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2012

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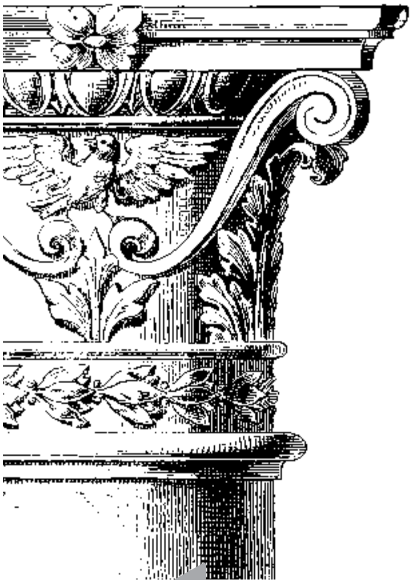

2012

SENIORS HOUSING
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ARTICLES

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NIC

The National Investment Center for the Seniors Housing & Care Industry (NIC) is a 501(c)(3) organization whose mission is to facilitate informed investment decisions that create value and further the quality of seniors housing and care. Since 1991, NIC has been the leading source of research, data, and analysis for lenders, investors, providers, developers, and others interested in meeting the housing and care needs of America's seniors. NIC has sponsored the *Seniors Housing & Care Journal*, a peer-reviewed journal for applied research in the seniors housing and care field, since 1993.

In addition to the 2012 *Seniors Housing & Care Journal*, NIC is pleased to announce the availability of its ***Investment Guide: Investing in Seniors Housing & Care Properties, Second Edition***. The NIC Investment Guide is designed as a primer for understanding the seniors housing and care sector. As such, it serves as an introduction to the industry's investment characteristics, performance and leading players. The intent is to offer a data-driven understanding that can be used to further investigate opportunities and risks and formulate investment theses.

This data-driven overview is made possible by the tremendous progress in data collection specifically the NIC MAP® Data & Analysis Service. NIC MAP® is a powerful tool that provides local market intelligence about the performance of seniors housing and care properties in America's top 100 metropolitan statistical areas (MSAs). With the NIC MAP® Data and Analysis Service, subscribers can tap into time series data for occupancy rates, average monthly rents, new construction, existing supply, demographics, sales transactions and more. Every property type, care segment and campus type is covered, including independent living, assisted living, memory care, nursing care, and continuing care retirement communities.

For more information, call (410) 267-0504 or visit www.nic.org.

MATHER LIFEWAYS

Mather LifeWays is a unique, non-denominational not-for-profit organization based in Evanston, Illinois, founded more than 70 years ago. Mather LifeWays is dedicated to developing and implementing Ways to Age Well^{SM} by creating programs, places, and residences for today's young-at-heart older adults. Through conducting applied research, Mather LifeWays Institute on Aging has developed award-winning, evidence-based education programs for professionals who serve older adults. Staffed by nationally recognized researchers and educators, the Institute is a global resource for information about wellness, successful aging service innovations, and educational programming. In 2011, the Institute reached more than 3,000 older adults and professionals through its efforts, and more than 550 organizations implemented Institute-designed programs. Current initiatives focus on comprehensive wellness programs and assessment tools, aging-in-the-workplace issues, emergency preparedness, senior living staff development and retention, and online education and support programs empowering working family caregivers. In line with identifying, implementing, and sharing progressive practices for these initiatives, Mather LifeWays Institute on Aging collaborates with NIC to produce the *Seniors Housing & Care Journal*.

To learn more about Mather LifeWays Institute on Aging, call (888) 722-6468 or visit www.matherlifewaysinstituteonaging.com.

INTRODUCTION

The 2012 *Seniors Housing & Care Journal* continues its tradition of disseminating empirically based research and commentaries about quality and progressive practices that are focused on critical issues faced by professionals in the field.

Demonstrating the richness of how program implementation, evaluation, and research can be used to improve planning, operations, and policies in senior living, **articles in this edition cover many aspects relating to senior residences, ranging from sales approaches to physical design.**

As in the past, the *Journal* editors selected one outstanding research article for special recognition, generously sponsored by Prudential Real Estate Investors. *Adult Children of CCRC Residents: Their Perceptions, Insights, and Implications for Shaping the Future CCRC*, written by **Linda Hollinger-Smith, Kathryn Brod, Susan Brecht, and Mary Leary**, presents an exploratory analysis of how adult children of current continuing care retirement community (CCRC) residents view CCRCs in light of their parents' experiences. Based on a sample of more than 3,600 adult children, the researchers **found that factors including age, education, marital status, region of current residence, and income all influenced valuing the CCRC lifestyle, but the most significant factor was increasing health care needs**. These findings highlight the importance of CCRCs educating residents' family members about health care options available in CCRCs. It should be noted that as managing editor of the *Seniors Housing & Care Journal*, Dr. Hollinger-Smith abstained from discussions regarding the award and declined the honorarium accompanying it.

One piece deserving special commendation is *Measuring Success in Seniors Housing Sales: Prospect-Centered Selling^{SM} with the "Stages of Change" Model*. In this article, **David Smith and Alexandra Fisher provide a data-driven rationale for taking a person-centered approach to seniors housing sales, as opposed to transactional selling**. Relating it to a book written about baseball, *Moneyball*, they elaborate on their successful application of Prochaska's "Stages of Change" model of health behavior change to sales opportunities.

Other articles give readers equally important concepts to apply in their own settings and provide broad implications for the field. The next two include important findings about predicting demand and usage of seniors housing services. **Nailya DeLellis, Lauren Manthei, and Jacob Woodworth found that nursing home demand can be predicted via county level data as well as with demographic and market variables. April Temple and David Cockley showed that for adults ages 40 to 64, poor health is a strong predictor of long-term care planning, but for those 65 and older, being female and older are significant predictors**.

The next four include important findings about adults already living in seniors housing communities. **Sonia Salari**, via an in-depth ethnographic project, **explores issues nursing home administrators face when attempting to provide decennial census data while staying true to a person-centered philosophy. Jerome Short evaluates a pilot study of a psychological fitness intervention, showing that providing residents with opportunities to enhance their mental health resulted in positive changes compared to a delayed-treatment control group. Kathleen Abrahamson, Dana Burr Bradley, Kristopher Morgan, and Bradley Fulton**, using structural equation modeling with a multistate sample of more than 1,200 assisted living residents, **found that the relationship between functional independence and resident satisfaction is not as direct as anticipated**. In conclusion, **Pamela Fancey, Janice Keefe, Robin Stadnyk, Emily Gardiner, and Katie Aubrecht synthesize a wide-ranging body of literature** regarding resident-centered approaches to care and physical design, **showing that these types of approaches are likely to have positive outcomes for both residents and families**.

We are especially appreciative of the efforts of the *Journal's* Editorial Board members, who spent considerable time reviewing submissions to ensure their quality and significance. We further want to acknowledge our colleagues in the field who identified articles for consideration that are of benefit to readers, as well as referring numerous authors. Finally, we are indebted to Technical Editor F. Gill as well as Associate Managing Editors Saher Selod and Scott King, who have shepherded this edition to conclusion. This is Dr. Selod's last year working on the *Journal*. We wish her the best in her new career in academia and are pleased that she will take on the role of reviewer for us in the future.

The *Journal* continues to publish research that contributes to the senior living field and has direct relevance to day-to-day operations. As evidenced by this issue's quantity and quality of selections, the field continues to grow and mature. With this growth, we expect the range of research topics to expand as well. We look forward to your thoughts and views regarding the topics that should be considered for future editions of the *Seniors Housing & Care Journal*. If you would like to submit an article for publication in the 2013 edition, please direct e-mails to new Associate Managing Editor Amy Kerr, akerr@matherlifeways.com.

Sincerely,

Joan Hyde, PhD Gerontology Institute University of Massachusetts Boston	Linda Hollinger-Smith, PhD, RN, FAAN Mather LifeWays Institute on Aging Managing Editor

David A. Lindeman, PhD
Center for Technology and Aging
Center for Innovation and Technology in Public Health

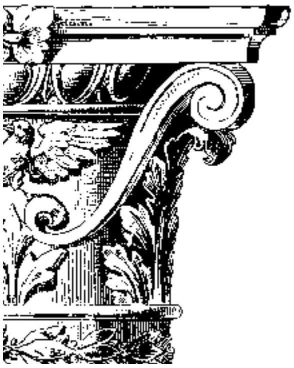
Margaret Ann Wylde, PhD
ProMatura Group, LLC
Editors

NEW THIS YEAR

NIC, with assistance from Mather LifeWays, is working to make the 2012 *Seniors Housing & Care Journal* an open access journal. All content will be freely available without charge to a user and/or his/her institution. Users are allowed to read, download, copy, print, search, or link to the full texts of the articles in this journal without asking prior permission from the publisher or the author.

To view or download an article please visit www.nic.org/SeniorsHousingandCareJournal/2012. If you have questions about, or experience difficulty, downloading an article please contact NIC at communications@nic.org.

Prudential Real Estate Investors Award for Best Research Paper



Adult Children of CCRC Residents: Their Perceptions, Insights, and Implications for Shaping the Future CCRC

Linda Hollinger-Smith, PhD, RN, FAAN; Kathryn Brod, MBA; Susan Brecht;
Mary Leary, MS

ABSTRACT

With the aging of the U.S. population, senior living providers and industry professionals recognize the need to understand the preferences the next generations of older adults will desire relative to their housing and lifestyle needs and choices. For several decades, continuing care retirement communities (CCRCs) have offered many older adults lifestyle options promoting independence but also offer a full continuum of health care and services if needed. The purpose of this exploratory study was to understand how adult children's experiences and expectations of services and care provided to their relatives currently living in CCRCs influence their own decisions in considering a CCRC lifestyle in their future. A national sample of 3,647 adult children respondents found that of those "very likely" to consider a CCRC lifestyle for themselves, 74% reported their family members' experiences living in CCRCs influenced their own interest "to a great extent." Certain categories of prospective CCRC residents may be more likely than others to value aspects of this lifestyle, with influential factors including age, education, marital status, region of current residence, and income. Across all age groups of respondents, increasing health care needs was the most significant factor prompting consideration of a CCRC lifestyle. Respondents most willing to recommend their family members' CCRCs to others were very satisfied with value of services, safety and security, the CCRC's reputation, responsiveness of managers, appearance of amenity areas, variety of social events, and quality of food. These insights provided support for CCRCs to proactively inform, educate, and engage residents' family members and thus influence prospective residents to value the CCRC lifestyle in advance of health care needs.

INTRODUCTION

The U.S. Census Bureau (2010) indicates there are nearly 41 million individuals currently living in the U.S. who are age 65 or older. Over the next 20 years, this age cohort is expected to grow by more than 75% (U.S. Administration on Aging, 2010). Both seniors housing providers and industry professionals alike recognize the need to understand the preferences of this age group and others that may consider moving to a retirement community—specifically to a continuing care retirement community (CCRC)—as a future lifestyle choice.

The oldest cohort of the boomer generation has begun to turn 65 years of age, signaling the threshold of a dramatic shift in demographic characteristics of the U.S. population. Over the next 18 years, three to four million boomers will turn 65 each year (U.S. Census Bureau, 2010). With medical and health advancements increasing life expectancies and the emphasis on health and wellness promoting active lifestyles, it is projected that 20% to 25% of one's life will be in active retirement years (National Center for Health Statistics, 2011).

For several decades, CCRCs have offered many older adults lifestyle options and alternatives that promote independence but also offer a full continuum of health care and services if needed, unlike other housing and care options (Zarem, 2010). As the U.S. population ages, CCRCs have grown to meet the changing preferences, demands, and needs of new residents by offering features that include larger homes, greater contract choices, and more wellness-related programs and services (Brecht, Fein, & Hollinger-Smith, 2009).

With the aging boomer generation, their choices will continue to influence the creation of the CCRC of the future. As a potential future customer group, this segment of the population is influential financially, owning 75% of all financial assets, possessing two-thirds of all stock, and representing half of all discretionary spending in the U.S. (*The Economist Newspaper*, 2002). A surge in the number of retiring boomers through the year 2029 has led some to envision an increased demand for retirement lifestyle options (Burns, 2003). Moschis and colleagues (2005) noted the importance of understanding the heterogeneity existing within market segments across age cohorts that will influence future lifestyle choices, preferences, and motives.

As senior living providers plan for the future, many are wondering what the next generation of older adults will desire relative to their housing and lifestyle needs. Reports for the past 10 years have consistently shown that less than 7% of adults in the general public would consider a senior living community for themselves as a future lifestyle option (National Association of Home Builders and MetLife Mature Market Institute, 2011).

The present exploratory study is the first to focus specifically on adult children of CCRC residents, as they may be more knowledgeable about the CCRC lifestyle compared to the general population and therefore may provide helpful information regarding what they would like to see in a future CCRC. Although respondents' current perspectives regarding their interest in a CCRC lifestyle may not be reflective of their future behaviors, the study's ramifications may influence current marketing tactics and opportunities.

METHODOLOGY AND SAMPLE

Description of the Methodology

The study was based on a national sample of 3,647 family members of residents living in CCRCs. CCRCs are defined as lifestyle communities providing a continuum of living options, including independent living, assisted living, and long-term nursing care.

Developing the Web survey.

Survey items were derived from a literature review of a number of published studies (National Association of Home Builders and MetLife Mature Market Market Institute, 2011; Del Webb, 2010; MetLife Mature Market Institute, 2010) and previous senior living surveys conducted by Mather LifeWays Institute on Aging and Brecht Associates, Inc. (Brecht et al., 2009). The survey consisted of 49 questions focused on the following areas:

- Opinions about the community in which the resident lives;
- Plans about one's own retirement and future housing plans;
- Interests and preferences for a CCRC lifestyle;
- Programs, services, amenities, and long-term care contract preferences; and
- Choices regarding housing options to meet future needs.

Senior living providers and association leaders reviewed the survey categories and items for their recommendations. A pilot test of the Web survey was then conducted with a group of family members of residents living in CCRCs to determine clarity of survey items, length of time to complete, and ease of completing.

Sampling methods.

The Ziegler National CCRC Listing and Profile (Ziegler Senior Living Finance, 2009) was compiled as a comprehensive national CCRC database of more than 1,800 CCRCs. Using the Ziegler CCRC database, 1,501 communities with available current contact information were invited to participate in the survey. Two hundred and twenty-one CCRCs agreed to participate, representing more than 65,000 residents in 49 states and the District of Columbia. Seventy-eight percent of participating CCRCs were nonprofit and 22% were for-profit. The geographic distribution of participating CCRCs was representative of the 1,501 CCRCs contacted from the Ziegler database.

Reaching family members of CCRC residents was a multistep process with safeguards to protect the confidentiality of both residents and their family members. It was determined that the most effective means to provide anonymity and enhance participation was to have participating CCRCs send individualized invitations to their residents' family members. CCRCs were provided template invitation letters that they individualized from their communities and sent to both residents and family members. Residents were informed about the survey in their letters and were encouraged to elicit their family members' participation. The Web survey was conducted between March and June 2011.

Statistical methods.

Frequency analyses were used to describe the sample of respondents. Subgroups of respondents were compared using the chi-square (X^2) test of independence. Stepwise discriminant analyses were conducted to identify factors predicting respondents': (1) willingness to recommend their family members' CCRC to others; and (2) degree of likelihood to consider a CCRC lifestyle in their future. Statistical analyses were conducted using IBM SPSS Statistics 19.

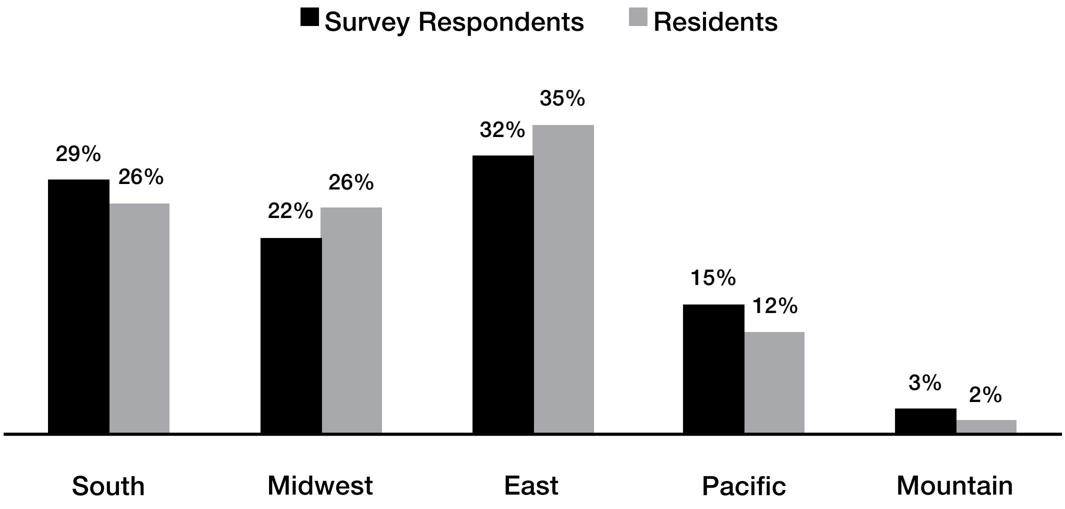
Description of the Sample

Of the 3,647 family member respondents, 95% currently had a relative living in a CCRC while the other 5% had a relative who lived in a CCRC in the past. As there were very few significant differences between these two groups, survey results were based on combined data from all respondents.

Distribution of respondents by region was anticipated to be somewhat different compared to the regional distribution of participating CCRCs. Two-thirds of respondents lived in the same state as their relatives living in CCRCs. When examined by region, there were no statistically significant differences, although somewhat greater percentages of respondents lived in the South, Mountain, and Pacific regions compared to somewhat greater percentages of CCRC residents living in the East and Midwest regions (**Figure 1**).

Ninety-one percent of respondents were adult children or spouses of adult children of CCRC residents. The remaining 9% consisted of nieces or nephews (4%), siblings (3%), grandchildren (2%), and cousins (<1%). Initial analyses did not reveal

Figure 1. Comparison of Survey Respondents' and Residents' Regions of Current Residency.



significant differences between these subgroups, so data were combined in final analyses. **Table 1** provides a description of the demographic characteristics of respondents. The majority of respondents were:

- Members of the boomer generation, ages 47 to 65 years (78%);
- Married (81%);
- Parents of at least one child (78%);
- College graduates (81%);
- Living in a single-family home (85%); and
- In "very good" or "excellent" health (81%).

Of respondents providing financial information (80%), 67% reported an average annual income of $75,000 or more, and 46% reported an average annual income of $100,000 or more. Not surprisingly, respondents' annual household income significantly decreased with increasing age. Respondents age 66 or older earned the lowest annual income, as a number of them were retired or partially retired ($X^2 = 31.5$, $p = 0.001$). In comparison, 72% of respondents 59 or younger reported annual earnings of $75,000 or more. Forty-three percent of those 59 or younger reported annual earnings of $100,000 or more compared to 32% of older respondents.

On the other hand, estimated net worth significantly increased with age ($X^2 = 71.73$, $p = 0.001$). Of those age 60 or older, 43% estimated their net worth at $800,000 or more. In comparison, 50% of respondents 46 or younger estimated their net worth as less than $200,000. Respondents living in Mountain and Pacific regions estimated a significantly greater net worth compared to other regions (44% versus 37% estimate net worth at $800,000 or more, $X^2 = 68.76$, $p = 0.001$).

Eighty percent of respondents estimated their current home value at up to $600,000, with an average home value of $400,000. In comparison, the average U.S. home sale price as of June 2011 was $269,000 (U.S. Census Bureau, *Median and Average Sales Prices of Homes Sold in the United States*, 2011). Examining home values by age group, a significantly greater percentage of respondents ages 53 to 65 reported home values of $400,000 or more compared to other respondents (40% versus 34%, $X^2 = 53.12$, $p = 0.001$). Additionally, there were regional differences in estimated home values, with respondents living in Mountain and Pacific regions reporting significantly greater home values compared to respondents in

Table 1. Demographic Characteristics of Family Member Respondents.

Characteristic	Percentage of Total Respondents (*n* = 3,647)	Characteristic	Percentage of Total Respondents (*n* = 3,647)
Age of Respondents		**Region of Respondents' Residence**	
66-75 years	17%	East	31%
60-65 years	31%	South	29%
53-59 years	34%	Midwest	22%
47-52 years	13%	Mountain	3%
36-46 years	4%	Pacific	15%
Marital Status		**Number of Children**	
Married	81%	None	22%
Single	8%	1-2	54%
Widowed	3%	3-4	21%
Divorced	7%	5 or more	3%
Highest Level of Education		**Current Residence**	
High school graduate	5%	Single-family home	85%
Some college/technical school	14%	Condo or townhouse	10%
College graduate	34%	Rental apartment	3%
Post-graduate/professional	47%		
Estimated Home Value		**Estimated Net Worth (excludes home value)**	
Less than $200,000	18%	Less than $200,000	14%
$200,000 to $399,999	35%	200,000 to $399,999	12%
$400,000 to $799,999	24%	$400,000 to $799,999	18%
$800,000 or more	8%	$800,000 or more	25%
No response	15%	No response	31%
Annual Average Income		**Respondents' Health Scores (self-reported)**	
Less than $50,000	11%	Excellent	38%
$50,000 to $74,999	15%	Very good	43%
$75,000 or more	54%	Good	17%
No response	20%	Fair/Poor	2%

other regions (58% versus 33% estimated home values of $400,000 or more, $X^2 = 53.68$, $p = 0.001$).

RESULTS

Influence of Residents' CCRC Experiences on Respondents' Future Lifestyle Choices

A premise of the study was that family members of CCRC residents are more knowledgeable about the CCRC lifestyle compared to the general public, and their experiences and expectations regarding services and care their relatives receive in CCRCs influence their own interest and decision to consider a CCRC lifestyle in the future. Of those "very likely" to consider a CCRC lifestyle for themselves ($n = 1,169$ or 35% of the total sample), 74% of respondents reported that their family members' experiences living in CCRCs influenced their interest "to a great extent" compared to 21% indicating these experiences had little to no influence on their future living plans.

