the case study. The majority of residents were female (75.1%) with males comprising 24.9% of the sample. The average length of stay was 22 months. Most of the residents consume their meals in a dining room (78.1%) versus in their personal room (21.9%).

The demographic of the foodservice employees aligns with the demographic from the previously discussed case study. The majority of workers are female (79.6%) and males 20.4%. The mean age was 34.75 years of age. The majority of employees classified themselves as Aides. Other predominate positions indicated were cooks and supervisors. Most of the employee participants were employed full-time (54.4%); part-time (45.%). The majority of employees have a high school diploma (57.3%); some indicated college education (21.4%). The mean length of employment was 5.17 years.

Resident Satisfaction

Research Proposition 6 a-c: Residents are satisfied with (a) food quality, (b) service quality, (c) customization

Resident satisfaction with dining services was ascertained through the development of three measurement items previously identified in long-term care, food quality, service quality, and customization. The variables were analyzed and a composite mean score (M=4.00) was calculated. Overall, the respondents displayed a high level of agreement with the survey statements and are very satisfied with food and foodservices. The data were further analyzed by construct. Food quality had the lowest mean of 3.82 on a scale of 1 to 5. The composite mean score for satisfaction with customization was 4.05. The majority of the residents expressed a high level of satisfaction (M = 4.50) with the ability to choose their food selections at meal times. The same level of satisfaction was measured regarding the amount of choices available (M = 4.23) and portion sizes (M = 3.61). The composite for service quality was the highest at M=4.10. Items with statistical significance were related to the amount of time from the inception of the meal order to delivery (M = 3.76), being treated respectfully (M = 4.39), and acknowledging the needs of the resident (M = 4.23). Overall, residents appear to have concerns regarding meal delivery times regarding time promised for actual delivery of the meal. Statements of overall satisfaction with dining services were all significant at the p<001.

The only statement not revealing significance was the statement, "With the food served, I feel…" (3.95 ± 0.77), suggesting some possible issues related to service delivery. The "overall quality of the foodservice" was rated high with the composite mean of 4.17 ± 0.69. This suggests that the majority of the residents, regardless of demographics, are consistent in their opinions regarding food and food services.

Resident satisfaction was investigated further utilizing correlations to determine if there were any relationships between food quality, service quality, customization, and resident satisfaction. The results revealed very strong reliable correlations for all three factors with resident satisfaction. Food quality had the strongest correlation followed by service and customization. Even though residents prefer to choose their meals and expect timely delivery, food quality appears to be the most important factor in satisfaction. It is evident that improvement in food quality, service quality, and customization resident satisfaction with foodservices will likely improve.

Employee Perception of Resident Satisfaction

Research Proposition 7 a-c: Foodservice employee ratings of resident satisfaction with (a) food quality, (b) service quality, and (c) customization closely parallel the resident ratings of food quality, service quality, and customization.

Employee perception of resident satisfaction was measured through the administration of a survey that paralleled the resident survey. The same factors (food quality, service quality, and customization) were analyzed. The composite mean satisfaction score of the employees' perception of resident satisfaction was 4.12, consistent with the resident mean of 4.00. Employees perceive that overall, residents were satisfied with the products and services provided by the foodservice. Further analysis of the factors revealed very similar ratings when compared to the resident ratings. Food quality had the lowest rating of a mean of 3.05. Some of the same concerns expressed by residents were perceived by the employees. The means for the food quality questions were all significant at the $p<.001$ level. Hot food temperatures had the lowest mean of 3.86 (resident $M=3.36$). Customization had a composite mean score of 4.11 (resident $M=4.05$). Again, employee responses were very similar to resident responses. Both employees and residents scored, "Being able to choose my own

foods" the highest (employee mean 4.59, resident mean 4.50). The employees and residents rated menu variety, menu choices, and portion sizes similarly. Portion sizes for both employees and residents was rated the lowest at 3.66 and 3.61 respectively. The service quality composite score for employees was 4.25 ± 0.62 while the resident mean was 4.10. This factor was rated the highest by employees and residents. The question regarding employee respect (employee *M*=4.44, resident *M*=4.39) was rated the highest by employees and residents in the service category. Employee perceptions of resident satisfaction are critical because the employees control the foodservice operation.