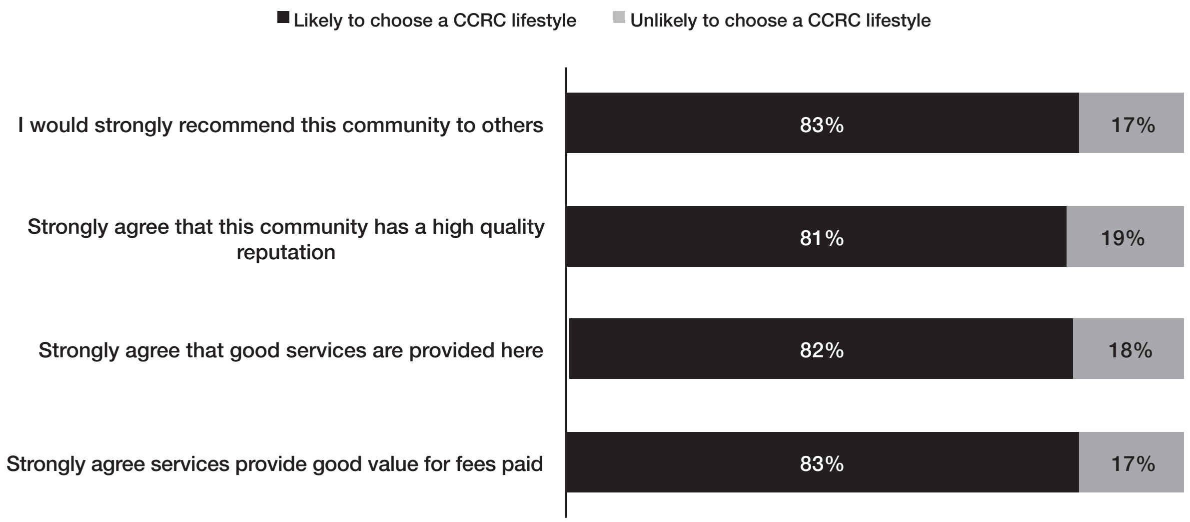
Respondents' satisfaction with CCRC services.

Overall, respondents were very pleased with services and care CCRCs provide to their family members:

- 66% "strongly agree" and 27% "agree" (93% total) they would recommend this CCRC to others as a good place to live;
- 61% "strongly agree" and 27% "agree" (88% total) this CCRC has a high quality reputation compared to others;
- 57% "strongly agree" and 36% "agree" (93% total) that CCRCs provide good services to residents; and
- 39% "strongly agree" and 37% "agree" (75% total) that services provided reflect good value for fees paid.

The greater the degree of respondents' satisfaction with services and care CCRCs provide residents, the greater the likelihood respondents were "very likely" to consider a CCRC lifestyle in their future. **Figure 2** compares respondents who are most satisfied with services and care provided (i.e., indicating they "strongly agree" with statements) by the degree

Figure 2. Percentages of Respondents Most Satisfied About Their Family Members' CCRCs Compared to the Degree of Likelihood They May Choose a CCRC Lifestyle in the Future.



of likelihood they may choose a CCRC lifestyle. Of those who "strongly agree" with the previous statements, eight in 10 respondents indicated they would be likely to choose a CCRC lifestyle for themselves.

Respondents' familiarity with CCRCs.

Regarding respondents' familiarity with the continuum of care offered by CCRCs, 51% indicated they were "very familiar," 47% were "somewhat familiar," and 2% were "not at all familiar." Respondents' familiarity with CCRCs was directly influenced by their experiences with services and care provided to their family members across the care continuum. A significantly greater percentage of respondents "very familiar" with CCRCs had relatives who had transitioned to assisted living, skilled nursing, or memory support (34% of residents transitioned from independent living). In comparison, the majority of respondents "not at all familiar" with CCRCs primarily had experiences with their family members in independent living (14% of residents transitioned from independent living) (X^2 = 83.14, p = 0.001).

Respondents "very familiar" with CCRCs were more likely to "strongly agree" that good services were provided to their family members, and subsequently, strongly recommend those CCRCs to others compared to respondents "somewhat familiar" or "not familiar" with CCRCs (X^2 = 49.96, p = 0.001). Examining what respondent characteristics may be associated with degree of familiarity with CCRCs, age of respondents was the only characteristic significantly associated with their familiarity with CCRCs. Respondents age 60 or older were more likely to be "very familiar" with CCRCs compared to other ages (57% versus 45%, X^2 = 66.02, p = 0.001).

Factors Prompting Respondents to Consider a CCRC Lifestyle for Themselves

A number of factors may prompt individuals to move from their homes post retirement. For respondents, increasing health care needs was the most significant reason across all age groups, with 37% indicating this would prompt their move "to a great extent" and an additional 47% indicating this would be "somewhat" of a reason. A significant greater percentage of respondents "very likely" to consider a CCRC lifestyle for themselves indicated that availability of health care on site was "very important" to them compared to those less likely to plan to move to a CCRC in the future (74% versus 51%, X^2 = 61.17, p = 0.001).

Respondents were asked what onsite health programs and services would be important to them in considering a CCRC lifestyle for their future. The availability of assisted living was most important (77% selected), followed by health clinic services (66%), skilled nursing care (62%), physician/professional services (61%), home health care (51%), respite care (48%), therapy services (47%), and memory support programs (41%). Respondents' age was not a factor in selecting health programs and services as important except for memory support programs. Respondents ages 53 to 59 were more likely to select memory support programs as important compared to other ages (45% versus 38%, X^2 = 14.48, p = 0.006). Significantly greater percentages of respondents "very likely" to consider a CCRC lifestyle for themselves deemed these onsite health programs and services as important compared to respondents less likely to plan moving to a CCRC **(Table 2)**.

Factors related to health promotion and wellness also were important to respondents in their consideration of a CCRC lifestyle. The most important wellness-related programs and amenities included availability of a fitness center (73% selected), followed by walking/bicycle paths (73%), wellness programs and services (62%), indoor pool (55%), and cultural programs (54%). Least important wellness programs and amenities included computer training (22%), intergenerational programs (18%), golf course access (17%), art studio (14%), steam showers (11%), and tennis courts (11%). Respondents ages 47 to 65 were more likely to select the following wellness amenities as important compared to other respondents: fitness center (77% versus 73%, X^2 = 11.79, p = 0.003) and walking/bicycle paths (78% versus 72%, X^2 = 27.5, p = 0.001).

Table 2. Percentages of Respondents Rating Onsite CCRC Health Programs and Services as Important: Comparing Those "Very Likely" Versus Those "Less Likely" to Consider a CCRC Lifestyle.

Onsite CCRC Health Program or Service	Respondents Very Likely to Consider a CCRC	Respondents Less Likely to Consider a CCRC	Analysis
Assisted living	88%	64%	$X^2 = 482.64$, $p = 0.001$
Health clinic services	76%	54%	$X^2 = 312,89$, $p = 0.001$
Skilled nursing care	74%	50%	$X^2 = 322.27$, $p = 0.001$
Physician and professional services	70%	49%	$X^2 = 226.7$, $p = 0.001$
Home health care	61%	40%	$X^2 = 201.29$, $p = 0.001$
Respite care	58%	38%	$X^2 = 195$, $p = 0.001$
Therapy services	57%	37%	$X^2 = 181.94$, $p = 0.001$
Memory support program	48%	32%	$X^2 = 143.12$, $p = 0.001$

X^2 refers to the chi-square test of independence.

Opportunities Influencing Future Choices: CCRC Versus the Single-Family Home

As noted, there were a number of factors that may prompt older adults to move from their current homes after retirement. In weighing their options, older adults may consider factors such as personal safety and security, convenience, ability to remain independent, social interactions, lifestyle choices, and wellness opportunities. Although a significant percentage (77%) of survey respondents indicated they were likely to consider a CCRC lifestyle for themselves and their spouses or significant others in the future, how adult children of CCRC residents may compare opportunities of a CCRC lifestyle to a single-family home is unknown. Additionally, their opinions may differ based on respondent characteristics, familiarity with CCRCs, expectations of their family member's residential experiences, and likelihood they may consider a CCRC lifestyle in the future for themselves.

In comparing opportunities afforded by a CCRC lifestyle to continuing to reside in a single-family home post retirement (**Figure 3**), the majority of respondents indicated that a future CCRC lifestyle compared to a single-family home provides the greatest likelihood for:

- Personal safety and security (88%);
- Social activities (84%);
- Aging in place (79%);
- Convenience (78%);
- Staying fit (73%);
- Lifelong learning (73%);
- Choices and options in life (69%); and
- Eating well (67%).

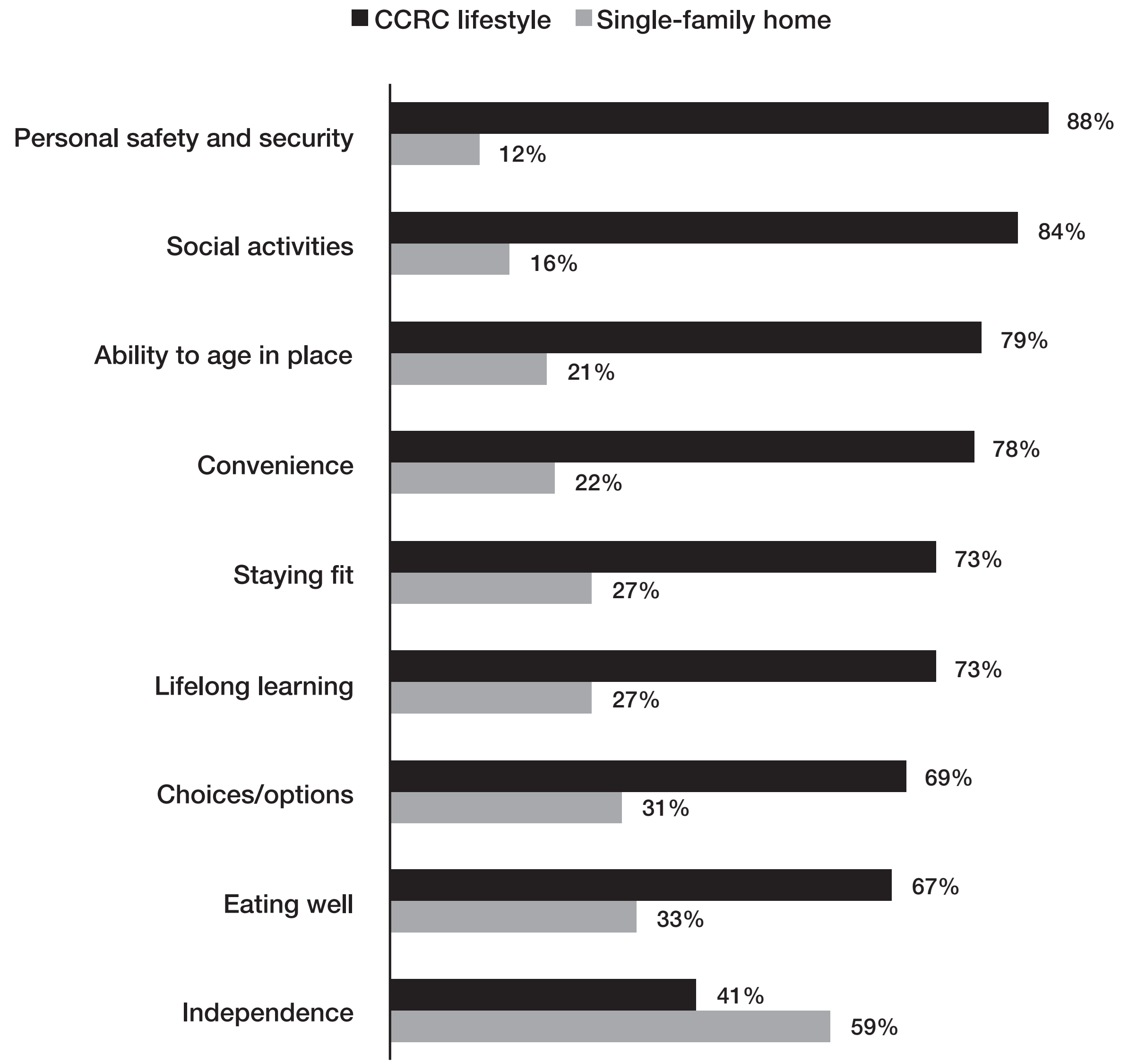
Ability to remain independent was the only attribute that respondents rated as being better able to be met in a single-family home versus a CCRC lifestyle (59% versus 41%).

Impact of respondent characteristics.

Respondents 60 years or younger were significantly more likely than older respondents to feel that a future CCRC lifestyle compared to a single-family home would offer (**Table 3**):

- Opportunities for social activities (87% versus 82%, $p = 0.005$);
- Ability to age in place (82% versus 74%, $p = 0.001$);

Figure 3. Which Housing Choice Affords Respondents the Greatest Opportunity for:



- Convenience (81% versus 74%, $p = 0.017$);
- Programs to stay fit (77% versus 68%, $p = 0.001$);
- Lifelong learning programs (76% versus 68%, $p = 0.001$); and
- Opportunities to eat well (68% versus 63%, $p = 0.033$).

Respondents older than 60 were significantly more likely than younger respondents to report that single-family homes offer more independence compared to CCRCs (64% versus 56%, $p = 0.001$).

Respondents with a college degree and post-graduates were significantly more likely than respondents with less education to indicate that a CCRC lifestyle would provide opportunities for personal safety/security (88% versus 84%, $p = 0.028$) and convenience (79% versus 68%, $p = 0.005$).

Married respondents were significantly more likely to indicate that single-family homes offered independence compared to other respondents (62% versus 52%, p = 0.005). Only widowed respondents felt that CCRCs offered more opportunities for independence (60%) compared to single-family homes (40%).

Respondents currently residing in East and Pacific regions were significantly more likely than respondents in other regions to indicate that a CCRC lifestyle afforded greater opportunities for convenience (80% versus 75%, p = 0.001) and staying fit (75% versus 71%, p = 0.007). Those living in the South region were significantly more likely than respondents in other regions to indicate that a CCRC lifestyle offered greater opportunities for eating well (69% versus 66%, p = 0.006). Respondents from the Mountain region were significantly more likely than respondents in other regions to choose a single-family home to maintain independence (67% versus 59%, p = 0.005).

Respondents reporting an annual income of $100,000 or more were significantly more likely than respondents at lesser income levels to report that a CCRC lifestyle offered greater opportunities to support aging in place (82% versus 76%, p = 0.001).

Impact of familiarity with CCRCs.

How familiar respondents were with CCRCs influenced their feelings about what a CCRC lifestyle may offer compared to a single-family home. A significantly greater percentage of respondents

Table 3. Comparing Importance of Lifestyle Factors by Respondent Characteristics. (Where CCRCs offer the greatest opportunities to address specific lifestyle factors compared to single-family homes are indicated by bold text.)

Lifestyle Factor	Age	Education	Marital status	Region of current residence	Self-reported health	Income level	Net assets
Personal safety/ security	ns	**$X^2 = 12.55$ $p = 0.028$**	ns	ns	ns	ns	ns
Social activities	**$X^2 = 15.02$ $p = 0.005$**	ns	ns	ns	ns	ns	ns
Ability to age in place	**$X^2 = 25.47$ $p = 0.001$**	ns	ns	ns	ns	**$X^2 = 15.67$ $p = 0.001$**	ns
Convenience	**$X^2 = 12.05$ $p = 0.017$**	**$X^2 = 16.61$ $p = 0.005$**	ns	**$X^2 = 35.70$ $p = 0.005$**	ns	ns	ns
Staying fit	**$X^2 = 19.68$ $p = 0.001$**	ns	ns	**$X^2 = 14.13$ $p = 0.007$**	ns	ns	ns
Lifelong learning	**$X^2 = 22.19$ $p = 0.001$**	ns	ns	**$X^2 = 12.58$ $p = 0.014$**	ns	ns	ns
Choices/options	ns	ns	ns	ns	ns	ns	ns
Eating well	**$X^2 = 10.52$ $p = 0.033$**	ns	ns	**$X^2 = 14.28$ $p = 0.006$**	ns	ns	ns
Independence	$X^2 = 18.89$ $p = 0.001$	ns	$X^2 = 14.42$ $p = 0.006$	$X^2 = 14.84$ $p = 0.005$	ns	ns	ns

X^2 refers to the chi-square test of independence; "ns" refers to no significant differences among respondents.

"very familiar" with CCRCs felt that a CCRC lifestyle offered greater choices and options in life compared to those less familiar with CCRCs (71% versus 66%, $X^2 = 9.63$, $p = 0.008$). Additionally, a significantly greater percentage of respondents "very familiar" with CCRCs indicated that a CCRC lifestyle offered greater opportunities for independence compared to those less familiar with CCRCs (44% versus 37%, $X^2 = 9.54$, $p = 0.008$).

Impact of expectations of residents' experiences.

Respondents' expectations of their family members' experiences residing in CCRCs was a strong influence on the likelihood they would consider a CCRC lifestyle for themselves in the future. Overall experiences focused on four key areas: (1) overall satisfaction with services provided; (2) reputation of the CCRC compared to others; (3) value for fees paid; and (4) willingness to recommend the CCRC to others as a good place to live.

Table 4 compares percentages of respondents who "agree" versus "disagree" that a CCRC offered greater opportunities to meet their future lifestyle needs by the degree that CCRC experiences have met their own expectations. Across all four key areas evaluated, respondents who "agree" that CCRCs provided quality services at good value, have a high reputation, and who are most willing to recommend their family members' CCRCs to others were significantly more likely to indicate that CCRCs afforded greater opportunities for what they may be

Table 4. Comparing Percentages of Respondents Who Feel a CCRC Offers Greater Opportunities for Their Future Lifestyle Needs by the Degree Family Members' CCRC Experiences Meet Their Own Expectations.

Lifestyle Factor	Overall satisfied with CCRC services		CCRC offers good value for fees paid		CCRC has a high quality reputation compared to others		Willing to recommend CCRC to others as a good place to live	
	Agree	Disagree	Agree	Disagree	Agree	Disagree	Agree	Disagree
Personal safety/ security	89%	61%	90%	63%	89%	56%	89%	64%
Social activities	86%	66%	86%	70%	85%	71%	85%	71%
Ability to age in place	80%	57%	80%	62%	79%	61%	80%	59%
Convenience	80%	51%	81%	57%	79%	54%	80%	60%
Staying fit	75%	54%	77%	49%	75%	52%	75%	49%
Lifelong learning	75%	56%	76%	51%	75%	47%	75%	52%
Choices/options	70%	50%	71%	56%	69%	54%	70%	44%
Eating well	68%	46%	70%	44%	68%	43%	68%	45%
Independence	42%	34%	44%	32%	42%	33%	42%	29%

seeking for their own future residential and lifestyle needs compared to single-family homes (p = 0.001).

Likelihood of choosing a CCRC lifestyle.

Thirty-five percent of respondents indicated they would be "very likely" and an additional 41% would be "somewhat likely" to consider a CCRC lifestyle in their future. To what degree respondents felt that a CCRC offered greater opportunities for their future lifestyle needs was strongly associated with the likelihood they may choose a CCRC lifestyle in the future. Of those "very likely" to consider a CCRC lifestyle in their future, nine of 10 respondents indicated that a CCRC lifestyle afforded the greatest opportunities for personal safety and security, social activities, ability to age in place, convenience, staying fit, and lifelong learning in comparison to a single-family home. Also of this group, eight in 10 respondents indicated that a CCRC lifestyle offered more opportunity for choices and options in life and eating well compared to living in a single-family home (**Figure 4**).

Of most interest is the finding that 59% of respondents who were "very likely" to consider a CCRC in their future indicated that this lifestyle offered more opportunity for independence compared to a single-family home. In comparison, 39% of respondents "somewhat likely" and 18% of respondents "unlikely" to consider a CCRC lifestyle felt that CCRCs would meet their needs for independence compared to single-family homes.

Influence of Respondents' Satisfaction with Services Provided on Likelihood of Considering a CCRC Lifestyle in the Future

A stepwise discriminant analysis was conducted to identify what factors predicted respondents' likelihood of considering a CCRC lifestyle in the future. As noted in **Table 5**, the following five factors correctly classified 67% of respondents who would be very likely to consider a CCRC lifestyle for themselves (Wilks' Lambda = 0.96, X^2 = 134.46, p = 0.001):

- Willingness to recommend their family members' CCRC to others;
- Expectations regarding variety of social events;
- Expectations regarding variety of educational programs and activities;
- Expectations regarding appearance of amenity areas; and
- Expectations regarding availability of fitness equipment.

Influence of Respondents' Satisfaction with Services Provided on Willingness to Recommend CCRCs

In addition to understanding how satisfaction with services provided to their family members residing in CCRCs predicted the likelihood respondents may consider a CCRC lifestyle for themselves, it is valuable to recognize how satisfaction with services influenced respondents' willingness to recommend those CCRCs to others.

A significant proportion of respondents (93%) would recommend their family members' CCRCs to others as a good place to live. Understanding what aspects of respondents' satisfaction with and expectations of CCRC services provided to their family members influence their willingness to recommend CCRCs may be beneficial to providers. A second stepwise discriminant analysis was conducted to identify what factors predicted respondents' willingness to recommend their family members' CCRC. As noted in **Table 6**, the following seven factors correctly classified 83% of respondents willing to recommend family members' CCRCs to others as good places to live (Wilks' Lambda = 0.75, X^2 = 902.30, p = 0.001):

- Services provide good value for fees paid;
- Expectations regarding safety and physical security;
- High quality reputation of the CCRC;
- Expectations regarding responsiveness of managers;
- Expectations regarding appearance of amenity areas;
- Expectations regarding variety of social events; and
- Expectations regarding quality of food.

Figure 4. Percentages of Respondents Likely to Consider a CCRC in Their Future by Lifestyle Opportunity.

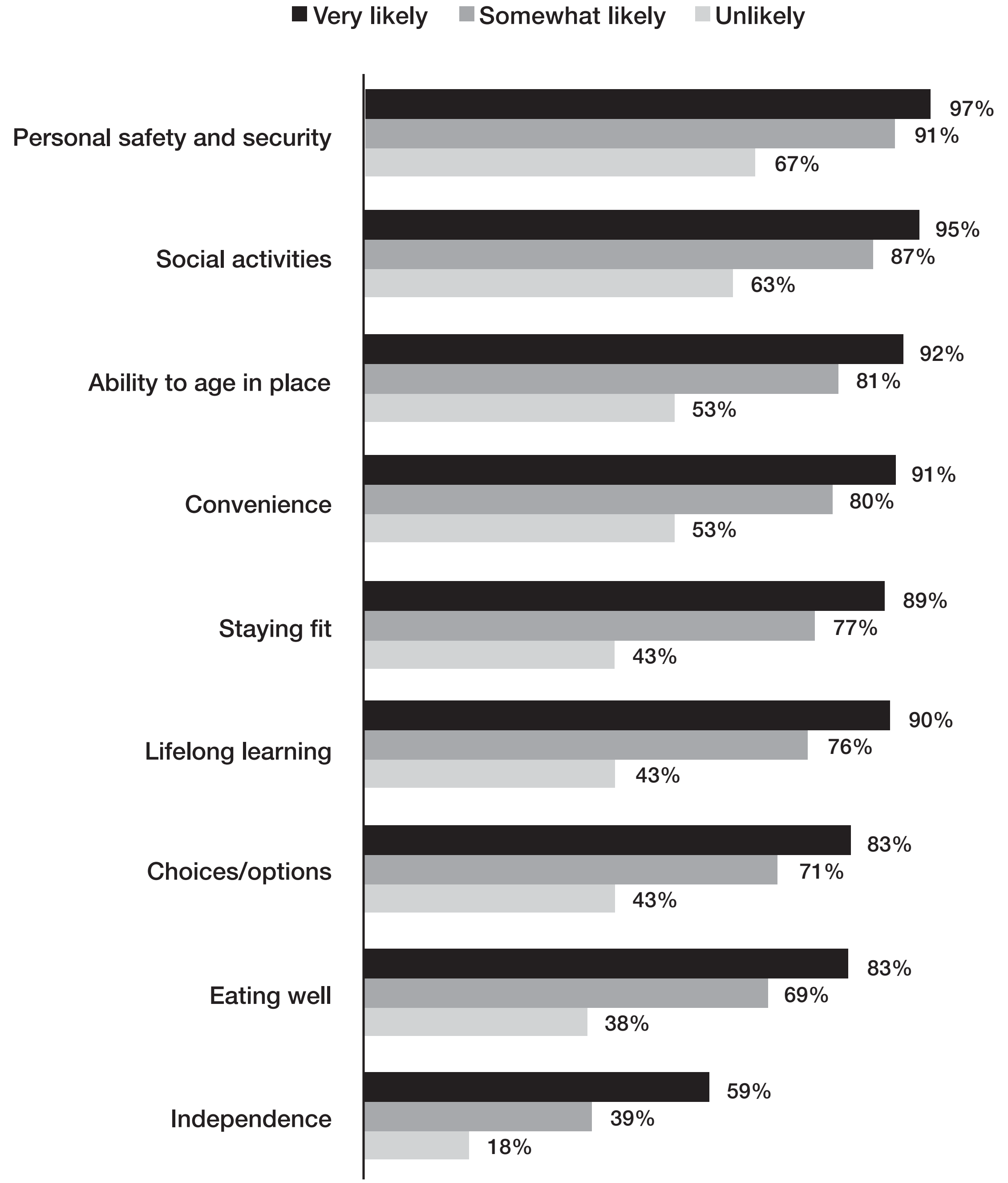


Table 5. Factors Discriminating Respondents' Degree of Likelihood in Considering a CCRC Lifestyle for Themselves.

Factor	Wilks' Lambda	Significance
Willingness to recommend their family members' CCRC to others	0.96	$p = 0.001$
Expectations regarding variety of social events	0.96	$p = 0.001$
Expectations regarding variety of educational programs and activities	0.96	$p = 0.001$
Expectations regarding appearance of amenity areas	0.96	$p = 0.001$
Expectations regarding availability of fitness equipment	0.96	$p = 0.001$

Results: 67% of respondents classified correctly
Wilks' Lambda = 0.96, $X^2 = 134.46$ (*df* = 5), $p = 0.001$

Table 6. Factors Discriminating Respondents' Willingness to Recommend Their Family Members' CCRCs to Others.

Factor	Wilks' Lambda	Significance
Services provide good value for fees paid	0.87	$p = 0.001$
Expectations regarding safety and physical security	0.82	$p = 0.001$
High quality reputation of the CCRC	0.79	$p = 0.001$
Expectations regarding responsiveness of managers	0.77	$p = 0.001$
Expectations regarding appearance of amenity areas	0.77	$p = 0.001$
Expectations regarding social events	0.76	$p = 0.001$
Expectations regarding quality of food	0.75	$p = 0.001$

Results: 83% of respondents classified correctly
Wilks' Lambda = 0.75, $X^2 = 902.30$ (*df* = 14), $p = 0.001$

DISCUSSION AND RECOMMENDATIONS

While generalizing the decision-making characteristics of any group is discouraged and may be considered a limitation of the study, the research findings suggested that CCRCs have an opportunity to target their marketing efforts to those who are more likely to consider the CCRC lifestyle. Given that the average age of CCRC residents is age 81 (ASHA, 2009), the majority of respondents in the present study are about 25 years away from such a decision if current age trends continue. Thus, respondent's current interest in the CCRC lifestyle may not reflect future retirement decisions. On the other hand, with 93% of adult children of current CCRC residents willing to recommend these communities to others, there is a more immediate opportunity for CCRCs to consider residents' children as a strong referral base in addition to targeting current residents.

The results of the 2010 Del Webb Boomer Survey (Del Webb, 2010) support the results of the present study, indicating a growing number of this age cohort plans to move from their single-family homes during retirement, with the concern for future health care being a primary driver of those decisions. According to the 2010 Del Webb Boomer Survey, 42% of 50-year-old respondents planned to move during retirement compared to 36% of 64-year-old respondents. The present survey found that 59% of younger respondents planned to move during retirement compared to 52% of older respondents.

The research showed that certain categories of prospective CCRC residents may be more likely than others to value the CCRC lifestyle. Education appeared to increase the likelihood that a prospective resident will value the CCRC lifestyle for personal safety/security and convenience. While those who were married were significantly more likely to indicate that single-family homes offer independence compared to other respondents, the loss of a spouse inclined one to see less independence in the single-family home than the opportunities for independence a CCRC offers. Though the decision to move to a CCRC was less need-based than a move to higher levels of care, these research findings may lead CCRCs to identify opportunities to connect with market segments reflecting these demographics.

Demographics were not a factor, however, when selecting health programs and services as important. Except for memory support (which respondents ages 53 to 59 were “more likely” to select as important), more than half of the respondents indicated that assisted living, health clinic services, skilled nursing care, physician/professional services, and home health care were important to them. Importance of health services in choosing retirement options was also reported in other studies. In a national survey of adults ages 55 and older, Gibler and colleagues (1997) also found that access to medical services was cited by all age groups as the most important reason in planning to move to a retirement community. Parr and colleagues (1988) found that some of the most important services included emergency assistance, a life care option, and an onsite skilled nursing center. Kichen and Roche (1990) reported that the availability of long-term care and health services to maintain one’s health were some of the most important factors impacting the decision to move to a CCRC.

As regulatory requirements in certain states (e.g., California) challenge the development of new communities with health care on site, senior living providers may increasingly find it difficult to meet these preferences. Some senior living providers have found it beneficial to develop contractual relationships with long-term care providers proximate to their communities rather than providing the services on site.

Because of the importance of health programs and services to the respondents, CCRCs may wish to focus resources on ensuring that family members are familiar with the care, services, and amenities available within their community. The respondents’ degree of familiarity with CCRCs was directly influenced by the experiences with services and care provided to their family members. Not surprisingly, adult children whose family members have lived only in independent living may not be familiar with the depth and breadth of additional services available across the continuum.

According to the study findings, increasing health care needs was the most significant reason across all age groups of respondents that would prompt a move from their current home after retirement. Corroborating this finding, the American Seniors Housing Association (2011) conducted a survey of adult children of residents in a variety of senior living settings and reported that 66% of adult children “would only consider a move to a senior living community at a point when they needed assistance with daily living”; however, findings from the present study suggested that CCRCs may be able to influence prospective residents to value the CCRC lifestyle in advance of health care needs by providing quality care and services and proactively educating those whose loved ones are served.

The American Seniors Housing Association study (2011) indicated that 90% of respondents would be "very likely" or "somewhat likely" to consider the CCRC lifestyle. Findings of the present study reinforced that the degree of familiarity with CCRCs influenced respondents' feelings about what a CCRC lifestyle may offer compared to a single-family home. Nationwide, the penetration rate of CCRCs is well below 10% (National Investment Center, 2010), so for most CCRCs, the single-family home is the most significant competitor to successfully filling independent living units. Since a significantly greater percentage of respondents "very familiar" with CCRCs felt that a CCRC lifestyle offered greater choices and options in life compared to those less familiar with CCRCs, a CCRC's strategic marketing efforts may be directed to all adult children in order to increase familiarity with their contract, their programs, services, and amenities.

Additionally, the study findings pointed to the importance of meeting the expectations not only of residents but also of residents' family members. Understanding that satisfaction with programs and services may predict the likelihood of a respondent's own consideration of the CCRC lifestyle for themselves should inform a provider's strategic initiatives. Prawitz and colleagues (1995) surveyed CCRC residents who had moved to their communities within the past year and found that satisfaction with aspects of care was the strongest factor predicting their satisfaction with their choices of CCRCs. According to results of the present study, satisfaction with five key areas influenced the likelihood respondents would consider a CCRC lifestyle in the future. Has the CCRC built relationships with family members such that they are recommending the CCRC to others? Is the CCRC's programming related to social activities and lifelong learning robust? Moschis and colleagues (2005) also found that wanting "more social contacts and activities" (p. 104) was a top reason for moving into a retirement community across all age categories (ages 55 to 64, 65 to 74, and 75+). These findings highlighted the importance of meeting family members' expectations surrounding the variety of social events and educational programs and activities, the appearance of amenity areas, and the availability of fitness equipment. Note, too, that respondents' expectations of their family members' experiences residing in CCRCs was a strong influence on the likelihood they would be likely to consider a CCRC lifestyle for themselves in the future. This finding applied to all four key areas evaluated: overall satisfaction with the CCRC services, belief that the CCRC offered good value for fees paid, agreement that the CCRC had a high quality reputation compared to others, and, finally, willingness to recommend the CCRC to others as a good place to live. CCRCs that have typically not gathered contact information for adult children may find it strategic to do so, not only to survey the opinions of family members but also to facilitate their understanding of the community, the importance of which was noted earlier.

Finally, family members' satisfaction with services affected their willingness to recommend CCRCs to others as a good place to live. Seven factors predicted respondents' willingness to recommend their family members' CCRCs to others. These factors focused on value of services, safety and security, the reputation of the CCRC, expectations targeting responsiveness of managers, appearance of amenity areas, variety of social events, and quality of food. These findings may reflect a potential marketing initiative. Since a significant proportion of respondents would recommend their family members' CCRC to others, opportunities to encourage their recommendations may prove beneficial. Whether incentives provide benefit to their loved one or benefits reward the family member when they visit, this willingness to recommend is one to harvest.

CONCLUSION

With the first wave of boomers having turned age 65 in 2011, the need is more pressing than ever for senior living providers and other key stakeholders to understand the thinking of this and subsequent groups of future retirees to determine the best means to address their growing desire for innovative, high quality, value-added services and care options. A significant percentage of respondents (77%) would be "likely" or "very likely" to consider a CCRC lifestyle for their own future, and the majority of these respondents indicated their loved ones' experiences living in CCRCs influenced their interest "to a great extent." It is incumbent upon senior living providers to involve, educate, and connect to these advocates to both market the current CCRC lifestyle to prospective residents and to continually learn what will be the next iteration of the CCRC model for the future generations.

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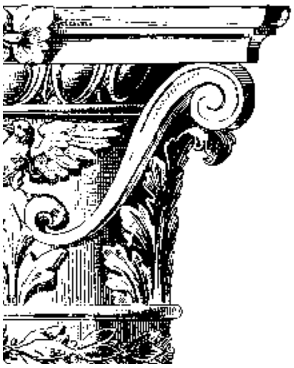
Special Commendation



Measuring Success in Seniors Housing Sales: Prospect-Centered Selling^{SM} with the “Stages of Change” Model

David A. Smith and Alexandra Fisher

ABSTRACT

Prospect-Centered Selling,^{SM} when compared to transactional selling, can produce higher “visit-to-close” conversion ratios. The incremental gains from this approach appear to correlate the strongest with higher-functioning independent and assisted living prospects, the ones who are not forced to move due to an immediate crisis. This observation is supported by sales results from eight lease-up campaigns. Prospect-Centered Selling correlates success with meaningful prospect “advances” as well as other sales behaviors that are not considered relevant to the transactional sales model used by most seniors housing providers. For example, sales behaviors that anecdotally appear to contribute to the success of Prospect-Centered Selling include spending more time in the “Selling Zone,” building trust by asking more and better questions, personalized creative follow-up, and planning advances along a series of distinct “Stages of Change.” Further research is needed to properly assess the extent to which each of these factors impacts the visit-to-close ratio and overall sales results.

"In baseball, a hitter should be measured by his success in that which he is trying to do, which is to create runs…Because that was not obvious, at least to the people who ran baseball, Bill James smelled a huge opportunity." From *Moneyball* (Lewis, 2004, p. 76).

INTRODUCTION

How Should We Measure Seniors Housing Sales Success?

In October 2011, the sales team at Quail Ridge[1] invested four hours assessing readiness and planning options for a strategic advance, and engaged in a home visit with Ed and Rozine, a higher-functioning[2] couple who were one of 74 active leads. Ed and Rozine accounted for one of many advances achieved by the Quail Ridge sales team. Specifically, the home visit resulted in an advance along the readiness continuum, from thinking about the problems of staying in their house to planning for a possible move. The advance was evidenced by a commitment for a return tour to consider a trial stay. Did the sales team's investment with Ed and Rozine and the resulting advance contribute to Quail Ridge's success? The answer depends on what assumptions drive the sales model and how one measures success through the lens of that model.

Comparing the relative strengths of Prospect-Centered Selling^{SM} and transactional selling, the central questions considered in this article are: What sales behaviors and what outcomes contribute to incrementally increasing sales conversion ratios, especially with higher-functioning residents? Specifically, can these behaviors and outcomes be identified, tracked, and measured to assess progress toward a move-in decision?

In *Moneyball*, author Michael Lewis illustrates how Oakland Athletics manager Billy Beane challenged the conventional model used by baseball insiders to evaluate success.[3] Prospect-Centered Selling could give providers that rely solely on a transactional model a "huge opportunity" for increased sales, just as Beane did for baseball owners when he changed the way they consider what makes a successful hitter.

The Transactional Model in Seniors Housing Sales

Ed and Rozine, like nearly every prospect who inquires about seniors housing, are struggling with serious problems that negatively affect their quality of life. Their problems involve chronic health issues as well as unmet needs associated with personal safety, lack of socialization, poor nutrition, the strain of spousal caregiving and home maintenance. From a logical perspective, all their needs could be satisfied in an independent or assisted living community. Ed and Rozine, however, like most similarly situated prospects, believe that they have a postponable decision and that they just "aren't ready yet."

Many providers use a transactional sales model to communicate the benefits of seniors housing to prospects like Ed and Rozine. According to Tim Smith, "Transactional selling methodologies focus on matching customer needs with supplier [product or service] offerings. Sales activities that are incorporated as routines…include asking questions to uncover customer needs; making offers; handling objections; [and] closing sales…The methodologies convert sales

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[1] We co-own Quail Ridge Senior Living in Oklahoma City, with sales oversight by One On One. It is a 127-unit independent and assisted living community. The Quail Ridge results are consistent with data from seven other sales campaigns. A summary of the data is included in Tables 1 and 2 to follow.

[2] As used herein, "higher-functioning" is a relative term that refers to independent and assisted living residents who require little or no ongoing assistance with activities of daily living. For example, despite a variety of illnesses, Ed and Rozine are ambulatory, require no medication management, and no assistance with other activities of daily living. Rozine still drives, and both are still involved with outside community activities.

[3] For example, Beane felt that statistics such as batting averages and runs batted in, typically used to evaluate hitters, were misleading. Instead, statistical analysis demonstrated that on-base and slugging percentages were better indicators of offensive success because they correlated with total runs scored and games won. By analogy, this article considers indicators of sales success that include prospect advances that are not typically identified or valued by seniors housing providers.

activities into routines in order to drive the selling cycle to a minimum number of points of contact with individual customers" (2006, p. 76). [In seniors housing,] "where the likelihood of a prospect's becoming a repeat customer is low, [transactional sellers] combine persuasion and pressure to drive toward closure in the shortest amount of time" (Smith, 2006, p. 77).

In an effort to enhance the matching process, some transactional seniors housing sellers have created prospect connection sheets and systems to direct sales counselor questioning (Bild, 2010). This system includes directly asking the prospect to assess their own level of urgency. Another transactional variation provides guidelines to help build trust so that the prospect will more openly share hidden and undisclosed needs. This "Value Match Selling" also involves asking the prospect to prioritize which needs they value most in the decision-making process (Nowell, 2006). The prospect's stated priorities and values then drive the matching process.

Transactional sales models view success from the perspective of how the transaction is progressing toward a move-in decision. Four milestones are typically tracked and measured: inquiry, initial tour, deposit, and move-in. The most widely used seniors housing lead tracking and sales monitoring systems (e.g., REPS, Move-In, You've Got Leads, and Yardi) employ this model. They are set up to measure and report the number of sales activities (primarily call-outs, tours, and deposits) based on the assumption that the level of sales activity directly correlates with and is a useful predictor of the prospect's progress through a "sales pipeline" (Jobber & Lancaster, 2009, p. 371). Transactional sales pipeline reports are used to prioritize sales resources based on these four milestones. The highest priority is given to "new" inquiries (typically those who have inquired within the past 30 days). All new prospects are considered "hot" while those in the pre-tour and post-tour categories are further classified as "hot," "warm," or "cold" based on a perceived urgency to move.

In seniors housing, transactional selling can be effective with professional referral sources, perhaps because these interactions resemble business-to-business sales. It also can be used effectively with some higher acuity offerings, especially those that are necessitated by ongoing health needs such as Medicare and Medicaid skilled nursing, short-term rehabilitation, and later-stage memory care[4]. Some focused adaptations of the transactional approach are said to produce better-than-industry-average lead-to-visit ratios (Bild, 2010; Nowell 2006). Finally, transactional selling also can be effective with those prospects in the later stages of readiness (Prochaska, 1995, p. 39; Miller & Rollnick, 2002, pp. 133-138); i.e., prospects who have already made the decision to move and are actively choosing among competing communities.

Prospect-Centered Selling

Brian Tracy (2004) identifies four prerequisites that he believes must be met prior to closing any kind of sale. They are:

- The customer must be able to afford the product or service;
- They must be able to use it (in seniors housing, this generally relates to their health qualifications);
- They must need it; and
- They must want or have a desire for it.

All seniors housing sales models employ techniques to ensure that active prospects are financially and health qualified for their communities. Transactional selling focuses on identifying unfulfilled prospect needs that are then matched to features and benefits. It assumes that the prospect (or adult child inquiring on his or her behalf) is ready and willing to move. Unfortunately, this is rarely the case with higher-functioning prospects.

Given the incredible benefits that seniors housing offers, one could argue that every qualified prospect should want to move and that providers should not

[4] Since these types of higher acuity offerings tend to be more standardized and more demand driven, there is less need to personalize the sales activity (Homburg et al., 2011).

need to sell. But there is strong emotional resistance toward age-segregated, congregate living. The resistance is real and firmly grounded in societal ageism as well as what Solie (2004, p. 17) refers to as each older adult's personal "developmental agenda." According to Solie, this agenda places a strong premium on preserving the status quo in order to maintain whatever control each older adult has left (2004). Therefore, even as higher-functioning prospects like Ed and Rozine experience an inability to continue maintaining their house or perform necessary caregiving, they nevertheless continue to resist and postpone moving. Like Ed and Rozine, most higher-functioning senior adults across the country also resist moving until some health or other crisis forces them to do so. As a result, total U.S. market penetration for seniors housing is less than 10% of those who are qualified and who would benefit from moving into independent or assisted living communities (NIC, 2007).

A consequence of this strong emotional resistance is that converting higher-functioning prospects is difficult. Initially, they require personalized strategic planning and more selling time because they are not open to considering a move anywhere until their negative preconceived ideas about seniors housing, along with their developmental and emotional resistance, have been addressed. Attempting to sell product benefits too soon before fully addressing these issues disrupts and delays the decision-making process and promotes objections (Rackham, 1988, p. 117). Moreover, the prevailing use of transactional selling early in the sales scenario usually results in what Solie calls "uncoupling" (Solie, 2004, pp. 80-84), which is the prospect's way of disconnecting emotionally. Once a prospect uncouples, transactional sales counselors typically classify them as "cold," and then turn their attention to newer leads and other prospects who seem to express more urgency.

Prospect-Centered Selling[5] is customer centered rather than product centered.[6] The style is characterized by personalized selling designed to help qualified prospects embrace whatever change may be necessary to enhance their quality of life. The role of the sales counselor is to help the prospect through a difficult life transition. The approach is to align with the prospect in a non-judgmental way, build trust, discover who they are, and assess the extent to which they are ready to change. Rather than trying to convince or persuade, Prospect-Centered Selling relates to the prospect in a manner that is collaborative, evocative, and reflective.