Employee Job Satisfaction

Research Proposition 8: Foodservice employee job satisfaction is negatively associated with intent to leave.

The final section of the employee survey contained five questions relating to job satisfaction. The composite mean score for satisfaction with the type of work, satisfaction with the job, and the perception of co-worker satisfaction with their jobs was 3.92. The composite mean score for two questions relating to "intent to leave" (reverse stated) was 2.34, indicating that employees are generally not planning to leave their positions nor do they believe that their co-workers are intending to leave. The item with the highest mean score was, "Generally speaking, I am very satisfied with this job" (*M*=4.21).

There was only one question ("People on the job often think of quitting") that revealed a significant difference between facility 1 and facilities 3, 4, 5. Facility 1 was basically neutral (*M*=3.23) regarding "intent to leave". This may be related to the fact that facility 1 is owned by a different corporation than facilities 3, 4, 5.

The results of a regression analysis using the factors of food quality, service quality, and customization revealed that service quality was the only significant predictor of employee satisfaction. Service is of primary importance in restaurant-style dining. Recognition of service quality may be more important for those employees with job responsibilities requiring more frequent personal contact with the residents. Food quality and customization were not significant predictors of job satisfaction. On the other hand, employee satisfaction does significantly predict intent to leave. In other words, job

satisfaction may reduce job turnover among foodservice employees in skilled nursing facilities.

A mediation analysis was conducted to further analyze if employee job satisfaction mediates the relationship between employee intent to leave and the three variables of food quality, service quality, and customization. Mediation was not supported for food quality and customization. Mediation was supported for service quality. In other words, employee job satisfaction mediates the relationship between the employees' perception of resident service and their intent to leave the position. Employee satisfaction did not mediate the relationship between their perceptions of residents' opinion of food quality and customization and on their intent to leave the position.

Conclusions

The results from this study indicate that a restaurant-style foodservice system is a viable alternative to the traditional foodservice system in a skilled nursing facility. The following is a listing of major conclusions:

Residents

- Resident satisfaction with food and foodservices increased with restaurant-style dining.
- Residents were especially satisfied with the ability to choose their meal selections at meal times.
- Residents appreciated the increased variety of food items offered.
- Favorite foods were available at any meal (e.g., chicken noodle soup)
- Resident concerns were identified (e.g., lower rating for hot food temperatures and food portions)
- Resident service expectations were realized (e.g., water included with table settings; promised meal delivery times)
- Menu presentation concerns were identified (e.g., clear, simple language, use of pictures)

Foodservice employees

- Foodservice employees believed that residents preferred the restaurant-style system compared to the traditional system.
- There was no significant change in employee job satisfaction or intent to leave in the transition from the traditional to the restaurant-style foodservice system.
- Foodservice employees are generally satisfied with their work.
- Foodservice employees know the residents food and foodservice concerns (e.g., comparable ratings on surveys)
- Foodservice employees are more concerned with the resident satisfaction of the service aspects of their jobs.
- Foodservice employees recognize the importance of resident food selections and preferences at mealtimes.

Operations

- Cost savings could be realized in many areas of the foodservice budget. Specifically, reduction in purchases of liquid oral meal replacements could provide a substantial savings. Other major food purchasing categories including dairy products, meat, and bread had decreases in costs from pre- to post-transitioning. Purchases of fresh produce increased with the restaurant-style system due to resident choice. The restaurant-style menu included more fresh fruit and vegetable offerings at the request of the residents.

Generally, foodservice professionals need to recognize that residents desire the ability to select their own foods from a variety of offerings. This one aspect of shifting control to the resident may not only improve their satisfaction with foodservices and the facility, but also improve their quality of life.

Strengths and Limitations of the Research

Limitations of this study are similar to other studies of foodservice satisfaction in long-term care. Generalizability is limited by the sample size and geographic location. The convenience sampling method did not allow for randomization.