In the early stages of readiness, prospect-centered sales counselors invest time building relationships, learning the prospect's life story, and planning purposeful initiatives designed to help them confront their emotional resistance. In later stages of readiness, however, Prospect-Centered Selling shifts toward a more transactional approach. While there is a small number of older adults that purposefully seek seniors housing as a solution to their current difficulties before a crisis, most do not. Accordingly, the opportunity to convert higher-functioning prospects like Ed and Rozine with transactional selling is minimal. In a transactional seller's lead base, most higher-functioning prospects are relegated to the "cold" status until there is a health crisis that forces a move. Homburg et al. (2011) point out that implementing a customer orientation and adapting each sales presentation to the needs of the customer instead of using a "one size fits all" style presentation

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[5] For a comparison of transactional and Prospect-Centered Selling, see Table 3.

[6] Several empirical studies support the existence of a positive relationship between customer orientation and positive sales results (e.g., Brady & Cronin, 2001). Homburg et al. (2011) define "salesperson customer orientation in sales encounters" as the "degree to which a salesperson identifies and meets customer needs and interests in the different stages of a sales encounter. By identifying and satisfying customer needs, customer-oriented salespeople create customer value and increase the attractiveness of a firm's offering and thus is a strong direct predictor of customer purchasing intentions." They also found that, in general, customers are willing to pay more if the salesperson possesses "a profound knowledge of their needs."

requires a lot of time. This may affect salesperson performance in terms of potential lost opportunity costs. Salespeople who spend more time per customer reduce the total number of customers they can serve.

Nevertheless, Homburg et al. concede that investing more time per customer is justified for businesses, like seniors housing, "which offer[s] highly individualized products, products which are of greater importance to their customers, and that are positioned at a higher price point." Moreover, while Prospect-Centered Selling encourages spending more time with prospects in the early stages of readiness, there is no reason to believe that the approach converts any less of the urgent or crisis-driven prospects in their lead base. The fact that Prospect-Centered Selling calls for a shift into a transactional selling mode for prospects in the planning and action stages should help minimize any potential lost opportunity costs.

Using a Stages of Change Model with Seniors Housing Prospects

A limitation of using the four-phase transaction-based sales pipeline (namely, inquiry, initial tour, deposit, and move-in) is that it does not offer any guidance about how to facilitate decision-making once a prospect becomes "cold" other than to simply stay in contact, usually with multiple bulk mailers, event invites, and status-check calls. Once a prospect becomes "cold," transactional sellers often resign themselves to waiting for some health crisis to force a move and turn their attention to someone that has more urgency.

Prioritizing based on urgency, however, can be costly because prospects who have the most urgency are nearly always the ones who have the highest acuity. Independent and assisted living providers can reasonably expect that due to a higher level of nursing and personal care needs, lower-functioning residents will create the most demands on operational staff. They also may have the shortest expected length of stay, and depending on how they appear to other higher-functioning and more independent prospects, these high acuity residents also could have a negative impact on future marketing. Thus, focusing resources on the most urgent prospects (the "hot" or priority leads) can be counterproductive.

To address this issue, One On One adopted a different strategic view of prospect advances using a "Stages of Change" model.[7] This model supports and reinforces Prospect-Centered Selling. A Stages of Change model offers an integrative framework for understanding the process of incremental behavior change. It provides distinct screening filters for determining where a prospect is on the readiness for change continuum.[8] At any time during the sales process, each prospect's behavior and statements are associated with one of four stages of "readiness": denial, thinking, planning, and action. The nomenclature and forthcoming examples reflect One On One's adaptation of the model for use by seniors housing sales counselors.

[7] James Prochaska, John Norcross, and Carlo de Clemente developed The Stage of Change or Transtheoretical Model. A good overview can be found in their book *Changing for Good*, which was published by Harper Collins in 1995. The three authors are clinical psychologists, university professors, and research collaborators who have conducted more than 50 different quantitative studies on thousands of individuals to discover how people overcome problems such as smoking, alcohol and drug abuse, stress management, weight control, and others. Their theories have been tested, revised, and improved through scores of empirical studies. One On One has adapted their six-stage model into a four-stage model. The Quail Ridge fill campaign in September 2011 was the first time that One on One integrated the Stage of Change model into Prospect-Centered Selling.

[8] Note that the model is focused on the prospect's state of readiness and not that of his/her adult child or other decision influencer. With higher acuity, crisis-driven prospects, adult children often make the initial inquiry. They usually present themselves as the decision-makers and represent the prospect as being in either the planning or action stage. Transactional sellers, who frequently prefer to deal with the person showing the most urgency, run the risk of mistakenly assuming that the prospect is ready for action. Unfortunately, higher-functioning prospects, usually the true decision makers, nearly always lag far behind.

Stage 1 – Denial.

Prospects in this stage minimize or deny problems or difficulties in their current living situation. They are generally not aware of the disparity between how they are living and what they value. They express little urgency, and often the initial inquiry comes from an adult child or other decision influencer. The first response by the prospect to questions about his/her current situation is usually defensive.

Stage 2 – Thinking.

Prospects in this stage are more aware of their problems and more willing to explore how those problems are negatively affecting their quality of life. They are looking for validation that their concerns are being heard and understood. Their focus is generally on the past. They begin to show some ambivalence about moving but still resist and procrastinate. Negative preconceived notions and fears about losing control often paralyze prospects in this phase. Many behave as if they are waiting for something magical to happen that will take them back to better times.

Stage 3 – Planning.

Prospects in this stage become more open to explore future solutions. They are still ambivalent, but the focus shifts from *whether* to change to *when* they will be ready to act on acknowledged problems and difficulties. "Pro-Change talk" (Miller & Rollnick, 2002, p. 76) increases and they may begin to ask what they can do to improve their situation.

Stage 4 – Action.

In this stage, prospects have decided that they will move within the foreseeable future and may even have made specific commitments to begin the moving process. They may or may not have decided on where they will move to and if so, will be actively comparing features and benefits at more than one senior community. Other decisions that need to be made by prospects at this stage include committing to a moving plan, choosing a particular apartment, committing to a move-in date, or making a deposit.

Unlike transactional selling, where there is constant pressure to move the prospect from tour to deposit, the Stages of Change model provides helpful guidelines for incrementally advancing prospects from one stage to the next.[9] No single stage is considered to be more important than another. Depending on what triggers the initial inquiry, prospects can start out at any one of the four stages. In general, the more crisis driven and higher acuity the prospect is, the more ready and the closer to the action stage he/she is likely to be. Linear progression through all the stages is considered possible but very rare. Prospects frequently move back and forth from one stage to another, even during the same conversation. Nevertheless, strategic milestones for each stage indicate that the prospect has, at least for the moment, advanced to a new stage of readiness.

In the early stages (especially the denial and thinking stages), the guidelines encourage sales counselors to invest the time necessary to build trusting relationships, evoke life stories, and address emotional resistance with Motivational Interviewing (Miller & Rollnick, 2002) and other questioning techniques before offering product-based solutions. This focus encourages formation of an emotional connection between the sales counselor and the prospect that helps facilitate and inspire self-awareness, self-persuasion, and a dampening of emotional resistance. According to Solie (2004, p. 82), these emotional connections also provide a basis for reconnecting after a prospect uncouples. It is precisely because nearly all higher-functioning yet "cold" prospects like Ed and Rozine are stuck in these early stages that Prospect-Centered Selling gains an incremental advantage over transactional selling. On the other

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[9] See Table 4.

hand, the failure to seek an appropriate commitment with prospects who are ready to move is detrimental (Prochaska, 2002, p. 39) not only to the provider but, more important, to the prospect as well. Accordingly, a truly prospect-centered orientation requires a shift in the sales approach for prospects who have reached the planning and action stages.

Product differentiation and value matching of needs and benefits, while counterproductive in the early stages, does become important for prospects in the planning and action stages. Miller and Rollnick (1991, p. 203) have called this "Phase 2 of Motivational Interviewing." The counselor's job changes "from one of motivating change to a more action-oriented role." This is when Prospect-Centered Selling most clearly resembles transactional selling, and the objective is to gain a commitment for the sale. Sales counselors who excel at closing prospects in the action stage might be compared to baseball hitters who score runs with men on base. By analogy, facilitating prospect advances in the early stages of change is like putting runners on base and into scoring position.

One significant observation is that when sales counselors have succeeded in building trusting relationships with higher-functioning prospects like Ed and Rozine, their demonstrated concern for the prospect's well-being in the early stages of change may be one of the most important factors that differentiates their community from all others.

Comparing Conversion Ratios

Sales conversion ratios are commonly used as an indicator of sales effectiveness. The seniors housing industry recognizes two primary ratios. The first is the percentage of qualified inquiries who have had at least one tour or home visit. While commonly known as the "inquiry-to-tour" ratio, we prefer the term "lead-to-visit" ratio.[11] The second, commonly known as the "tour-to-close" ratio, is referred to as the "visit-to-close" ratio.[12] We observed that especially with higher-functioning prospects, obtaining a move-in commitment, even if they have toured the community, is a more difficult, less predictable, and more time-consuming process than getting them in for an initial visit. This observation is consistent with Rackham's (1998) findings about sales success in "large" transactions. Accordingly, we contended that achieving a higher visit-to-close ratio is more critical to increasing sales results, especially with higher-functioning prospects like Ed and Rozine.[13] The best available data indicated typical conversion ratios for independent and assisted living and are shown in **Table 1**.

At Quail Ridge and seven other sites, Prospect-Centered Selling helped produce visit-to-close conversion rates that were considerably higher than typical communities (compare Tables 1 and 2).

A direct comparison of the sales results at Quail Ridge with reported industry ratios is challenging. This is due in part to the fact that the terminology embedded in the key conversion ratios is not standardized in the industry. In addition, data

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[11] Many providers refer to this ratio as the "lead" or "inquiry-to-tour" ratio. In calculating the ratio, we only count as "leads" prospects that we have no reason to believe are not qualified. In calculating this ratio, "Visits" include all initial face-to-face visits whether by walk-in, tour, or home visit.

[12] In calculating this ratio, "visits" include all initial face-to-face visits, whether by walk-in, tour, or home visit. We do not include repeat visits in the ratio. While repeat tours and home visits are an important part of the selling process, we do not view them as having any strategic or predictive value. Rather, they are viewed as only one of many tactics or sales behaviors that can be used to advance prospects toward a decision to move. Other commonly used tactics include participation at onsite educational or social events, attendance at a scheduled resident event, trial stays, conversations and meetings with adult children and other decision influencers, and personalized creative follow-up.

[13] For a contrary view, compare Bild (*Zero Lost Revenue Days*, 2010), who relies on a transactional, product-centered sales approach. She contends on page 34, "The number one most important skill factor required to drive occupancy is to get more people in the door." Also, on page 26: "Everyone can close a prospect once on site, it's getting them in the door that's the difficult part!"

Table 1. Typical Sales Conversion Ratios.[14]

Qualified Leads Assume 100	Typical lead-to-visit by % and number who have been face-to-face	Typical visit-to-close by % and number of closes
Independent Living	35% = 35	20% = 7.0
Assisted Living	45% = 45	22% = 9.9

samples we compiled for properties were very small. **Table 2** shows average Prospect-Centered Selling conversion ratio results we compiled during eight different sales campaigns. Based on this limited sample and our observations at dozens of consulting sites, the visit-to-close ratios achieved utilizing Prospect-Centered Selling appear to be better than ratios reported at typical independent and assisted living.[15]

In addition, the sales results showed that only a small percentage of the units were leased by prospects facing an immediate crisis. For example, at Quail Ridge only three of the 21 prospects who moved in needed any help with medication management or with activities of daily living. Also, none were discounted from published rates. This suggested that Prospect-Centered Selling at Quail Ridge and other selling sites resulted not only in better visit-to-close ratios, but that it also produced high-functioning residents. While any number of factors could account for these results, use of Prospect-Centered Selling is one plausible distinction.

Perhaps a more important question, however, is not so much how much better one selling style is than another, but rather, what are the vital behaviors and outcomes that contribute to producing better visit-to-close ratios with higher-functioning prospects?

Vital Behaviors That Contribute to Better Results

A vital behavior is a high-leverage action that will directly lead to the results we desire (Patterson et al., 2008 p. 23). While others were fixated on batting averages, Beane, after an exhaustive review of available data of total runs produced, concluded that the vital behavior of a batter is simply this: "on-base percentage and slugging percentage. Everything else is far less important" (Lewis, 2004, p. 127). Similarly, while transactional sellers count and track pre- and post-tour status, perceived prospect urgency, and the number of sales activities, Prospect-Centered Selling indicated that counting and tracking prospect advances along the readiness continuum might

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[14] Data compiled from more than 100 different independent and assisted living communities by NIC (NIC 2011 Regional Symposium; *Select Seniors* Housing Sales & Marketing Statistics) and presented by Tony Mullen at Annual Advanced Sales & Marketing Summit For Seniors Housing, December 2011. Margaret Wylde and ProMatura Group are conducting a new, more comprehensive industrywide study.

[15] Anecdotally, this inference appears consistent with improved sales results reported by several companies that adopted Prospect-Centered Selling. One company, which operates six small assisted living communities in the Midwest, reported an increase from the six properties from 37 to 65 new leases per month within 90 days following the initial training. Another, which operates 11 high-end Independent Living in the Northwest, reported that their companywide visit-to-close ratio increased from 18% to 38% and produced an increase of 221 leases companywide (from 442 to 663) as well as a 60% reduction in vacancy costs in the year immediately following initial training.

Table 2. Prospect-Centered Selling Conversion Ratios.[16]

Qualified Leads	Lead-to-visit by % plus number of visits per every 100 leads	Visit-to-close by % plus number of closes per every 100 leads
Average One On One Independent Living	70% = 70	51% = 35.7
Average One On One Assisted Living including Quail Ridge	75% = 75	60% = 45

provide a better indicator of sales success.[17]

Most senior prospects view moving to an independent or assisted living community as a decision that should be postponed for as long as possible. Accordingly, only a very small percentage of prospect interactions result either in a sale or in a request to be deleted from the lead base. The overwhelming number of prospect contacts result instead in what Rackham calls "continuations" (those "interactions where there is no commitment or progress toward a decision by the prospect") or "advances." According to Rackham (1988, p. 44-45), advances occur "when an event that takes place, either during a call or after it, that moves the sale forward toward a decision…by understanding what kind of advance would be required to make a call successful, top sales people set…closing objectives that move sales forward." The most successful sales counselors, according to Rackham, are those who can convert continuations into advances (Rackham, 1988, p. 44-46). Advances in the early stages of change are the sales equivalent to baseball's on-base percentage since they set up additional opportunities for closes later in the selling process.

As with on-base percentages in baseball, striving for advances with any particular higher-functioning prospect may or may not result in a sale. But selling to seniors, like baseball, "is a game of probabilities and you could shift the probabilities slightly, but not perfectly, in your favor. Individual [results] are a crapshoot; luck rules, bad luck kills, and individual performances can overcome all other factors" (Lewis, 2004). The critical fact is that a consistent focus on advances with higher-functioning prospects like Ed and Rozine provides a much greater overall probability of achieving better visit-to-close conversions.

The vital behaviors and outcomes associated with advancing high-functioning prospects through the denial and thinking stages are based on the following assumptions:

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[16] Each of the eight campaigns consisted of three to four months of our hands-on, Prospect-Centered Selling at communities located in the Midwest. Four of the campaigns were at independent living communities, and four others, including Quail Ridge, were assisted living. During these eight campaigns, there were 808 independent living units and 363 assisted living units leased. Two were initial fill campaigns from the time of opening, two others were communities that were still in a fill mode two to three years after opening, and four were at turnaround communities that had been opened more than 20 years earlier.

[17] To date there are no reliable data that track and compare the number of advances or the visit-to-close ratio. We currently manually record and track advances along with other relevant behaviors and outcomes. We are also developing new sales tracking software designed to record and track the number of advances, time in the "Selling Zone," prospect profiles drawn from journal notes, Stages of Change assessment, and personalized, creative prospect follow-up.

1. Time in the "Selling Zone" is directly correlated with prospect advances.

Data compiled from Quail Ridge suggested that the amount of time invested in relevant sales activity (rather than the number of activities) increased the number of advances. By inference, this in turn appeared to directly impact the visit-to-close ratio and hence the total number of sales. This is a critical factor that should be measured and tracked. More time can be invested by adding additional sales staff or by delegating non-sales functions. We define time in the Selling Zone to include only time spent face-to-face, voice-to-voice, planning for meaningful advances, and sending creative, personalized follow-up. Several things differentiate this approach:

- It assumes that the relevant factor to measure is time invested, not activities.[18] Per Rackham, "In small sales it is generally desirable to keep the transaction time short; in larger sales—for a whole variety of reasons—a shorter transaction time has few advantages and many penalties" (1998, p. 33). During the Quail Ridge fill campaign, the sales team invested an average of 20 hours per close in the Selling Zone.
- Of the Selling Zone time invested at Quail Ridge, roughly half (on average 10 hours per close) was spent assessing the prospect's situation and planning for meaningful advances. Assessing the prospect's readiness and formulating a meaningful objective for the next advance, while difficult and time consuming, may have a positive correlation with advances into later stages of readiness.
- As we used it, time in the Selling Zone, however, does not include time spent on any number of things that in another context might be considered selling. For example, it does not include time spent on marketing, community outreach, public relations, administrative duties, or reporting and dealing with resident issues, move-in paperwork, or coordination after receipt of a deposit.

2. Asking more and better questions helps the sales counselor address underlying emotional resistance.

As Willingham says, "People are more apt to trust and open up to you when you listen to them, care about them, and have a sincere desire to understand them" (2003, p. 24). Based on a review of more than 500 mystery shop calls during 2011, we found that the average number of questions asked by sales counselors (other than typical health- or financial-qualifying questions) was only three. Only 15% of the sales counselors asked for the prospect's name. Less than 9% asked about problems in the current living situation, and only 3% asked about the prospect's life story. Most counselors, after a couple of qualifying questions, turned to prescripted statements touting the community's features and benefits.[19]

The most helpful questions for prospects who are still ambivalent about moving anywhere (those in denial or thinking stages) seem to relate to the prospect's personal life story or "legacy," as described in *How to Say It to Seniors* (Solie, 2004). It also appears that until there are clear signs that the prospect is "ready" to move somewhere, questions also need to address problems and difficulties in the current living situation as well as the implications and consequences of those problems (Rackham, 1988). A Prospect-Centered Selling approach encourages the sales counselor in the early stages of readiness to build trust by aligning and collaborating with the prospect to confront emotional barriers before trying to persuade or convince using product-oriented benefits. Life stories, as well as wandering and repeated

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[18] "Too often, sellers think activities such as giving presentations, making sales calls, or submitting proposals constitute the major milestones of a sales strategy. While these activities are important to making a sale, they are inadequate if they are not balanced with some measure of milestone which memorializes the customers' perspectives." (Huthwaite Asia Pacific, founded by Neil Rackham, *Pipeline Management*, http://www.huthwaite.com.au/pipeline-management.html)

[19] These results are consistent with Wylde and Smith's (2004) more extensive study.

conversations, often reveal important themes and provide meaningful clues (to the sales counselor and to the prospect) about what the prospect values, what motivates them, and what they fear (Solie, 2004, pp. 60-85). Unlike trying to meet quotas for sales tasks and activities, exploring the prospect's life story also appears to help generate achievement drive, motivation, and excitement with the sales team (Willingham, 2005, pp. 106-119). Success in asking more and better questions can be measured qualitatively by compiling a prospect profile drawn from a purposeful review of sales journal entries to see how much of the prospect's problems and life story have been captured.

3. Use personalized, creative prospect follow-up.

It also appears that personalized, surprising, and proactive selling initiatives can help generate prospect responses at every stage of change and even from otherwise "cold" prospects like Ed and Rozine (Levinson, 2007). This is an underutilized sales tactic. Each creative follow-up should resemble a personalized outreach campaign targeted to an individual prospect. Examples include a variety of customized initiatives tailored to the prospect's personality, interests, and concerns such as sending resource books, writing a poem, delivering a meal, solving a home maintenance problem, developing a personalized moving plan, or sending something that reflects the individual's unique life story. Every prospect contact or sales journal review can be seen as an opportunity for creative follow-up. Used frequently and consistently, creative follow-up can help create more opportunities for additional face-to-face encounters and for emotional breakthroughs.

4. Invest more time planning strategic advances for individual prospects.

Prospect-Centered Selling strives to build relationships and seek discovery to properly assess the prospect's situation—especially in terms of their state of readiness. In turn, the assessment helps provide a road map to develop meaningful strategies and tactics to help prospects overcome emotional resistance and advance toward a decision. Prospect-Centered sellers find it helpful to engage in group sales planning before and after each prospect contact. We use a case study format and interactive group format. The planning process is focused, deliberate, and considers biographical and motivational information before turning to sales history or developing strategic action plans.

CONCLUSION

Prospect-Centered Selling, when compared to transactional selling, may achieve higher visit-to-close conversion ratios, as indicated by data collected from Quail Ridge and other sales sites. Since there is less difference between how these two selling models approach prospects in the action sage, the incremental benefit of Prospect-Centered Selling appears to be greatest with higher-functioning prospects who are in earlier stages of readiness.

Rigorous statistical analysis eventually supported baseball manager Billy Beane's theory that on-base percentage is one of the best indicators of offensive success. Prospect-Centered Selling values sales behaviors that increase the number of advances by spending more time in the Selling Zone, asking more problem and legacy questions, planning for incremental gains along a continuum of readiness, and consistent use of personalized, creative follow-up. Unfortunately, unlike on-base percentage, most seniors housing providers generally do not measure these criteria. Additional research will be needed to:

- Provide a uniform language to define inquiries, tours, visits, and sales as used to compute sales conversion ratios.
- Develop a lead tracking system that can track time in the Selling Zone and relevant prospect advances.
- Correlate data from a statistically significant number of seniors housing sales transactions to determine the correlation, if any, between higher conversion ratios and any or all the following:

repeat tours, home visits, prospect advances from distinct and well-defined stages of readiness, and time in the Selling Zone.
- Compare the number of sales tasks (call-outs, creative follow-up, and home visits) performed by transactional and Prospect-Centered Selling.
- Create a uniform definition regarding what constitutes a "higher-functioning" resident for independent and for assisted living, perhaps based on level of function at the time of admission and a quantitative review of prospect care needs or on the resident's length of stay.
- Assess the potential for lost opportunity costs, if any, resulting from Prospect-Centered Selling

Table 3. Comparing Transactional with Prospect-Centered Selling.

	Transactional Selling	**Prospect-Centered Selling**
Focus	Product features and benefits	Prospect's stage of readiness for change
Vital Behaviors	Uncover prospect's product needs then value match with product offerings. Communicate what is different and better compared to competitive offerings. Generate as many new inquiries as possible. Give priority to new inquiries and minimize time with any particular prospect. Persuade and convince.	Assess prospect's stage of readiness then engage in ongoing planning and personalized creative follow-up. Build trusting relationships, explore life stories, uncover and address underlying emotional resistance, especially with prospects in denial and thinking stages. Motivate self-awareness and a desire for change, especially for prospects in denial and thinking stages. Shift to a more transactional style for prospects in planning and action stages.
Pipeline Milestones	Inquiry Initial tour Deposit Move in Perceived sense of urgency	Inquiry Initial Tour Stage of readiness: denial, thinking, planning, or action Advances along continuum of change Deposit Move in
Outcomes thought to favorably impact conversion ratios	Number of sales activities (call-outs, follow-up mailers, event invites, and tours) Number of total leads generated Number of prospects who have a high level of urgency to move somewhere	Number of prospect advances Time in the Selling Zone Strategic plans for next prospect interaction

counselors investing more time than transactional sellers with higher-functioning prospects who are in the early stages of readiness.

- Properly assess and correlate the extent to which any one of these factors impact sales results.

Table 4. Guidelines for Advancing Prospects Through Stage of Change Continuum.

Stage of Change	**The next strategic advance occurs when the prospect is:**	**Actions to Help Prospect Advance**
Stage 1 – Denial Stuck and hoping for magic	**Thinking about problems and difficulties in current residence**	Align, build trust, and validate feelings. Acknowledge their control of the decision. Explore expected outcomes of staying home without expressing judgment. Evoke life stories and listen for themes and values.
Stage 2 – Thinking About problems and difficulties; on the fence about "whether" to move	**Willing to acknowledge problems and explore solutions**	Promote self-confidence by evoking stories about prior life changes that were successful. Promote self-evaluation of staying at home through use of reflections, amplifications, and summaries. Ask direct questions and probe their perceptions of each problem area.
Stage 3 – Planning Testing the waters but issue is "when" to move	**Open to consider the benefits of making a change, including a move to seniors housing**	Clarify prospect goals. Summarize situation and elicit what they may want to do to address problems; offer to help resolve stated obstacles, whether that involves a move to your community or not. Suggest options and encourage small steps. Solicit collaboration with family/friends.
Stage 4 – Action Choosing "where" to move	**Ready to make a commitment – hopefully to move into your community**	Praise the decision to move somewhere, anywhere. Provide information about you product/service package. Value match prospect needs to what your community offers. Ask for a commitment and offer to assist with any perceived barriers.

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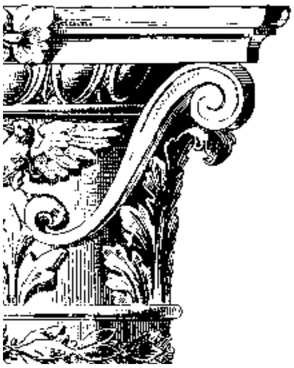

Predicting Nursing Home Utilization at the County Level in Michigan: Influence of Demographic and Market Variables

Nailya O. DeLellis, PhD, MPH; Lauren Manthei; Jacob Woodworth

ABSTRACT

In attempting to make long-range predictions regarding the demand for nursing homes, it is important for public policy makers and nursing home operators to think beyond the simple formulas that are based in age and gender demographics alone. There are other factors that influence the rate of nursing home utilization. This study demonstrated how, at the county level, age, gender, income, County Health Ranking, educational level, and the number of beds per 10,000 population interact in measurable ways to predict nursing home utilization. The study focused on 400 non-hospital-based Medicare- and Medicaid-certified nursing homes in Michigan.

INTRODUCTION

Policy makers, investors, and operators of nursing homes need precision in planning for the renovation and/or expansion of existing facilities or the construction of new facilities. Being inaccurate in projecting future needs by even a few beds can mean the difference between financial success and failure. Therefore, whether the enterprise is for-profit, nonprofit, or governmental, predicting demand for nursing home beds must be precise. Of course, the number of beds has implications for many other aspects of nursing home planning, such as staffing ratio and mix, expectations for acuity rates, logistics, and others. In this research, however, focus was limited to predicting the number of beds that would be needed countywide.

Purpose of the Study

The broad purpose of the study was to evaluate the effects that demographic and market variables have on utilization of nursing homes in Michigan and to demonstrate a methodology for predicting, at the county level, the long-range need for nursing home beds. The level of county was selected because of the widespread availability of county level data. To accomplish this, the study assessed the effect of demographic and market variables on nursing home occupancy rates in Michigan, categorizing those variables as enabling, predisposing, and need factors (these three categories of factors are subsequently described in detail).

According to the U.S. Census Bureau, the elderly population will more than double between now and 2050 and reach 80 million, when as many as one in five Americans could be elderly (U.S. Census Bureau, 2011). The increase in the number of older adults is likely to cause an increase in demand for long-term care and nursing home services (Spillman & Lubitz, 2002). Although many long-term care options are available, almost 1.4 million Americans used nursing homes in the U.S. in 2009; however, average occupancy rate has been declining from 85.5% in 1995 to 82.2% in 2009 (Health, United States, 2010). Yearly, private-pay nursing home prices increased by 7.5% annually from 1977 to 2004, a rate of growth that has surpassed other goods and services (Stewart, Grabowski, & Lakdawalla, 2009). Simultaneously, the rising cost for long-term health care is demanding that providers use resources more efficiently.

Medicaid is a major payer for nursing home services; however, Medicaid payment rates are usually lower when compared to Medicare or private insurance rates. The composition of residents by payer source often is associated with quality of services provided. For example, Mor, Zinn, Angelelli, Teno, and Miller (2004), found that lower tier nursing homes (those with at least 85% of Medicaid residents, less than 10% of private, and less than 8% of Medicare residents) experience more health-related deficiencies, lower occupancy rates, and have fewer attending nurses. Nursing homes that served predominantly Medicaid residents were more likely to discontinue their operations (Castle, Engberg, Lave, & Fisher, 2009). In addition, nursing homes that lack quality care, have insufficient staffing levels, and contain an undesirable Medicaid mix (occupancy and reimbursement) are more prone to receiving citations for safety violations (Castle, Wagner, Ferguson, & Handler, 2011). At the same time, Zhang and Wan (2007) found that nursing home quality is positively associated with the potential demand for care, Medicaid reimbursement rate, and occupancy rate.

Public policy makers, investors, and nursing home operators need to know the extent and type of future demand for nursing home beds in their service area, and they need to know it precisely. Thus, they need to identify those factors that enable them to strategically predict need in the distant future and to adjust predictions as circumstances change. This study was not about strategic planning, however. Rather, the study focused on converting disparate raw data into useful information that could be employed in strategic planning.

Theoretical Model

The study was based on Andersen's Behavioral Model of Health Services Utilization (1968). According to this model, at the individual level, the factors affecting health services utilization may be grouped as enabling (reflecting availability of resources, individual or offered in the community), predisposing (such as race and gender, reflecting genetic predisposition), and needs factors (subjective or objective). Bradley et al. (2002) applied Andersen's model to psychosocial factors in long-term care use; Yang and Barner (2001) utilized the model in their analysis of the relationship between health insurance and health services utilization among the elderly. The model also was used in a wide variety of health care settings (Ou, Chen, & Hillman, 2010; Stein, Andersen, & Gelberg, 2007).

The application of this model was based on several observations. Swan and Benjamin (1990) noted that urbanization is associated with costs to providers and availability to patients. Where greater proportions of state populations are urbanized, travel costs may be lower, translating into greater supply. Other factors, such as economies of scale, suggest that urban areas are better supplied with agencies (Swan & Benjamin, 1990). Few published studies have examined whether wealth or income affects nursing home utilization; however, Vicente, Wiley, and Carrington (1979) found that individuals whose family income was "inadequate" were more than twice as likely to be admitted to a nursing home as individuals of "very adequate" means. Gender also seems to be an important factor: elderly women are more likely than elderly men to enter a nursing home (Greenberg & Ginn 1979; Vicente, Wiley, & Carrington, 1979; Luppaa, Lucka, Weyerera, Königa, & Riedel-Hellera, 2009). The Center for Disease Control and Prevention (CDC) determined females accounted for 72% of nursing home residents (Centers for Disease Control and Prevention, 2012). African American persons and Hispanic persons are less likely to enter nursing homes; this could reflect greater access to family- and community-based care among these ethnic groups (Lakdawalla, Goldman, Bhattacharya, Hurd, Joyce, & Panis, 2003). Furthermore, in predicting admissions, Greene and Ondrich (1990) found that the major factors were ethnicity, home ownership, age, living alone, cognitive and functional impairment levels, physician use, and living in an area with a larger nursing home bed supply.

As a result of these several observations and the availability of publicly available data at the county level, the following factors for analysis were established for this study:

Enabling factors.

In this study, the enabling factors, or available resources, were represented for each county by income, unemployment rate, education level, location, the number of nursing homes, and the total number of nursing home beds available.

Predisposing factors.

Predisposing factors were represented by gender and race.

Need factors.

The need factors were represented by age, health status, health outcome ranking, and number of housing units as separate living quarters.

Data Sources and Population

Data were obtained from the Online Survey Certification and Reporting (OSCAR) database of 2011, (**Exhibits 1, 2, 3**), the U.S. Bureau of the Census, and the U.S. Bureau of Labor Statistics (Exhibit 3). The study included all non-hospital-based, Medicare- and Medicaid-certified nursing homes in Michigan (N = 400); 75 of Michigan's 83 counties contain at least one such nursing home. Hospital-based nursing home beds were excluded from the study because they were likely to serve different patient populations, have different management structures and different resource bases than non-hospital-based nursing homes (e.g., immediate availability and proximity of hospital on-call physicians, shared use of existing hospital financial management and personnel system, shared use of infrastructure and utilities accounts, etc.). The study examines data from only one state because state level statutes, policies, and regulations differ among the states to an extent that a single national level interpretation of study outcomes would not be useful outside the context of each respective state. A description of the study population is provided in Exhibit 1, where Michigan facilities were compared to average U.S. facilities. Exhibit 2 describes the non-hospital-based nursing homes in Michigan with comparison data for U.S. non-hospital-based nursing homes. While Michigan nursing homes experienced a decrease in occupancy rates similar to the U.S., during 1995 to 2009, the rate in Michigan was about 3% higher than average for the U.S. The average size of a nursing home in the U.S. increased from 107 beds in 1995 to 109 beds in 2009; at the same time, Michigan nursing homes decreased in size by four beds from 114.5 in 1995 to 110.4 in 2009 (Health, United States, 2010) and to 113 in 2011 (OSCAR, 2011). Exhibit 3 provides information about the Michigan nursing homes market and demographic environment.

DESIGN AND METHODOLOGY

The study employed a multiple linear regression in a cross-sectional design. Michigan county level data from the U.S. Census Bureau and the U.S. Bureau of Labor Statistics were merged with facility level information of 400 nursing homes from OSCAR. Regression models were used to identify the strength of the correlation between various demographic and market factors that were associated with nursing home utilization.

Exhibit 1. Characteristics of Michigan Nursing Homes Extracted from OSCAR (2011) Compared to the Rest of the U.S.

	Michigan		U.S. (excluding MI)	
	Mean	SD	Mean	SD
Facility Characteristics				
Size (number of total beds)	113.40	49.52	111.59	60.99
FTE RN	14.98	12.43	12.70	13.80
FTE LPN	13.10	8.21	13.79	10.97
FTE nurse aides and nurse aides in training	41.25	22.91	39.23	27.37
Residents				
Medicare residents	18.87	15.15	14.38	12.94
Medicaid residents	61.01	21.75	61.34	21.79
Other residents	20.12	14.14	24.27	18.02
Occupancy rate %	84.71	12.9	82.16	15.84
Acuity index	10.30	1.17	10.23	1.49
Activities of daily living (ADL) index	10.07	1.10	9.99	1.40
ADL limitations	4.11	.41	4.03	.61

Exhibit 2. Michigan and U.S. Nursing Home Comparison.

	Percentage	
	Michigan	U.S. average
Location		
Urban	74	67.2
Rural	26	32.8
Ownership		
For-profit	71.5	72.6
Nonprofit	19.8	23.1
Governmental	8.8	4.3
System Membership		
Belongs to a system	56	56.2
Independent	44	43.8

Study Variables

Dependent Variable.

Utilization rate served as the single dependent variable in this study, defined as the sum of nursing home residents in each Michigan county divided by the total number of persons who were age 65 and older.

Independent Variables.

The independent variables in the study were the demographic and market factors, grouped following Andersen's model of health services utilization. These were predisposing, enabling, and needs factors.

For each county in Michigan, the predisposing factors were represented by gender and race, noting the percentage of people who were female and the percentage of people who were white. To avoid multicollinearity issues, only the percentage of white was included in the regression model.

Enabling factors considered in the study were, for each county, the percentage of people who had a baccalaureate level degree or higher, the number of housing units, unemployment rate, poverty estimates, and average income. The availability of resources was represented by the number of nursing homes and nursing home beds per 10,000 population in each county.

Needs factors were represented by the percentage of people who were age 65 and older and the health outcome rank of each county. Health outcomes are the primary ranking used to describe the overall health of counties; the county ranked number one is considered the healthiest county in the state (County Health Rankings, 2011); lower ranks reflect worse health status of a county population and higher need in health care services.

On average, Michigan nursing home facilities, when compared to the rest of the U.S., had a higher percentage of Medicare residents (18.9 versus 14.4; $p < 0.01$) and a higher occupancy rate per facility (independent *t*-test, $p < 0.001$). In addition, Michigan facilities also had residents with a slightly higher acuity index, activities of daily living (ADL) index, and ADL limitations when compared to residents in other facilities in

Exhibit 3. Study Variables Description for Michigan Nursing Homes, 2011.

Market Level Variables, Michigan	**Mean**	**SD**	**Source**
Average median household income	44633.81	8481.98	U.S. Census Bureau, 2009a, b
Education % with bachelor's degree	23.13	9.36	U.S. Census Bureau, 2010
Unemployment rate	10.99	2.23	Bureau of Labor Stats, 2011
Demographic Variables			
Percent White	80.23	14.86	U.S. Census Bureau, 2010
Percent African American	13.23	13.86	U.S. Census Bureau, 2010
Percent American Indian/Alaska native	0.71	1.22	U.S. Census Bureau, 2010
Percent Asian	2.05	1.82	U.S. Census Bureau, 2010
Percent Hispanic	4.36	2.40	U.S. Census Bureau, 2010
Percent other language spoken	8.28	4.23	U.S. Census Bureau, 2010
Percentage of females	50.69	2.13	U.S. Census Bureau, 2010
Percentage over 65 years old	14.60	3.54	U.S. Census Bureau, 2010
Occupancy Rate %	84.71	12.9	OSCAR, 2011
Utilization Rate %	3.03	0.92	OSCAR, 2011

Exhibit 4. Standardized Regression Coefficients and Statistical Significance for Analysis of Factors Affecting Utilization of Nursing Homes in Michigan, 2011.

	Standardized Regression Coefficients	***t*-value**	**Sig.**
(Constant)		2.338	.023
Females percentage	.023	.539	.592
White percentage	.079	1.337	.186
Bachelor's degree or higher percentage	.084	1.256	.214
Unemployment rate	.084	1.593	.116
Poverty estimate	-.138	-1.030	.307
Health outcome rank	-.128	-2.078	.042
Median income	-.170	-2.769	.007
Number of NHs county	.915	3.385	.001
Beds per 10,000	1.030	19.903	.000
65 years and older percentage	-.589	-9.894	.000
Housing units	-.768	-3.138	.003

the U.S. (Exhibit 1); only the number of ADL limitations had a statistically significant difference, with $p < 0.005$.

Michigan also had a higher percentage of facilities located in urban counties and government-owned facilities. In comparison to other facilities in the U.S., nursing homes in Michigan had a lower percentage of rural, for-profit, and nonprofit facilities. Michigan is similar to other U.S. facilities as it had about the same percentage of nursing homes that either belong to a system or are independent (Exhibit 2).

The county level demographic and market variables indicate that, in Michigan, the average county population was 80.2% white; average household income was $44,633.81; average occupancy rate was 84.71%; and 3.03% of population age 65 and older were served in nursing homes (Exhibit 3).

The study applied multiple linear regression with these factors to determine which factor had the strongest correlation with utilization rate. The coefficients of the regression model are presented in **Exhibit 4**. The model explains 81% of variance in the dependent variable (R^2 = 0.814, adjusted R^2 = 0.809, SE = 0.004, F = 448.23).

RESULTS AND CONCLUSION

For the 75 Michigan counties that have at least one nursing home, the regression model explained 90% of variance in utilization rates. The dependent and independent variables according to Anderson's Model are described: enabling factors, such as median income and poverty estimates in a county, were negatively associated with nursing home utilization. The observed negative correlation between median income and utilization rate may be explained by a number of factors. For example, median income may be associated with better health, which may decrease the use of nursing home services. The standardized coefficient of median income was -.170 ($p < 0.01$). Also, having a higher income may be associated with the availability of resources, substituting nursing home use for more convenient methods of care, such as home health agencies. Another possibility may be with the variable itself; since median income is not age specified, it is not possible to take into account age within a county.

Factors representing the availability of services, such as the number of nursing homes in a county and the number of nursing home beds per 10,000 population, had positive regression coefficients. The standardized coefficient of the number of nursing homes per county is .915 ($p < 0.01$), and the standardized coefficient for beds per 10,000 is 1.030 ($p < 0.01$); exclusion of these two variables from the regression resulted in a model explaining only 40% of variance (adjusted R^2 = 0.386). A higher percentage of people with at least a bachelor's degree was positively related to utilization rate; however, the coefficient was not statistically significant.

Predisposing factors, such as the percentage of the white population and the percentage of females, were positively associated with utilization rates; however, neither of the coefficients was statistically significant.

Needs factors, such as population health status (measured as the health outcome county ranking), were positively associated with utilization of nursing homes. Since a ranking of 1 indicates the highest level of health outcomes county ranking, then negative coefficient indicates that lower health status is associated with higher utilization of nursing homes. For health outcome rank, the standardized coefficient was -.128 ($p < 0.05$).

The percentage of people age 65 and older was negatively associated with nursing home utilization. Since the relationship of the percent of people 65+ years of age and county utilization rate does not support the theoretical model of this study, it will require further study. Some possibilities for this may be that people in this age group are moving to specific counties or nursing homes may be admitting younger residents. In addition, the number of housing units is highly correlated with population density. This, in turn, may be associated with the availability of social supports that result in a decreased need for nursing home services. The standardized coefficient of housing units was -.768 (*p* < 0.01).

Four independent variables in the tested model had negative coefficients: poverty estimate, median income, percentage of people age 65 and older, and the number of housing units in a county. County health outcome ranking is based on only a few health indicators (i.e., premature death, poor or fair health, poor physical and mental days, and low birth weight; countyhealthrankings.org). In addition, the data are not age specific, and may not accurately reflect the population age 65 and older.

Implications

Engaging in planning that predicts long-range and accurately the demand for nursing home beds at the county level has implications for a wide range of policy makers, regulators, investors, and operators. Planners need to address the financing of new construction and renovation of facilities, acquire appropriately located, affordable land, recruit and train a workforce with a wide range of skills and certifications, establish support service relationships with social service and health care organizations that interact with nursing homes and residents, attempt to influence laws and regulations that impact nursing homes, and more. When these activities are aimed at the distant future, the need for precision and accuracy based on information that may not be apparent is critical. It is not sufficient to assume that current occupancy rates will remain stable or that current need will be the same as future needs.

Some of the findings of this research were counterintuitive (e.g., the percentage of people who are age 65 or older did not increase nursing home utilization). Such findings suggest that the comprehensive nature of the model described in this article may prove especially useful. As useful as it is, however, it may become more accurate with additional refinement that would result from additional, focused research. For example, future research is needed to determine conclusively if the positive correlation between the county unemployment rate and the rate of nursing home utilization will ever prove to be statistically significant. Yet, even without such refinements, the model can contribute to long-range planning.

Limitations to the Study and Future Research

Among the limitations to this study, there were several that pointed to the need for further research. The scope of the study was deliberately narrow so that it could focus on demonstrating the methodology of the model employed. Thus, there was no exploration of the influence of and the extent of need for short-term rehabilitation beds or assisted living beds or home health care when nursing services are provided. An expansion of the model in the future might prove useful in addressing such questions not raised in the current research.

The scope of the study did not allow applying the model to every state in the U.S. It would be useful, however, to confirm through future research that the model is applicable to all states. Furthermore, to ultimately contribute to a potentially revised national view of future nursing home need, it would be appropriate to conduct the research across all states of the U.S. Any national view, however, would have to be interpreted as a collection of county level views that would likely reflect substantial variation in extent of need.

There was no attempt in this study to address the Certificate of Need policies established in some states. In the future, however, it might be useful to conduct research to determine if there is a relationship between future need, as determined by the model employed in the current research, and future need, as defined by Certificate of Need panels in those states where they exist.

There is sometimes perceived ambiguity regarding the definition of and interplay between causal factors and outcomes, as employed in this article. It is an ongoing discussion in health services research. The interplay is a cycle rather than a direct cause and effect. For example, if occupancy rates in a given county are low, that may lead to closure of some nursing homes in that county. This would require that residents of the closing facilities go to other nursing homes, some of which would likely be in the same county. By doing so, the occupancy rates of those nursing homes receiving the displaced residents would rise and so would the average occupancy rate for that county.