Some assumptions can be made regarding the demographics of residents in skilled nursing facilities: age ranges will be similar; female residents will be the majority; most residents will have multiple chronic disease conditions affecting daily living; and most residents may not have chosen to reside in the facility. Some residents may feel socially compelled to inflate their ratings. Some residents may have fatigued during the process of completing the survey and answered quickly in order to finish. Over one-third of the residents required assistance with completion of the survey. Some residents completed the survey immediately following a meal, which could have skewed the ratings.

Even though most of the foodservice facilities studied were under the same corporate structure, differences in foodservice management and management styles do exist and could have an effect on employee job satisfaction. Employees may have altered their ratings due to fear of possible retribution even though anonymity was assured. Employees were offered an incentive to complete the survey. The small incentive provided to complete the survey may have caused some employees not to give sufficient thought and time to completing the survey.

Several strengths of the study could be generalized:

- Using resident focus groups and satisfaction surveys will uncover or validate resident issues concerning food and foodservices.
- Restaurant-style dining supports "person-centered" care and the culture change movement in skilled nursing facilities.
- Utilizing surveys to determine employee perceptions of food and foodservices and job satisfaction will provide valuable insight.
- Satisfaction data could become part of a continuous quality improvement program documenting resident concerns, proposing and implementing change, evaluating outcomes, and reporting results to stakeholders.
- Mealtime satisfaction is paramount for quality of life for residents in skilled nursing facilities.

- The use of a reliable and validated survey adds to the body of knowledge regarding resident satisfaction with food and foodservices in long-term care.

Implications and Future Research

This study is intended to inspire foodservice managers in long-term care to consider foodservice system changes that could have a positive impact on resident satisfaction with food and foodservices and resident quality of life. Further research should be conducted in facilities that have taken steps to "de-institutionalize" their foodservices to report successful transformations. Even small changes, such as providing a short list of favorite foods always available, increases resident satisfaction.

Financially, restaurant-style dining may reduce expenditures in some areas. Food waste was not explored in this study. Especially during this economic state, determining resident satisfaction by analyzing mealtime and production food waste could be very insightful. Further exploration of operations in skilled nursing facility foodservices should be explored.

Residents' and employees' opinions regarding food and foodservices should be investigated. Residents and employees are customers; their opinions are important. Foodservice employees' job satisfaction requires investigation. Foodservice employees in long-term care are unique. Unlike foodservice employees in commercial settings, foodservice employees in long-term care provide all meals and foodservices to the same "customers" every day. In light of the lack of any published studies of employee opinions of services they provide or job satisfaction, this is a needed area of future study.

Administrators, foodservice managers, and corporate leaders could utilize foodservice satisfaction data to make informed decisions regarding resident care and quality of life in the facilities they manage. Prospective residents, significant others of current residents, and external accrediting agencies are expecting quality assurance in skilled nursing facilities.

References

Baron, R. & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Huang, H. (2004). Factors affecting satisfaction and residents' utilization of foodservice in assisted-living facilities. Unpublished doctoral dissertation, Kansas State University, Manhattan.

Huang, H. & Shanklin, C. (2008). An integrated model to measure service management and physical constraints' effect on food consumption in assisted-living facilities. Journal of the American Dietetic Association, 108 (5), 785-792.

Howells, A. (2007). *The impact of perceived quality on assisted living residents' satisfaction with their dining experience.* Unpublished Master's Thesis, Kansas State University, Manhattan.

Lee, K. (2004). *Residents' perception of foodservice in continuing care retirement communities.* Unpublished doctoral dissertation, Kansas State University, Manhattan.

Seo, S. & Shanklin, C. (2005). Using focus groups to determine specific attributes that influence the evaluation of quality food and service quality in continuing care retirement communities. *Journal of Foodservice Business Research, 8*(1), 35-51.

Spector, P. E. (1985). Measurement of human service staff satisfaction: Development of the Job Satisfaction Survey. *American Journal of Community Psychology*, *13*, 693-713.