Finally, OSCAR data, as reported each month, tend to reflect multiple years within the data set. This is because OSCAR data are collected from each nursing home approximately every 15 months on a rotating basis. Thus, in the same data set there are nursing home reports from the current year and at least some from the previous year. Accordingly, an OSCAR report published in, for example, March 2012 will reflect data from nursing homes surveyed in 2012 and from those surveyed in 2011.

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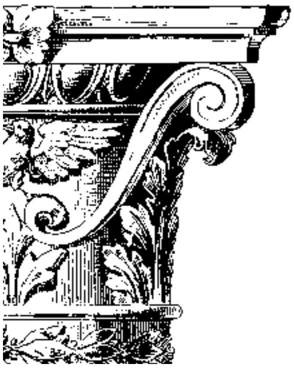

Factors Associated with Long-Term Care Planning Among Middle-Aged and Older Adults

April Temple, PhD, and David E. Cockley, DrPH

ABSTRACT

With the aging of the population, it is becoming increasingly important for individuals to plan in advance for future care needs. This study consisted of a mailed survey to middle-aged (40 to 64) and older adults (65+) in one region of Virginia (n = 225) to explore preparation for long-term care (LTC). Linear regression results indicated that a higher number of chronic conditions, poorer self-rated health, fewer difficulties in instrumental activities of daily living, and greater knowledge of LTC were significantly associated with greater LTC planning among those who were ages 40 to 64, whereas increasing age, female gender, and greater knowledge of LTC were associated with greater planning among respondents 65+. These differential findings have important implications to prepare for the growing demand for LTC.

INTRODUCTION

With the aging of the population, the demand for long-term care (LTC) services and supports is expected to increase from nine to 12 million older Americans by 2020 (U.S. Department of Health and Human Services, 2011). LTC includes services provided in the community or an institutional setting through informal or formal caregivers when help is needed with daily activities. It is estimated that 70% of people age 65 and older will require LTC during their lifetime (U.S. Department of Health and Human Services, 2011). Consequently, it is important for individuals to plan for aging and future care.

Planning for future care needs has been associated with greater knowledge of LTC services, lower levels of worry and depression, and higher coping and satisfaction with preparations (Pinquart & Sorensen, 2002a; Sorensen & Pinquart, 2001). Research suggests, however, that many adults do not proactively plan for LTC or fully understand their options (AARP, 2006; Black & Brown, 2004; Black & Reynolds, 2008; Matzek & Stum, 2010; Miller & Mor, 2006; Pinquart & Sorensen, 2002a; Sorensen & Pinquart, 2001). As a result, many decisions are made in a time of crisis, leaving consumers vulnerable to limited options, financial insecurity, and reduced quality of care and life.

Factors that contribute to preparations for LTC include demographic characteristics, social and financial resources, and health and functional status. Empirically, studies have confirmed a positive relationship between LTC planning and increasing age (Black, Reynolds, & Osman, 2008; Sorensen & Pinquart, 2000), female gender (Black & Reynolds, 2008; Sorensen & Pinquart, 2000), and African American race (Mitchell, Mathews, & Hack, 2000). Frequent family contact has been associated with more concrete planning for LTC (Sorensen & Pinquart, 2000), whereas living alone has been negatively associated with planning (Black et al., 2008; Black & Reynolds, 2008). In addition, research suggests that individuals with more education (Black et al., 2008; Mitchell et al., 2000; Sorensen & Pinquart, 2000) and a higher socioeconomic status (Sorensen & Pinquart, 2000) are more likely to have plans in place for future care. Last, limitations in activities of daily living (ADLs) were found to be a significant predictor of having concrete plans in one study (Sorensen & Pinquart, 2000) while another found that those with poor health and functional status were actually less likely to plan (Black et al., 2008).

Given the likelihood of needing future care and the high costs of LTC (Prudential, 2010), planning for LTC is crucial. Furthermore, planning in advance is relevant across the life course if individuals wish to have the knowledge and financial resources to make informed decisions and to have their preferences for care met in their later years. Most of the research to date on LTC planning has focused on older adults age 65 and older (e.g., Black et al., 2008; Black & Reynolds, 2008; Sorensen & Pinquart, 2000; 2001). Little is known about LTC preparations among adults younger than 65. The objective of our study was to explore factors associated with LTC planning behaviors among middle-aged (40 to 64) and older adults (65+).

METHOD

Study Design and Sampling Procedures

This study surveyed community-dwelling adults in one Metropolitan Statistical Area in Virginia. The study site was selected out of convenience. Simple random samples of listed households ages 40 to 64 and 65+ were obtained, and potential respondents were contacted by telephone in 2011 to invite participation in a mailed survey. The purpose of this initial contact was to increase the response rate and to confirm contact information; no responses were collected via telephone. The first 250 households in each age category who agreed by phone to participate were mailed a survey packet. All study procedures were approved by the Institutional Review Board.

Of the 500 mailed surveys, 236 surveys were returned (47%). Eleven cases were omitted due to incomplete data and did not differ significantly ($p < 0.05$) on age, gender, race, education level, or living arrangement, but they were less likely to be married. Thus, the analytic sample consisted of 225 participants.

Measures

The survey instrument contained approximately 60 items and was based on the literature (e.g., Black et al., 2008; Black & Reynolds, 2008; Friedmann, Newman, Seff, & Dunlop, 2004; Sorensen & Pinquart, 2000; 2001).

Demographics.

Age was measured as a continuous variable, gender was coded as female (1) and male (0), and race was coded as white (1) versus non-white (0). For the multivariate analysis, race was excluded since nearly all participants in the sample were white (97%), which closely resembles the region (U.S. Census Bureau, 2009). Marital status was coded as married (1) versus non-married (0), and living arrangement was coded as living alone (1) or with others (0). Education level was dichotomized as some college or higher (1) versus high school or less (0).

Health and Functional Status.

Participants were asked if they had ever been diagnosed with the following: arthritis, cancer, diabetes, heart disease, high blood pressure, lung disease, stroke, or dementia. These responses were summed to reflect a mean number of chronic conditions. Respondents also were asked to self-rate their health on a five-point Likert scale ranging from 1 = "poor" to 5 = "excellent." Participants were asked to rate their level of difficulty with six ADLs and seven instrumental activities of daily living (IADLs). All ADLs and IADLs variables were coded as no difficulties (0), need some assistance (1), or cannot perform independently (2). The scores reflect the sum of scores with a range of 0 to 12 for ADLs and 0 to 14 for IADLs.

Knowledge of LTC.

The survey included seven items from the Knowledge of Services subscale of the Preparation for Future Care Needs instrument (Sorensen & Pinquart, 2001). Knowledge of various types of LTC services and programs was assessed using a five-point Likert scale ranging from 1 = "strongly disagree" to 5 = "strongly agree." To reduce the number of knowledge items in the multivariate analysis, a principal component analysis was conducted and resulted in all seven items loading on one factor that explained 68% of the variance.

Planning Behaviors.

The survey also included the Long-Term Care Planning (LTCP) instrument (Friedmann et al., 2004), which has previously demonstrated strong psychometric properties in several ethnic groups (Friedmann et al., 2004) and has been used previously to examine planning behaviors in a sample of adults age 65 and older in Florida (Black & Reynolds, 2008; Black et al., 2008). The LTCP instrument contains 23 items assessed on a four-point Likert scale ranging from 1 = "strongly agree" to 4 = "strongly disagree." Possible total scores ranged from 23 to 92, with lower scores indicating higher agreement and more LTC planning behaviors. Cronbach's alpha for the LTCP instrument in the present study was 0.84, indicating good reliability.

Data Analysis.

All analyses were conducted using PASW Statistics Version 18.0.2 (SPSS Inc., 2010). Chi-square and t-tests were used to examine differences between respondents ages 40 to 64 and respondents 65+. Bivariate correlations also were examined. Since marital status and living arrangement were highly correlated ($r = -0.76$), marital status was excluded from the multivariate analysis. The remaining variables showed no substantial indication of collinearity.

To explore factors associated with LTC planning behaviors, a multiple linear regression model was used for each age group. All independent variables were entered simultaneously into the models with the dependent variable as the total score on the LTCP instrument. The underlying assumptions of linear regression were examined and met sufficiently (Newton & Rudestam, 1999).

RESULTS

Demographic Characteristics, Health Status, and LTC Planning

Demographic characteristics, health status, and LTC planning scores are presented in **Exhibit 1**. The sample ranged in age from 40 to 95 (M = 63.80, SD = 12.69). More than half were female, and most were white. Those 40 to 64 were significantly more likely to be married and less likely to live alone. They also had higher levels of education compared to those 65+. Self-rated health of the respondents was good to excellent overall. The 65+ group reported significantly greater incidence of self-reported cancer, heart disease, and high blood pressure. The mean number of chronic conditions reported per respondent was 0.71 for those 40 to 64, which was significantly lower than the 1.37 chronic conditions reported among those 65+. Although difficulties with ADLs and IADLs were low in the sample overall, those 65+ had significantly greater scores on difficulties with IADLs than those 40 to 64. Noting that a lower LTCP total score represents more planning activities, the 65+ subsample was slightly more engaged in planning behaviors for their LTC needs (M = 49.26, SD = 9.49) than the 40- to 64-year-old subsample (M = 54.29, SD = 8.29).

Knowledge of LTC

Respondents' knowledge about various types of aging and LTC services is presented in **Exhibit 2**. Half or less indicated that they knew how to get help from and pay for home health, assisted living, and nursing homes. Fewer were aware of which home health agencies were in the area compared to location of assisted living facilities or nursing homes. About one-third of those ages 40 to 64 and one-quarter of respondents 65+ reported they did not know where to get further information about aging services. For six out of seven of the knowledge items, those 65+ reported greater agreement with the statements than those 40 to 64.

Factors Associated with LTC Planning

The results of the multiple linear regression models are presented in **Exhibit 3**. Among those ages 40 to 64, a higher number of chronic conditions and greater knowledge of LTC were significantly associated with lower scores on the LTCP instrument, indicating more planning behaviors; better self-rated health and difficulties with IADLs were significantly associated with an increased score on the LTCP instrument. Among those 65+, increasing age, female gender, and greater knowledge of LTC were significantly associated with lower scores on the LTCP instrument, indicating more planning behaviors.

DISCUSSION

Previous research suggests that many adults do not proactively plan for future care needs (Black & Brown, 2004; Black & Reynolds, 2008; Miller & Mor, 2006; Pinquart & Sorensen, 2002; Sorensen & Pinquart, 2001). The purpose of this study was to explore factors associated with LTC planning behaviors among adults ages 40 to 64 and 65+. Not surprisingly, respondents 65 and older engaged in more planning behaviors and had greater knowledge about LTC programs and services than those 40 to 64. The findings also suggested that there are key differences in factors related to planning for LTC between these two age groups.

Among respondents ages 40 to 64, in which little is known about LTC planning, health and functional status appear to be particularly important. Consistent with the theoretical concept of proactive coping (Aspinwall & Taylor, 1997), individuals who have a number of chronic conditions and poor self-rated health may have a current need for services or greater

Exhibit 1. Demographic Characteristics, Health Status, and LTC Planning by Age Group.

	% or M (SD)			
	All (*N* = 225)	**40-64** (*n* = 116)	**65+** (*n* = 109)	*p*-value[a]
Demographic Characteristics				
Age	63.80 (12.69)	53.84 (7.48)	74.39 (7.39)	
Female	55	60	50	0.11
White	97	97	98	1.00
Married	71	78	62	0.01
Live alone	22	15	31	0.01
Some college or higher education	66	72	58	0.04
Health Status				
Self-Rated Health				
Poor	2	1	3	
Fair	8	5	12	
Good	28	27	28	0.10
Very good	42	42	43	
Excellent	20	25	14	
Chronic Conditions				
Arthritis	39	32	47	0.07
Cancer	19	6	32	<0.01
Diabetes	12	9	16	0.17
Heart disease	12	4	21	<0.01
High blood pressure	42	31	54	<0.01
Lung disease	4	2	6	0.16
Stroke	3	2	4	0.43
Dementia	1	0	1	0.51
Number of Chronic Conditions	1.03 (0.98)	0.71 (0.86)	1.37 (0.98)	<0.01
Activities of Daily Living	0.14 (0.79)	0.12 (0.67)	0.16 (0.83)	0.73
Instrumental Activities of Daily Living	0.25 (1.37)	0.07 (0.41)	0.45 (1.91)	0.04
LTC Planning				
LTC Planning Score	51.78 (9.01)	54.29 (8.29)	49.26 (9.49)	<0.01

Note. LTC = long-term care; M = mean; SD = standard deviation.

[a] Chi-square tests were used to examine differences between frequencies. *T*-tests were used to assess mean score differences.

Exhibit 2. Knowledge of Long-Term Care Services by Age Group.

	Strongly Disagree/ Disagree (%)	Neither (%)	Strongly Agree/ Agree (%)	p-value[a]
I am well informed about the federal programs for seniors, including Social Security, Medicare, and Medicaid.				
40-64	46	20	34	<0.01
65+	14	20	66	
I know what I would have to do to get help from home health care agencies.				
40-64	52	22	26	<0.01
65+	26	28	46	
I know what I would need to do to get into a nursing home or assisted living facility.				
40-64	54	17	29	<0.01
65+	25	21	54	
I am aware of how a stay in a nursing home or services from home health care are paid for.				
40-64	48	12	40	<0.01
65+	23	22	55	
I know where I can get information about different options for getting care.				
40-64	34	17	49	0.08
65+	21	17	62	
I know which home health care agencies are available in my area.				
40-64	42	21	37	0.03
65+	25	25	50	
I know which assisted living facilities or nursing homes are available in my area.				
40-64	25	15	60	0.05
65+	15	11	74	

Note. 40-64 (n = 116); 65+ (n = 109).
[a] Chi-square tests were used to examine differences between frequencies.

awareness that services may be necessary in the future, prompting them to engage in more LTC planning behaviors. One contrary finding is that respondents in this age group who reported greater difficulties with IADLs actually engaged in fewer planning behaviors for LTC. Since the sample consisted of community-dwelling adults, this finding may signal the need for assistance with IADLs is currently being met.

Exhibit 3. Factors Associated with Long-Term Care Planning Behaviors by Age Group.

	40-64 (n = 116)			65+ (n = 109)		
	b	SE	β	*b*	SE	β
Age	-0.12	0.10	-0.11	-0.25	-0.12	-0.19 *
Female	-0.92	1.33	-0.05	-4.87	1.68	-0.26 **
Living alone	3.20	1.87	0.14	2.39	1.88	0.12
Education	0.33	1.45	0.02	-2.80	1.62	-0.15 †
Chronic conditions	-1.66	0.89	-0.17 *	-0.43	0.91	-0.05
Self-rated health	1.72	0.90	0.19 *	1.37	0.94	0.14
ADLs	0.01	1.05	0.01	-1.02	1.23	-0.09
IADLs	5.31	1.87	0.26 **	0.15	0.56	0.03
Knowledge	-4.25	0.71	-0.51 **	-4.32	0.93	-0.42 **
	$F = 7.37, p < 0.001$, Adj. $R^2 = 0.34$			$F = 7.07, p < 0.001$, Adj. $R^2 = 0.34$		

Note. b = regression coefficient; SE = standard error; β = standardized regression coefficient.
† $p < 0.10$; *$p < 0.05$; **$p < 0.01$

Study findings were generally consistent with previous studies that examined preparedness for LTC among samples age 65 and older. For example, studies using the LTCP instrument have found similar scores reflecting few planning behaviors (Black & Reynolds, 2008; Friedmann et al., 2004). Others also have found increasing age (Black et al., 2008; Sorensen & Pinquart, 2000), female gender (Black & Reynolds, 2008; Sorensen & Pinquart, 2000), and education level (e.g., Black et al., 2008; Mitchell et al., 2000) to be positively associated with preparations for LTC. Planning is particularly important with advanced age and for women, given that these two demographic variables are associated with greater likelihood of LTC utilization (AARP, 2007; Andel, Hyer, & Slack, 2007). Surprisingly, no health-related variables were associated with planning for LTC in this age strata, which provides further evidence that those 65+ may deny the need for LTC planning until there is a health crisis (Pinquart & Sorensen, 2002b; Sorensen & Pinquart, 2001).

Overall, the general lack of understanding about aging programs and services in the sample was substantial, which is comparable with prior studies (AARP, 2006; Matzek & Stum, 2010). Since the sample was relatively healthy, this could reflect the lack of researching options until the personal need arises. The deficit of knowledge also was more pronounced among adults ages 40 to 64, which may be in response to their perceived distance from the need for future care and from eligibility of the public programs. It also may be that those 65+ have greater familiarity because they presumably have acquaintances or family members receiving LTC.

Since knowledge was positively associated with planning for LTC in both age groups, improving understanding about the financing and availability of LTC services may contribute to greater planning for future care. For example, physicians, nurses, or social workers could initiate individual discussions about plans for future care. Educational outreach and information-sharing by employers, health professionals, financial advisors, or aging service providers also may increase awareness. Not only is knowledge of LTC advantageous for adults of all ages for beginning personal preparations, it also may be beneficial in anticipation of parental caregiving responsibilities.

Limitations to the Study

The sample was drawn from one region in one state, so the results are not generalizable. Further, the sample was primarily white with good to excellent overall health, so minorities and those in poorer health are likely underrepresented. The study sample also was too small to examine the potential for meaningful differences between smaller age strata. As with any survey, response bias may be present. Last, the data are cross-sectional, so causality cannot be inferred. Despite these limitations, study strengths include that it builds on findings described in prior research with older samples 65+ and serves to reduce the current gap in understanding about LTC planning among adults younger than 65.

CONCLUSION

In this study, adults age 65 and older had greater knowledge of and engaged in more planning behaviors for LTC than adults 40 to 64, and key differences were found in factors related to planning for LTC between the two age groups. Overall, the study findings of low knowledge and planning for LTC should be of concern as LTC requires substantial personal, familial, and financial planning by the individual. Greater educational outreach and information-sharing tailored to the needs of adults in midlife versus older age are needed to potentially improve understanding of and preparation for LTC and to ensure that preferences for care are met when LTC is needed.

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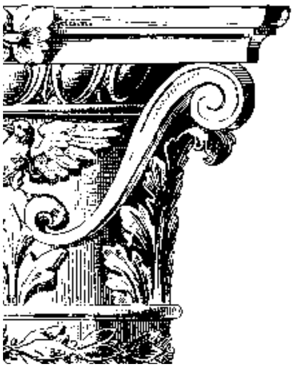


Ethnographic Evidence of Barriers to Resident Self-Report on the Decennial Census in Hospice and Skilled Nursing Facilities

Sonia Salari, PhD

ABSTRACT

Health-related group quarters (HRGQ), such as nursing homes and other in-patient residence facilities, have historically presented enumeration challenges for the decennial census. These institutional populations are often counted with administrative lists that require the use of facility staff time and may not include any active resident participation. This ethnographic project studied two nursing homes and one in-patient hospice facility. Data from focus group interviews and 72 hours of observation were collected on and around the time of the 2010 U.S. Census. Research questions included (1) What conditions would facilitate resident self-report?; and (2) Would commitment to the "person centered" philosophy be worth the increased effort required? Results suggested person-centered rights of participation were typically overlooked in the enumeration process. Some administrators agreed with this philosophy, but others defended the resident's right to self-report rather than rely on the use of an administrative list. A model is introduced to describe the factors associated with the barriers and potential for resident civic participation through self-report.

INTRODUCTION

Health-related group quarters (HRGQ), such as nursing homes and other in-patient residence facilities, have historically presented enumeration challenges for the decennial census (Jonas, 2003). Hypothetically, there are four options for population count in HRGQ facilities: (1) the use of an administrative list—from records; (2) family member proxies; (3) verbal interviews of residents by an enumerator; and (4) resident written self-enumeration. These options are organized to represent increasing levels of resident autonomy. If answering the U.S. Census is considered a civic responsibility similar to voting or paying taxes, the cognitively capable institutional population may wish to respond personally to the government's call.

Barriers may exist, however, in the form of census efficiency, institutional culture, and resident health and functional limitations that impede the potential for self-report. GQ with health compromised populations, such as nursing homes and hospitals, typically utilize administrative records as the primary mode of data collection and population enumeration (Jonas, 2003). Administrative lists may increase efficiency but also require assistance from facility staff members (American Hospital Association, 2010) and do not typically involve active participation from residents (Salari & Chan, 2012).

Conducting census enumeration in the traditional self-report method would present a challenge because many residents suffer from cognitive impairment, severe health problems and functional disabilities (Salari, 2010). Some have end-stage terminal illness, so mortality is a salient factor in the population count as well as the ability of residents to participate in the process. This research project included both observations and focus group interviews in two skilled nursing facilities and a privately owned in-patient hospice facility around the time of the 2010 decennial census.

Research Questions

RQ1: What sources of information about the resident population were utilized in the HRGQ facilities for the 2010 Census?

RQ2: How did resident characteristics and turnover challenge census enumeration of facility populations?

RQ3: What resident, census, and facility characteristics helped or hindered the potential for resident self-report versus administrative list proxy reports?

RQ4: Can HRGQ settings maintain norms of "person-centered" care and appropriate privacy standards and still provide access to an efficient census of the population?

This study discusses the implications surrounding the sources of information provided to the enumeration process and aim to help facility administrators, census enumerators, residents, and families better understand these dilemmas.

Background

The 2010 U.S. Census focused efforts on better counting the population of approximately 8.1 million people living in group quarters (U.S. Census Bureau, 2007). An ethnographic study was commissioned with researchers who specialize in ethnographic methods and would observe the census process in several GQ settings such as the prison system, domestic violence shelters, college dorms, military barracks, homeless shelters, and health-related facilities. The purpose was to identify barriers to accurate enumeration and also to determine "best practices" for future census counts. This researcher's role in the project was to investigate the situation for three health-related facilities, specifically skilled nursing and hospice.

Persons in skilled nursing facilities (SNFs) need help with activities of daily living (ADLs) because of various mental and/or physical impairments caused by developmental disability, accidents, injuries, stroke, and chronic illness. In 2010, there were 1.3 million people age 65 and older in skilled nursing facilities, approximately 3.1% of that population (U.S. Census Bureau, 2011). Census residence codes indicated “SNFs are licensed to provide medical care with seven-day, 24-hour coverage for persons requiring long-term non-acute care. People in these facilities require nursing care, regardless of age (U.S. Census Bureau 2011a, coding type 301).” Residents in these facilities represent just under one-quarter (22%) of the total U.S. GQ population (U.S. Census Bureau, 2007). In 2004, there were approximately 16,100 facilities with about 1.7 million nursing home beds and an occupancy rate of approximately 86.3% (U.S. Department of Health and Human Services, 2009). The typical nursing home resident is female (70%), white, widowed, advanced in age (median 83.2), and suffers from multiple health problems (U.S. Census Bureau, 2007). A nursing home may be either freestanding or a distinct unit in a larger facility (U.S. Department of Health and Human Services; 2009).

Veterans Homes, which may be disproportionately male and include residents with service-related injuries, may have somewhat different census-related issues; therefore, one of the three study sites selected was a Veterans Home. On any given day, 35,000 veterans receive institutional long-term care for disabilities. The need for this type of institutional care will increase dramatically with the rise in the older veteran population in the next two decades (U.S. Department of Veterans Affairs, 2010).

Modern SNFs offer a variety of services, including short-stay rehabilitative, respite, and hospice care. Trends in skilled nursing care have recently included an emphasis on rehabilitation with a goal of returning the resident to the community home. Connections to the outside world and family relationships may be maintained in these temporary institutional arrangements, and for the purposes of the census, these patients or their families may not consider themselves to be “residing” in the nursing facility.

Hospice services are for those with six or fewer months of life expectancy who wish to shift to non-curative care. With the help of Medicare, Medicaid, and private insurance funding, hospice care has been increasing. Estimates suggest that 38.5% of deaths were under the care of a hospice program in 2008. In that year, an estimated 1.45 million patients received hospice services, and approximately 963,000 died. More than half of hospice patients were female (56.6%), and a minority (16.8%) were under 65. In the 1970s, the primary hospice admission had terminal cancer. By 2008 cancer comprised less than 25% of U.S. deaths, and other terminal conditions such as dementia, heart and lung disease featured more prominently (National Hospice and Palliative Care Organization, 2009). The majority of hospice services take place in a patient’s own home, but they may also be located in in-patient hospice centers, hospitals, long-term care facilities, and nursing homes. In-patient hospice facilities could be freestanding or units in hospitals that provide palliative comfort and supportive care to terminally ill patients and their families. The official definition of in-patient hospice counts only those with “no permanent residence elsewhere,” and the residents in the facility on the census date of April 1 are counted as residing in the facility (U.S. Census Bureau 2011a, code type 403). In 2010, there were an estimated 2,278 freestanding in-patient facilities in the U.S. (Hospice Association of America, 2010), and an estimated 21% of hospice deaths took place in such a location (National Hospice and Palliative Care Organization, 2009). The needs of hospice patients and families are more acute than those in general nursing home care.

Person-Centered Resident Rights

Nursing homes have historically been restrictive, which can negatively influence the identity of the resident. Previously, it was not uncommon for residents to have been chemically restrained with drugs, physically prevented from wandering, and limited in many other ways from experiencing a good quality of life in the institution. Goffman’s (1961) work suggested that the social influences of a “total institution” would cause self-mortification or a loss of personal identity. Residents might respond with adaptation strategies such as withdrawal or aggression. Salari (2006) supported this finding with observations in aging services where inappropriate treatment and environments were associated with aggressive outbursts toward staff or severe introversion among clients.

In response to these restrictive environments and potential abuses, legislation has been enacted to protect vulnerable residents in health care settings. The legal mandates supporting the need for patient privacy (e.g., Health Insurance Portability and Accountability Act [HIPAA]) and residents' rights have increased resident autonomy in HRGQ but also have served to make access to those populations a more complicated task. The Omnibus Budget Reconciliation Act of 1987 (OBRA) made nursing homes among the most highly regulated environments for health care in the U.S. The act emphasized the importance of increased patient rights for decision-making and planning his/her own care (Hillier & Barrow, 2007). Several philosophies have sprung from these changes, including the emerging emphasis on greater autonomy and decision-making. The "Eden Alternative" encouraged opportunities so that residents in nursing homes could be spared boredom, helplessness, and loneliness (Thomas, 1996). Scholars have encouraged care facilities to treat residents as "consumers" who are worthy of meaningful activities and a high quality of life, even if they suffer from physical disability and/or dementia (Kane, 2001: Salari, 2006).

Collins (2010), Koren (2010), and others have pointed to the culture shift in long-term care toward the person-centered approach, which strives for a homelike environment where residents retain choices about schedules, meals, entertainment, health care, self-governance, and socialization opportunities. High regard is placed on provision of autonomy "being one's own person, without constraint by another's action or by psychological or physical limitations" (Beauchamp & Childress, 1983). There is an ethical duty to use the least restrictive options, and practitioners are urged to create individualized solutions that allow for personal freedom. Disabled persons have capacities in some areas and lack capacity in others. Caregivers are encouraged to "begin with the client handling their own affairs and then move up the ladder to more restrictive options" (Heisler and Quinn, 1998, p. 178) as the need arises. Adults are thought to be legally competent until a court of law rules otherwise. "This means they can execute legal documents, make medical decisions, decide where to live, and…have full control of their lives (p. 179)." The focus should not be what a person is incapable of but rather the tasks he/she is capable of doing (Heisler & Quinn, 1998).

Access to health-related facilities and their populations have also become more restrictive over time, due to privacy and safety regulations. Beginning in 1996, HIPAA required health-related facilities to have increased concern over the privacy of patient health records, including those in electronic form (U.S. Department of Health and Human Services, 2010). The Privacy Rule ensures that sensitive health information is shared only at a core level to promote heath-related benefit, and there should be a ban on inappropriate use of patient data (Conway, 2010). Unsecured patient records might be subject to a potential for financial exploitation, identity theft, or pharmaceutical mismanagement and abuse. If residents fill out a census form or speak for themselves, that action implies their consent to participate and share otherwise protected information.

There are many times when personal information required by the census may not be able to be obtained directly in long-term care facilities. Conway (2010) points to 45 CFR § 164.512(a) "an entity may use or disclose protected health information without written authorization…if disclosure is required by law and the use or disclosure complies with and is limited to the relevant requirements of such law." Census Bureau enumerators are specially sworn under Title 13 of the U.S. Code to protect data (Conway, 2010). The information collected by the census includes name, gender, age, date of birth, race, and ethnicity—and each health care facility "is required to work with census staff to identify in-patients who have no other home elsewhere" (Conway, 2010 p. 3).

Conway (2010) suggested the "general condition" of the resident may be disclosed without authorization. Others who advised long-term care facilities indicated a more stringent stance, suggesting the census is not authorized to collect any health-related information on individuals (American Hospital Association, 2010) and must use administrative lists but not medical records (American Healthcare Association, 2010). Specialty facilities such as mental health or drug and alcohol treatment programs have special confidentiality requirements beyond that of other health care facilities (American Hospital Association, 2010).

In addition to HIPAA, other regulations have increased health care facility security by enacting legislation that mandates criminal background checks for employees in nursing homes. While these health and security regulations decrease access to criminals, they also may influence the census enumeration process if it is perceived to be at odds with institutional privacy and safety goals.

The current research examines the role of resident rights, privacy, and autonomy in light of the task of population enumeration. At issue is whether HRGQ settings can maintain norms of person-centered care and privacy standards for residents and still provide access to an efficient census of the population. It is important to determine how the HIPAA requirements, facility administration, and census enumerator's needs may overshadow the resident's right to self-report personal census information—and whether self-report is worthy of the risks involved.

METHODOLOGY

Qualitative Approach

The researcher was commissioned by the U.S. Census Bureau to use ethnographic methods to study the enumeration process in HRGQ. The observations of three facilities took place over 72 hours and were carefully timed to study the institutional culture before, during, and after the 2010 decennial census. The researcher noted obvious resident characteristics in the aggregate, such as cognitive and functional disability symptoms, and requested general estimates from the focus-group members (key staff and administrators) regarding the resident ability to self-report. In addition, the researcher determined population transitions, as well as the process and accuracy of the census enumeration.

Qualitative research is well suited for the study of the characteristics of residents and the culture within institutions (Gubrium, 1992; Hendricks, 1996). Grounded theory approach (Glaser & Strauss, 1967) allowed the researcher to observe aspects of the residents' social lives and to discover patterns or themes in an inductive fashion without predicting results. A reiterative process of data examination and coding led to interpretations and theoretical modeling. The ethnographic approach facilitated (a) observation of the naturalistic setting and contexts; (b) knowledge of the insider's perspective (administrators, staff, and residents); (c) observation of both the formal and the more implicit agenda (Ward, 1999); and (d) determination of the impact and effectiveness of the population count process. The study reported here focused on the themes associated with the potential for skilled nursing and hospice resident self-reporting on the 2010 census. The results of this study are not intended to generalize to other residents or institutions, but it is recognized that similar facilities may have similar subcultures (Ward, 1999). Multiple sites of observation varied in meaningful ways and were ideal for comparison purposes during the process of resident counting.

Training and Procedures

As a contract recipient, the researcher physically went to the U.S. Census Bureau for training and swearing-in regarding proper procedures of data collection, as well as transferring and storing of Title

13 data. The Census Bureau Office of Management and Budget (OMB) obtained interview schedules, consent forms, and IRB human subjects approval. Only the researcher was permitted to collect the data due to the special Title 13 sworn status and the various background security checks (for the Census Bureau and in addition each observed facility). In the approved institutions, additional entry requirements involved HIPAA training, volunteer education, ID badge requirements, health screening, and an orientation tour. Additional specialized training regarding bereavement, grief, patient care, and resident rights was also administered.

The researcher observed the daily lives and routines of those residing and working in designated HRGQ facilities and attempted to be as unobtrusive as possible without getting involved in the activities in the natural environment. Observations began approximately a month ahead of the officially scheduled census enumeration date so that residents and staff members became accustomed to her presence. The facility administrators were aware of the researcher's status as a census employee; however, census enumerators were not aware the "researcher" was specifically hired and sworn in by the U.S. Census Bureau to study the enumeration process and create an alternate population list for comparison purposes. The study did not intend to evaluate or judge the enumerators but to research the process and accuracy of the count in group quarters, and to determine the potential for accurate reenumeration for Census Coverage Measurement (CCM) (Salari, 2010).

The researcher attended all meetings and training sessions held between facility administrators and census enumerators, and also kept a record of population transitions, giving special attention to transfers, hospital visits, deaths, admissions, and discharges back into the community. She continually checked resident beds and double-checked the administrative reports regarding transfers, deaths, admissions, and hospitalizations that took place since the last observation. She spent several hours observing each facility on the specific census date. Observations of the census enumeration process were ongoing as administrative lists were used to count residents. There were several opportunities for her to observe interactions between the enumerators/census workers, staff, and administrative personnel. Observations noted staff preparation for the census count, the process of census enumeration, staff reaction to enumeration, enumerator interactions, and the impact of the count process on the facility. There were no interactions between regular census enumerators and residents in any facility studied.

The 2010 decennial census had only one form, the Individual Census Report. The form was comparable to what was previously labeled the "short form" and requested basic information such as name, age on April 1, 2010, birth date, gender, race, and ethnicity. Gender (male, female) was measured. Ethnicity was determined by whether a respondent was coded "No" or affirmative on a number of possible categories (Mexican, Mexican-American, Chicano; Puerto Rican; Cuban; other Hispanic). In addition to ethnicity, respondents were instructed to fill out a question about race. Race was determined as (white or one of 13 other designations of black, Asian, American Indian, Hawaiian, or Pacific Islander). There was a question regarding "Did you live in this facility MOST OF THE TIME?" (Yes or No). If answered in the negative, the respondent was referred to a fill-in-the-blank section for the address where he/she lived most of the time. In each facility, the census enumerators took a full list of all present on April 1, 2010, and there was no attempt to determine who had a regular home elsewhere. It was the researcher's understanding that eventually duplication of count was prevented by matching name and birth date records at the next level of data entry. This job was reserved for trained demographers at the Census Bureau who better understood the specific residence definitions and had access to all the data (See U.S. Census Bureau, 2011b Residence Rules).

The researcher constructed an "alternate list" and personally visited each of the residents. She followed room-level data provided by the facilities. The staff members were asked for clarification if there was ambiguity about characteristics such as gender or race and ethnicity. The detail of the racial and ethnic status obtained was probably not as complete as the information that would be gathered on an individual census form, but it should be noted the population was not particularly diverse.

For observations in the facilities, field notes were taken by hand on scene during the observation process, and detailed notes were filled in immediately after the observation session closed. Unobtrusive techniques of observation used "busywork"—a strategy developed and utilized in previous research projects by the researcher and colleagues (Salari & Rich, 2001; Salari, 2002; Eaton & Salari, 2005; Salari, Brown, & Eaton, 2006; Uriona & Salari, 2002). In these observations, the researcher had a pad of paper for note-taking and appeared to be looking down, engrossed in writing. This activity kept the researcher from making social alliances or being recruited by staff or residents for assistance with tasks.

Post enumeration interviews/focus groups were conducted in each facility. The insider perspective provided insight to long-term care culture, along with the strengths and weaknesses of what appeared to be observed in the setting. Informal and formal interview techniques were employed. Some of the techniques were limited by U.S. Census Bureau norms to collect data without causing burden on group quarter residents. Formal sit-down interviews with vulnerable adults were not appropriate in this research, but voluntary discussions initiated by residents helped to shed light on the residents' cognitive capacity and frame of mind. Interviews of residents were informal and stemmed from the natural observation process. In-depth formal interviews in populations with cognitive limitations or end-stage terminal conditions would have required a more complicated consent process, with family consent and resident assent.

Formal in-depth interviews of staff members and administrators were conducted in the three facilities. These interviews were structured and open ended. Respondents were asked for consent to record the interview so that transcription could be accurate. The focus group in Facility 3 declined permission for recording, so notes were written by hand. Questions on the interview schedule asked about access to residents, language barriers, health/cognitive difficulties, the ability to self-report, accuracy, errors and updates of administrative lists, staff adequacy, suggestions for improvement, and potential feedback. Consent forms were relatively simple, with a copy provided to respondents.

Analyses

Field notes were collected from observations and were ultimately managed, analyzed (qualitative), and referenced. The researcher transcribed the notes. From the initial handwritten notes, there were no specific identifiers included in descriptions. When the notes were typed into a computer, they had no information that could have indicated location or personal information, including names of residents, administrators, or facilities. A research team was assembled, including the researcher and two research assistants, to read over the field notes and determine a coding scheme and the emergence of themes. The process involved agreement between researchers so that only those they agreed on were utilized. There was not a significant degree of disagreement noted among members of the team.

The process was repeated for coding and interpretation of interview and focus group transcripts as well. As an example, the team identified themes from these data such as "census fatigue," which refers to evidence that the facility staff or administration grew tired of the intrusion of the census process. Once themes like these were identified, the incidence was determined within the field notes and interview transcripts using content analysis. The presence of patterns in observed practices, behaviors, and attitudes could represent a theme, or the lack of expected interactions or outcomes, through omissions, also could be indicative of a theoretical pattern in these data. For example, the lack of interaction between outside census enumerators and residents was noted as there were never any opportunities specifically created for resident self-report.

Facilities

Facility 1 was a private veteran's SNF, associated within a larger hospital campus, with 81 beds. The nursing home was observed for approximately 30 hours. General long-term care was located on the main level and housed 60 residents. The behavioral dementia unit was downstairs and had 21 residents. This was the only one of the three facilities studied that had an extensive wait list, which was approximately 80 for upstairs and 70 for the dementia unit.

The vast majority of residents were men, and requirements for eligibility included injury or age-related disability. The administrative focus group estimated about 40% to 50% of the residents in Facility 1 were cognitively aware, and about 41 persons were too demented to participate in simple tasks such as answering questions. Two staff members (the administrator and a social worker), who had been specially trained (over three hours) to properly handle census data, conducted the census enumeration. They were given the option to use medical/administrative records or ask residents to report for themselves. Ultimately, all residents were proxy coded with information from administrative data. The two sworn facility staff enumerators used computerized administrative records files and transferred them to paper census forms for each resident. The census representative collected the completed forms the next day. Originally, there was talk of allowing certain residents to self-report, but that plan was later abandoned. The researcher saw no evidence that residents were asked whether or not they wished to participate by means of self-report.

Facility 2 was observed for 18 hours. The in-patient hospice care facility had 21 beds available but typically housed 15 to 18 current residents. The facility served dying persons with a life expectancy of six months or less. The facility administrators and staff were committed to providing a stress-free environment for dying persons and their families. The residents were often bedridden with advanced stages of disease. The administrator estimated that 50% of the residents would not be capable of self-report on the census.

Preparation for the decennial census included an advanced visit from an enumerator in March. In preparation, the hospice administrator was provided a folder with an example census form and was given notice the census would take place via administrative list in early April. On April 8, the administrator was visited by the enumerator, and she submitted a list of 15 residents based on her records and her memory of population transitions for April 1.

Population turnover was a very salient issue in Facility 2. The population was influenced by rapid changes, sometimes including several deaths and/or admissions in one day. On the census date, April 1, there was a death at 9 a.m. Throughout the day, three new admissions were added to the population. One of those admissions died that day and another died the next day.

In the interview the administrator expressed a preference for the use of resident lists for census data collection and hoped that option would be available again in the future. She expressed concern that family members of hospice residents had several responsibilities and may be under increased emotional pressure. The lists provided information without asking residents and their families to perform tasks.

Observed for more than 22 hours was **Facility 3**, an Alzheimer's disease care, skilled nursing, and short-term rehabilitation facility with 115 beds and four sections, which included a behavioral dementia unit, two long-term care units (with hospice), and a short-term, Medicare-funded rehabilitation unit. Approximately 69 to 85 residents were observed in the facility at any given time. About half were men and half women, and the vast majority were white, non-Hispanic. Some of the residents suffered from physical decline but were not cognitively disabled.

Others were cognitively unaware, but had relatively good physical health. The focus group estimated 30% to 50% of the residents could have responded to the decennial census for themselves. It was important to the administrative staff that residents who were capable should have been given the right to participate in self-report. For those who were incapable, the preference was that family members should have been given the option to provide the resident's information regarding proper names, date of birth, race and ethnic identification. According to the two administrators, the exclusive use of administrative lists was a preference of last resort.

During the week of April 1, the administrator initially perceived they had been missed by the census. Once the enumerator made contact, the administrator stated that he had little advanced notice and was caught at a busy time with "month-end" business. The census worker assumed it would be better to do it the "easy way" and expected the facility would immediately produce a written list of requested resident information. A disagreement ensued, and the administrator sent the census worker away without a list. The census enumerator returned the following week and collected an administrative list of residents after the administrators went to the effort to prepare one. It was determined that there was not enough time to conduct self-report census responses for capable residents.

RESULTS

Themes emerged from the observation and interview process that emphasized the importance of long-term care culture, business-related goals, census fatigue, administrative list controversies, and the self-determination rights of consumers in long-term care culture. Despite discussions of administrators in Facilities 1 and 3 (both skilled nursing) regarding a potential choice for self-report, no resident in the three-facility study was observed to be given the option of participating in his/her own enumeration. Proxies based on use of administrative data were coded for all 163 residents counted.

Resident characteristics ranged from cognitively aware residents in skilled nursing or short-term rehabilitation to those who were in the final stages of cognitive and physical decline in the later stages of dying. Several residents could carry a coherent conversation and were oriented to place and person. For example, in Facility 1, Mr. B introduced himself to the researcher and spoke to her about his influence and achievements: "I've been to other nursing homes and this is the best. I was on the Board…and now I'm back on the Board… Did you see they are opening one in X city? I visited the legislature to lobby for that one. There are going to be resident units, four of them. I helped design it...it's more modern than this one…I also helped design the front room of this building…Now [I'm] 78...I'm younger than most of the other guys in here. I've seen 500 leave here on a gurney...I've been here since the 13th resident in this building, when they first opened 11 years ago."

Another resident, Mr. D, described his frustration with his physical condition but had a solid grasp on his cognitive functioning and probably could have participated in a self-report: "I'm a prisoner…I'm 84…you wake up one morning and there you are…I can't walk. I was World War II injured…could walk again…I was in hospital when I came out…I couldn't walk…I've been trying to learn to walk again. Not currently scheduled for more therapy…I like to nap now, but I can't sleep at night if I do. My wheelchair feels hard about this time…I got a boil… I used to golf and ski…Skiing, a steep drop-off…[he showed the researcher his room and pointed to his sleeping roommate]. He won't last long…My stuff is with friends here and there…I lived in a condo; I had to sell it. I'm like a baby now…"

The researcher replied, "Babies don't have the same knowledge or memories or skills…"

Mr. D: "Yes, but I can't get myself on the toilet, and I can't wipe myself….I can't bathe myself… they've got young girls who help me with that… Sometimes men, but mostly girls…It's what you've got to do, I guess."

In contrast, the hospice residents were often in poor physical and cognitive condition. The administrator of Facility 2 (hospice) introduced the term "dysphasia" during her interview to refer to the common symptom of patients that may limit the communication potential of residents in the end stage of dying. It was observed that the physical appearance of the individual also could make census information-gathering difficult. The facility did not include ethnic data in administrative records, so the researcher undertook a visual inspection to provide clues. Unfortunately, some of the residents were so progressed in the dying process that characteristics such as normal skin color and gender were difficult to ascertain. The voices of these residents were typically a whisper, and louder volume would have been a strain under interview conditions. Even so, it was not possible to generalize to the entire hospice population, as some remained functional until the day they died. The following case study illustrates functional capacity:

Ms. P actively participated as she put puzzles together and had quiet conversations with visitors in the common area of her residence wing. She reportedly had lived in the facility for four to six months. By the end of the study, Ms. P had died, but she had never experienced symptoms that would have precluded her self-report on a census form.