United States Department of Health and Human Services & Institute for the Future of Aging Studies (2005). Measuring long-term care work: A guide to selected instruments to examine direct care worker experiences and outcomes. Retrieved February 25, 2009 from www.ifas.org

Appendix A - Facility Telephone Inquiry Script

Telephone Inquiry Script

Good Morning/Good Afternoon.

May I speak with the Dietitian or Foodservice Manager?

My name is_____. I am calling from Youngstown State University. We are conducting a survey regarding foodservice in skilled nursing facilities. Would you be willing to answer a few questions about your foodservice?

1. What style of menu do you use (cycle, restaurant style)?
2. Are residents allowed to make menu selections at meal times?
3. Do you have table service at meal times?

Thank you for your time.

Appendix B - Resident Foodservice Evaluation

Resident Foodservice Evaluation

Listed below are statements that ask for your opinion about the foodservice. Please circle the number in the row that best describes your opinion. There is no right or wrong answer. Feel free to state your opinion.

Thank you for participating.

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Being able to choose my own food is important.	1	2	3	4	5
2. The menu provides choices.	1	2	3	4	5
3. I am able to order foods not on the menu.	1	2	3	4	5
4. A variety of foods are offered.	1	2	3	4	5
5. Foods taste good.	1	2	3	4	5
6. Cold foods are served cold.	1	2	3	4	5
7. Hot foods are served hot.	1	2	3	4	5
8. The quality of the food is the same each time it is served.	1	2	3	4	5
9. Food is served in the time promised.	1	2	3	4	5
10. The foods are served attractively.	1	2	3	4	5
11. Portion sizes are satisfactory.	1	2	3	4	5
12. The employees respect my needs.	1	2	3	4	5
13. The employees treat me with respect.	1	2	3	4	5
14. The foodservice corrects anything that is wrong quickly.	1	2	3	4	5
	Very Dissatisfied	**Dissatisfied**	**Neutral**	**Satisfied**	**Very Satisfied**
1. With the food served, I feel	1	2	3	4	5
2. With the service provided, I feel	1	2	3	4	5
3. With the overall dining experience, I feel	1	2	3	4	5
4. Being able to select from a menu, I feel	1	2	3	4	5
	Very Poor	**Poor**	**Neutral**	**Good**	**Very Good**
1. Overall, the quality of the foodservice is	1	2	3	4	5

About You

1. What is your gender	Male	Female
2. What is your birthdate?		
3. What year did you move into (name of facility)?		
4. Where do you eat most of your meals?	Room	Dining Room

Appendix C - Employee Foodservice Evaluation

Employee Foodservice Survey

A. Information about you

Job
Title:_____

Full -Time_____ Part-Time_____

Male_____Female_____

Age:_____

Education: Some High School_____ High School Graduate _____Some College _____

College Graduate_____

Employment Date: _____

B. Please answer the next set of questions thinking about the menu and foodservice.

Part 1. Ask yourself: How satisfied are the RESIDENTS with the following aspects of the menu and foodservice?

Item	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
1. Being able to choose their own foods	1	2	3	4	5
2. Menu variety	1	2	3	4	5
3. Being able to order foods not on the menu	1	2	3	4	5
4. Taste of the food	1	2	3	4	5
5. Cold food temperatures	1	2	3	4	5
6. Hot food temperatures	1	2	3	4	5
7. Portion sizes are satisfactory	1	2	3	4	5
8. Food choices	1	2	3	4	5
9. Food served in the time promised	1	2	3	4	5
10. Employees are respectful	1	2	3	4	5

Part 2. Please circle the one number for each question that comes closest to reflecting your opinion.

Item	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly
1. Generally speaking, I am very satisfied with this job.	1	2	3	4	5
2. I frequently think of quitting this job.	1	2	3	4	5
3. I am generally satisfied with the kind of work I do in this job.	1	2	3	4	5
4. Most people on this job are very satisfied with the job.	1	2	3	4	5
5. People on this job often think of quitting.	1	2	3	4	5

Comments:

Appendix D - Resident Consent to Participate

YOUNGSTOWN STATE UNIVERSITY

INFORMED CONSENT FORM

Research Project Title: An Evaluation of Two Menu Systems in a Skilled Nursing Facility

Principal Investigator: Sue Leson (330-941-1823)
For more information regarding this study you may contact the Principle Investigator or Dr. Deb Canter (785-532-2216) Kansas State University

IRB Chair Contact: Dr. Rick Scheidt (785-532-3224), Kansas State University

Purpose of the Study: This project is designed to evaluate two menu systems: a restaurant style menu and the traditional non-selective cycle menu in a skilled nursing facility and to document resident satisfaction, incidence of unintentional weight loss, and food cost per resident day.

Procedures: As a participant you will complete a questionnaire and take part in individual and group discussions about the food and foodservices.

Length of the Study: Approval Date: _October, 2005_Not Valid After: October, 2008_____
The above dates reflect the timeframe during which the study will be done. This will be the amount of time that you will be involved in the study.

Risks Anticipated: No known risks.

Costs: There is no cost to participate.

Benefits Anticipated: To assist the facility in meeting the food and foodservices needs of the residents.

Extent of Confidentiality: All responses will remain anonymous and confidential.

Terms of Participation: I understand this project is research, and that my participation is voluntary. I also understand that if I decide to participate in this study, I may withdraw at any time without explanation, penalty, or loss of benefits to which I may be entitled.

I verify that my signature below indicates that I have read and understand this consent form, and willingly agree to participate in this study under the terms described, and my signature acknowledges that I have received a signed and dated copy of this consent form.
Participant Name (Print):_____
Participant Signature:_____ Date:_____
Witness to Signature:_____ Date:_____

Appendix E - Resident Foodservice Evaluation – Case Study

Resident Foodservice Evaluation

Listed below are statements that ask for your opinion about the foodservice at Austinwoods.
Please circle the number in the row that best describes your opinion. There is no right or wrong answer.
Feel free to state your opinion. Thank you for participating.

Item	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1. Being able to choose my own food is important.	1	2	3	4	5
2. The menu provides choices.	1	2	3	4	5
3. I am able to order foods **not** on the menu.	1	2	3	4	5
4. A variety of foods are offered.	1	2	3	4	5
5. Foods taste good.	1	2	3	4	5
6. Cold foods are served cold.	1	2	3	4	5
7. Hot foods are served hot.	1	2	3	4	5
8. The quality of the food is the same each time it is served.	1	2	3	4	5
9. I am satisfied with the number of choices on the dessert cart.	1	2	3	4	5
10.I am satisfied with the number of choices on the beverage cart.	1	2	3	4	5
11. I like choosing my dessert from the dessert cart.	1	2	3	4	5
12. I like having beverages served from the beverage cart before my meal arrives.	1	2	3	4	5
13. Food is served in the time promised.	1	2	3	4	5
14. The foods are served attractively.	1	2	3	4	5
15. Portion sizes are satisfactory.	1	2	3	4	5
16. The employees respect my needs.	1	2	3	4	5
17. The employees treat me with respect.	1	2	3	4	5
18. The foodservice corrects anything that is wrong quickly.	1	2	3	4	5
	Very Dissatisfied	**Dissatisfied**	**Neutral**	**Satisfied**	**Very Satisfied**
1. With the food served, I feel	1	2	3	4	5
2. With the service provided, I feel	1	2	3	4	5
3. With the overall dining experience, I feel	1	2	3	4	5
4. Being able to select from a menu, I feel	1	2	3	4	5
	Very Poor	**Poor**	**Neutral**	**Good**	**Very Good**
1. Overall, the quality of the foodservice is	1	2	3	4	5

About You

1. What is your gender	Male	Female		
2. What is your age				
3. What year did you move into (name of facility)?				
4. Where do you eat most of your meals?	Room	Dining Room		

Appendix F - Employee Foodservice Evaluation-Case Study

Employee Foodservice Survey

Listed below are statements that ask your opinions about you and your work, the residents, and the foodservice at (name of facility). Please circle the number in the row that best describes your opinion. There is no right or wrong answer. All survey information will be anonymous. Please feel free to express your opinion. Thank you for participating.

A. Please answer the next set of questions thinking back on the time before the "menu change". Part 1. Ask yourself: How satisfied were the residents with the following aspects of the foodservice BEFORE the menu change?

Item	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
1. Being able to choose their own foods	1	2	3	4	5
2. Menu variety	1	2	3	4	5
3. Being able to order foods not on the menu	1	2	3	4	5
4. Taste of the food	1	2	3	4	5
5. Cold food temperatures	1	2	3	4	5
6. Hot food temperatures	1	2	3	4	5
7. Dessert choices	1	2	3	4	5
8. Beverage choices	1	2	3	4	5
9. Portion sizes are satisfactory	1	2	3	4	5
10. Food choices	1	2	3	4	5
11. Food served in the time promised	1	2	3	4	5
12. Employees are respectful	1	2	3	4	5

Part 2. Please circle the one number for each question that comes closest to reflecting your opinion prior to the menu change.

Item	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly
1. Generally speaking, I am very satisfied with this job.	1	2	3	4	5
2. I frequently think of quitting this job.	1	2	3	4	5
3. I am generally satisfied with the kind of work I do in this job.	1	2	3	4	5
4. Most people on this job are very satisfied with the job.	1	2	3	4	5
5. People on this job often think of quitting.	1	2	3	4	5

B. Please answer the next set of questions thinking about the current menu and foodservice.

Part 1. Ask yourself: How satisfied are the residents with the following aspects of the CURRENT menu and foodservice?

Item	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
1. Being able to choose their own foods	1	2	3	4	5
2. Menu variety	1	2	3	4	5
3. Being able to order foods not on the menu	1	2	3	4	5
4. Taste of the food	1	2	3	4	5
5. Cold food temperatures	1	2	3	4	5
6. Hot food temperatures	1	2	3	4	5
7. Dessert choices	1	2	3	4	5
8. Beverage choices	1	2	3	4	5
9. Portion sizes are satisfactory	1	2	3	4	5
10. Food choices	1	2	3	4	5
11. Food served in the time promised	1	2	3	4	5
12. Employees are respectful	1	2	3	4	5

Part 2. Please circle the one number for each question that comes closest to reflecting your opinion with the current menu and foodservice.

Item	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly
1. Generally speaking, I am very satisfied with this job.	1	2	3	4	5
2. I frequently think of quitting this job.	1	2	3	4	5
3. I am generally satisfied with the kind of work I do in this job.	1	2	3	4	5
4. Most people on this job are very satisfied with the job.	1	2	3	4	5
5. People on this job often think of quitting.	1	2	3	4	5

Comments:

C. Information about you

Job Title:_____
_____

Full -Time_____ Part-Time_____

Male_____Female_____

Age:_____

Education: Some High School_____ High School Graduate
_____SomeCollege_____College Graduate_____

Employment Date: _____

Appendix G - Phase I: Foodservice Employee Profile

Phase I: Foodservice Employee Profile

Demographic Variable	n
Job Title (N=25)	
Aid	14
Baker	1
Cook	4
Cook Assistant	1
Dietetic Technician	1
Prep. Cook	1
Expeditor	1
Supervisor	1
Supervisor, Cook	1
Job Status (N=25))	
Full Time	18
Part Time	7
Gender (N=25)	
Male	9
Female	16
Range in Age (N=25)	
16-20	2
21-29	6
30-39	8
40-49	7
50-59	2
60-69	0
Education (N=25)	
Some High School	4
High School Graduate	13
Some College	6
College Graduate	2
Length of Employment in Years (N=25)	
0-.99	0
1-4.99	11
5-10.99	11
11-15.99	2
16-20.99	1
21-25.99	0
26-30.99	0