Obviously, with the existence of the dementia units and the terminal condition of hospice residents, the low end of the functioning scale was heavily represented in HRGQ facilities. From focus group interviews it seemed assumed by administrators that those in the specialized dementia units would be excluded from interview and placed in the proxy category. Residence in those units signified a variety of serious conditions such as behavioral problems, aggression, wandering, paranoia, or other major cognitive disability.

In the general long-term care population, selecting who would and who would not have meaningful potential to self-report would be possible if census enumerators could rely on the focus and cooperation of staff and administrators for assistance; however, many would consider that sort of effort to be a strain on the facility resources and a potential breach of resident medical privacy.

In addition to poor cognitive functioning, HRGQ populations experienced rapid resident turnover. These patterns of complexity influenced the accuracy of enumeration. For example, the following descriptions of population changes were recorded:

Hospice Facility 2 on census day had two deaths, three admissions, and one of the admissions died same day. Another admission from April 1 died on April 2.

SNF 3 staff administrator described the transitions: "Wed.—three admits, three left (ER, home, "expired"), Thurs.—two admits, two left, Fri—two admits, two short-terms left. Sat.—two "went" and there was an admission; three coming today….Mar. 23—two deaths and VA entered for 14-day stay. Hospitalized man returned and died. Next day—two admits and three discharges. Next day—two admits to rehab, two home discharges. Fri.—three admits to rehab, one home discharge. Sat.—discharge to home, status change to private pay. Sun.—discharge to home. Mon.—one admission, three discharges…"

Despite rapid population transitions, the administrative lists were observed to be updated daily for billing purposes, so accuracy was important. It was clear from focus group interviews that the administrators valued the accuracy of their own daily census.

The process of cooperating with the census left some evidence that administrators were burdened with "census fatigue." There were concerns about security, resident rights, HIPAA, and the resources of the facility. As an example, the administrator and social worker in Facility 1 expressed frustration at the "excessive" three-hour census self-enumerator training they had to endure as they were certified to conduct the census from within their facility.

Facility 3's administrator had a meeting with the census employee that eventually became somewhat contentious. When the enumerator eventually contacted the facility (late), she immediately requested an administrative list. The administrator expressed irritation regarding the last-minute contact but also with the neglect of residents' rights. By neglecting to provide notice and proper timing, the contact with the census was rushed and required swift decision-making. The census worker's opening statements: "I understand you have between 85 and 115 residents, correct?...I'm assuming you are not gonna want me to go around asking each resident. We can do it the easy way or the hard way."

From the beginning, she assumed he would submit an administrative list of residents and provide the requested census information. The administrator was concerned about the use of staff resources to create the list: "You are being paid to do this job?" [The census worker said, "Yes."] "…then we will let you do it."

In addition, the administrator raised concerns about the residents' rights to self-report: "Are the residents able to do their own [census form]? I'm an advocate for residents. Why didn't they get the form? Thirty percent are short stay, 60% to 70% are long term…"

Census Worker S: "I've done 1990 Census work… We can do it each way. If people could do their own…fill out their own…I can make packets up…"

Administrator: "If we do it with records, then I'm doing work that is not mine to do…I'd love for you to go to each resident…"

Census Worker S: "We need information…we can get it easily…or take three to four days with a combination of both."

Administrator: "I'll try to do it your way…20 years and no one comes…then when you do come in you're not giving the resident the time of day. These people are already disengaged in the community…if they can do their own census, it can get them back into it… There is gonna be a battle every 10 years….I advocate for them…Elderly are held in great esteem here…"

Census Worker S: "Well, if you want to play hardball…I can have three to four people come in and question people…"

Administrator: "It's not hardball…You approached me this way already…There are a handful who are alert and oriented, who could do it themselves…I guess we will have to do it the way you assumed we would…but it's a shame…I like to advocate for the elderly. About 25 could do it themselves."

Census Worker S: "Everyone can be asked if that's how you want to do it."

The administrator emphasized several times that he is an advocate for the elderly and had concerns about the use of staff time for government information-gathering purposes. The use of administrative lists was universal but not necessarily the first choice of all facilities. Census enumerators seemed to assume use of resident records would assist data collection and would be easier. The conditions of the lowest functioning resident were used to form opinions about the abilities of all residents. There was a belief that facility residents would be unwilling or incapable of answering census forms themselves. Ultimately, the administrator in Facility 3 agreed to "do it the easy way," but it was not without cognitive dissonance. The administrator conformed to the census worker's assumption because he didn't really have time or staff resources to tackle the workload associated with the option to let residents do their own forms. The issue had been pushed out to the "point of no return"—at that juncture it was impossible to get resident input on the task. The use of this example indicates that enumeration using administrative lists in this facility was not necessarily a simple task but rather a struggle with some degree of controversy.

The focus group of Facility 3 brought up controversies regarding the proper source for proxy-coded information. "Kin proxies" are relatives with rights of decision-making, especially when they hold Power of Attorney status. Permissions should be given consideration in the process of using proxies on census forms. Observational research found family members were not given an option to be involved in any of the studied facilities. Interviewees in the Facility 3 focus group described the process as a breakdown of "chain of permission": (1) resident, (2) family, and (3) facility administration. Their company desired to follow this chain due to their own philosophy and many legislative and policy regulations for resident rights that support that position.

The researcher asked: "What advice do you have that would improve the counting process in this facility?"

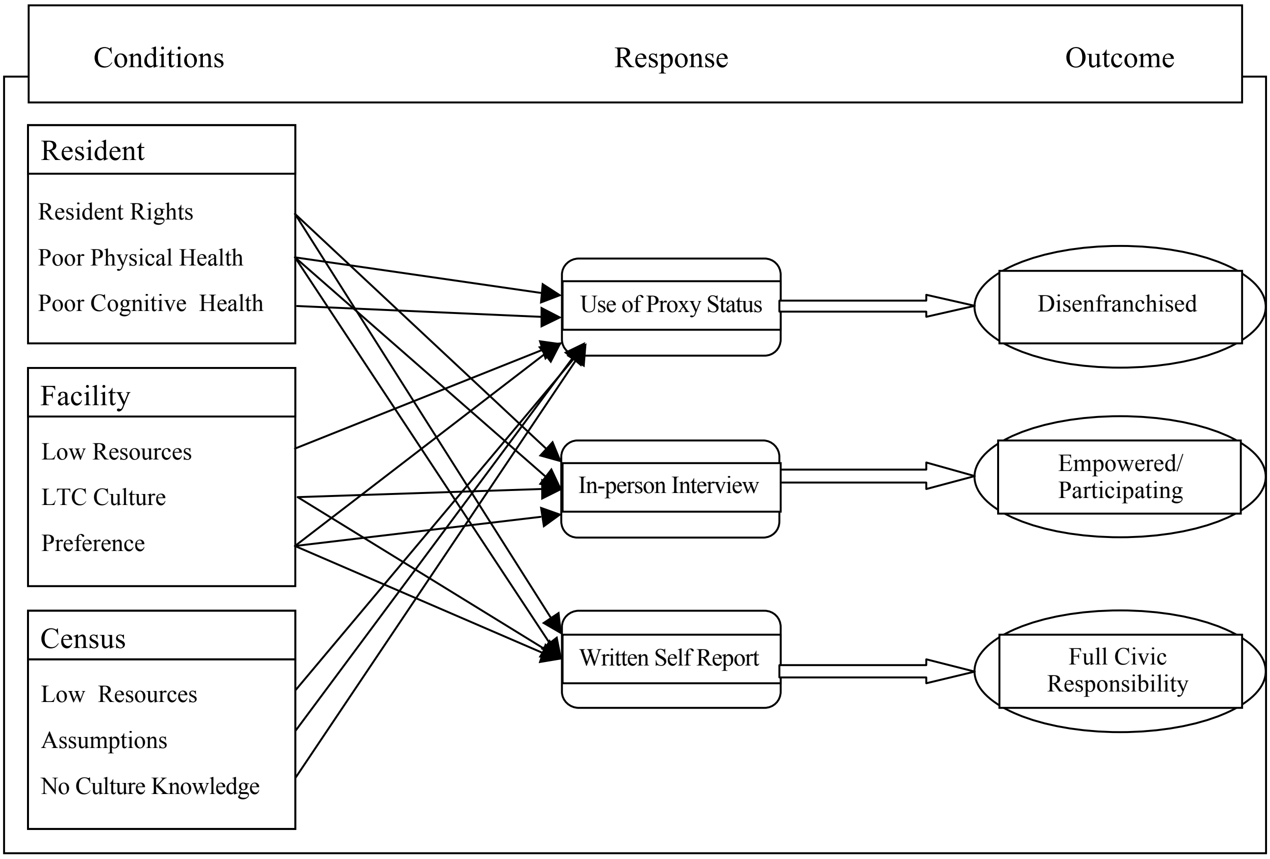
Admin. G: "…Comes down to …should it cost my facility anything? And can we afford to take out our residents from the process?"

Staff M: "Also a legal component. We are not Power of Attorney to do census. We can't vote or fill out taxes for them…so why census?"

In contrast, Facility 2's (hospice) administrator actually preferred the exclusive use of administrative lists so that dying residents and their families could be spared the participation in a potentially stressful task.

DISCUSSION

Based on the data observations and analyses in this study, a theoretical perspective began to emerge regarding the barriers to self-report among HRGQ residents. **Model 1** points to the resident, facility, and census characteristics that may limit or empower the group quarters resident to provide his/her own census information. Modern emphasis on residents' rights permits the maintenance of adult status and responsibilities similar to those they had in the outside world. These rights include the right to civic engagement, self-determination, choice, and autonomy. Poor physical health may limit a potential self-response. The most extreme physical limitations are associated with the final stages of dying; it may be plausible residents are too impaired to contribute in a meaningful way. Screening for physical impairment with the absence of cognitive disability would provide a list of potential participants, and these residents could potentially provide census information via written or verbal feedback. On the other hand, severe cognitive impairment would limit the census



Model 1: Barriers to Decennial Census Self-Report Among Residents of HRGQ.

response to proxy status.

Facility lack of resources (time, money, and staff manpower) to assist with decennial census enumeration may apply pressure to seek a quick resolution to the task, resulting in the use of proxies. To encourage in-person enumeration requires greater devotion of facility staff time to determine accurate versus inaccurate responses to inquiry. The business model might define helping with government tasks as a "waste" of resident funds. Modern long-term care culture encourages person-centered choices and responsibilities and gives residents "consumer" status. These provisions would encourage the productivity involved in answering one's own census form, either verbally or physically. To answer one's own surveys, and have the responsibility to report, would be an example of the choices involved in adult life. In years past, the institutional "inmate" had none of the rights and responsibilities of the outside world. The facility served as a barrier, and residents lost their identities through a process of "self mortification" (Goffman, 1961).

SNF 3 administrators fought against the use of administrative lists for decennial census enumeration on the grounds of resident rights; however, the administrator eventually acquiesced. To allow for choice would have taken more time. In contrast, hospice Facility 2 wished to spare dying residents from the potentially stressful hassle of having to respond to mail or questioning. The perspectives of the administrators must be factored into the equation since it seems inevitable that facility resources are involved.

The census enumerator's resources may be a factor as well—especially time and manpower. If he/she assumes that all residents are cognitively unable to respond to their own enumeration, then he/she will seek to obtain administrative lists exclusively. The perceptions of resident capabilities may be based on stereotype, with a lack of recognition of the varying cognitive functioning. If self-reports were to be used in the future, census workers would need education about norms of resident rights and would need to be educated to inquire about those who have cognitive abilities intact, making sure to abide by HIPAA standards. Their knowledge of the long-term care culture may determine whether they bypass the residents and work to obtain administrative lists. Ultimately, the residents and facilities had options that could have included other methods of counting (being interviewed or filling out forms), but these were not offered. Thus, the only outcome possible in this model had disenfranchised the residents since none of them were able to self-report. This process may itself impact a facility, as it limits the ability for it to provide autonomy and civic responsibility to capable residents. The "all or nothing" mentality required that facilities characterize residents according to the abilities of the lowest cognitive functioning—to quickly dispose of this task. To allow for self-report, the census would need to anticipate a mixture of counting methods, all based on the diversity of the cognitive and health status found in HRGQ. An additional concern is that disclosure of the cognitive status of residents to census personnel may create a level of privacy violation that goes beyond the scope of the information needed by the Census Bureau.

CONCLUSION

The task associated with allowing residents to self-report in HRGQ seemed overwhelming to facility administrators, even when they had expressed an interest in allowing this form of resident autonomy. Some of that result seemed motivated by the fact that even when self-report was desired, no one could properly conceptualize how the process would be conducted and what sort of resources would be required. Given that the facilities had rather short notice, it was not possible to come up with a successful plan to achieve the goal.

People in advanced ages and those with serious injuries or late-stage terminal illness are much more likely to experience mortality during the enumeration process, which has serious potential to complicate the count. On the other hand, evidence also indicated that there were residents with high levels of cognitive functioning and civic interest who would be capable of filling out a census form or being interviewed to obtain the personal information. In all three HRGQ facilities, the focus groups estimated that 30% to 50% of residents could have self-reported on the decennial census. Particularly strong arguments were made for self-reports among short-term stay residents who had "one foot in the facility and one in the community." In contrast to these arguments for self-report, the hospice administrator actually had a strong preference to spare residents and their families of the extra stress of actively participating in the census. In the case of the end-of-life care, the researcher found that concerns for comfort trumped resident autonomy. Eventually, all three settings counted residents exclusively by the use of administrative lists.

Rapid population transitions, including resident admissions, hospitalizations, transfer, discharges, and deaths, make HRGQ populations particularly difficult to measure. Despite the rapid nature of these transitions, administrative lists have a good chance of tracking changes. They are useful if they are maintained over time and kept accurate. The facilities observed here were fairly proficient at keeping lists up to date. Facility 3 administrator stated that "billing requires 100 percent accuracy," so the lists must be perfect. In the time it would take to assist residents with self-reports, the population would have shifted significantly, so that would represent a critique of self-report over the single-point-in-time use of an administrative list.

The business model of the health care facility considers time spent away from facility business as an opportunity cost. Staff assistance with preparation, maintenance, and storage of a census-specific administrative list is often equated to money spent on something other than the direct care of residents and recruitment of new business. Given the extra efforts required on the part of HRGQ staff to help create an administrative list or even to assist in resident self-enumeration, there may be a need from someone from within the facility who could be provided with an incentive to help. This would improve the accuracy of the task, and the individual would already have the trust, training, and security clearances to be in the facility, working with the vulnerable population.

In the three observed facilities, observations reflected assumptions by the census enumerators that 1) facilities would prefer to do the count quickly; and 2) the residents would be unable or unwilling to self-report. Although the Census Bureau had not made an official policy regarding the exclusive use of administrative lists for GQ, it was observed that enumerators seemed interested in this method of information-gathering. It is possible this philosophy was influenced by previous census research, which encouraged administrative list utilization exclusively (Jonas, 2003).

Study Limitations and Future Directions

The most significant limitation to this research was the inability to provide the insider's perspective from HRGQ resident interviews, due to considerations of burden to vulnerable populations in these facilities. It would have been useful to know whether or not residents themselves perceived a loss from the lack of involvement in their 2010 Census.

If future census data can be conducted securely from an electronic format rather than paper forms, the administrative list transfer will become more efficient, and this process will significantly cut down the burden of HRGQ staff and administrators; however, with increased ease of resident list transfers, the participation of residents in their own self-reporting may be even farther away in the future.

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DISCLAIMER

This article is released to inform interested parties of research and to encourage discussion of work in progress. The views expressed are the author's and not necessarily those of the Census Bureau.

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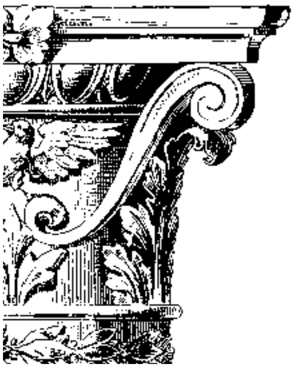


Psychological Fitness for Older Adults: A Pilot Intervention

Jerome L. Short, PhD

ABSTRACT

The purpose of this pilot study was to evaluate a brief (three hours) psychological fitness intervention that taught and encouraged participants in a retirement community (ages 69 to 94) to practice eight daily psychological exercises. The intervention randomly assigned 96 participants to receive a program immediately or to a delayed-treatment control group. At a one-month posttest, the immediate intervention participants reported significant increases in optimism, decreases in anxiety, and marginally significant increases in perceived support compared to the control group. The results suggested the value of a brief intervention to enhance older adults' mental health, with the potential to reduce medical care costs.

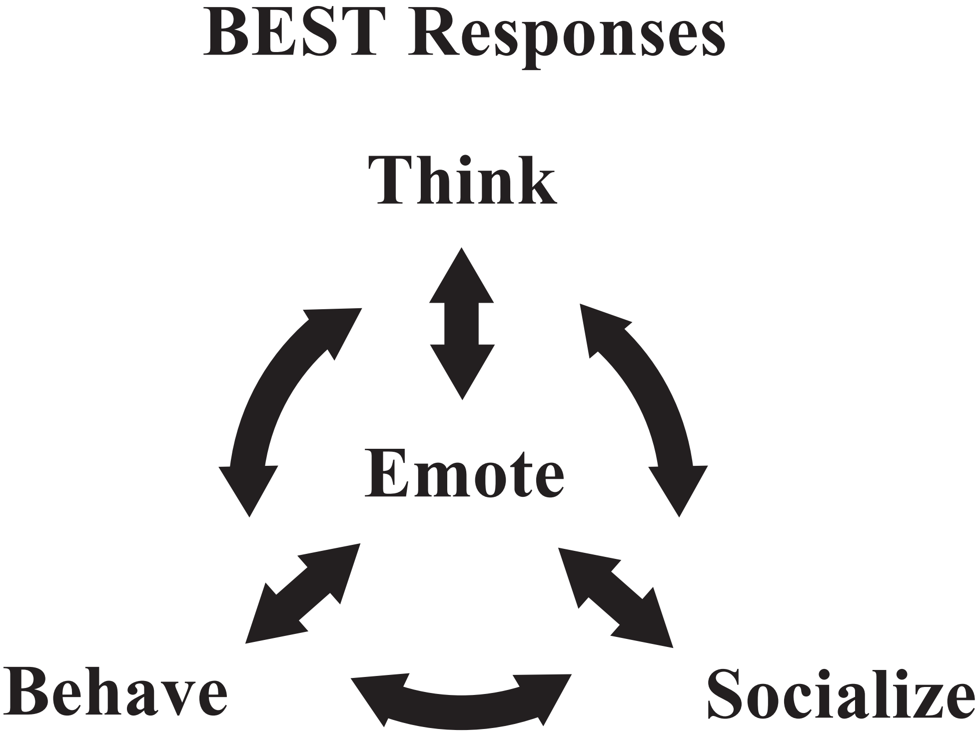
INTRODUCTION

In recent years, there is increased interest in the prevention of psychological symptoms and promotion of psychological health among older adults. Brief interventions of only a few hours may provide psychological skills to enhance mood, increase health behaviors, encourage adaptive thinking, and contribute to satisfying relationships. These skills in turn may reduce the need for medical care and increase life satisfaction and longevity (Chiles, Lambert, & Hatch, 1999).

By 2050, the number of adults age 65 and older in the U.S. is expected to more than double from 40.2 million in 2010 to 88.5 million (U.S. Census Bureau Population Projections, 2008). Lifetime prevalence rates for the most common psychological disorders are 15.3% for anxiety disorders and 11.9% for mood disorders among adults above age 60 (Kessler et al., 2005), and 13.7% for Alzheimer's and other dementias for adults above age 70 (Brookmeyer et al., 2011). Up to 20% of older adults experience significant anxiety symptoms that may not meet criteria for a specific anxiety disorder (Himmelfarb & Murrell, 1984). Among nursing home residents, 51.8% reported significant depressive symptoms in one study (Gaboda, Lucas, Siegel, Kalay, & Crystal, 2011). Depression in late life is related to more physical illness, self-neglect, suicide, and decreased physical, cognitive, and social functioning, which are associated with increased mortality (Blazer, 2009). The prevention of anxiety and mood disorders and increases in cognitive, behavioral, and social functioning are important targets for mental health interventions to increase the quality of life for older adults.

This article will review research on evidence-based mental health promotion techniques and interventions, describe a brief theoretically integrated psychological fitness intervention, present the results

Exhibit 1. BEST Model.



of a pilot study for residents of a retirement community, and suggest directions for future research.

Psychological Fitness Model

Most people understand and follow the principle of performing physical exercises to enhance physical fitness. Similarly, people who do psychological exercises should enhance their psychological fitness. One can organize the evidence for effective psychological exercises with the acronym of BEST for behavioral, emotional, social, and thoughtful exercises. Furthermore, one can integrate these conceptual approaches in an interactive model that indicates that changes in any one of these four dimensions will affect the other three dimensions, as shown in **Exhibit 1**. These exercises and the integrative model are consistent with cognitive-behavioral (Beck, 1995; Jacobson, Martell, & Dimidjian, 2001), emotion-focused (Greenberg, 2002), and interpersonal (Klerman, 1984) therapies that are commonly used evidence-based treatments for reducing psychological symptoms and increasing mental health.

The next section describes two exercises for each of the four BEST dimensions: (1) behavioral activation; (2) daily health behaviors; (3) relaxation; (4) emotional processing and expression; (5) altruism; (6) social support; (7) gratitude; and (8) optimism.

Behavioral Exercises

Behavioral activation is the pursuit of enjoyable daily activities and rewarding experiences to reduce negative emotions and increase positive emotions through behavior change (Jacobson et al., 1996). A practical approach to behavioral activation is to increase the experience of rewards and pleasure that involve one's five senses of sight, hearing, smell, taste, and touch through daily activities, such as watching people, listening to music, smelling perfume, eating favorite foods, and hugging others. Several successful interventions have been reported. A single session intervention and two-week treatment interval for university students with moderate depression led to greater reductions in depression and increased environmental reward at post-treatment relative to a no treatment control group (Gawrysiak, Nicholas, & Hopko, 2009). In addition, a five-session behavioral activation and therapeutic exposure intervention for participants with complicated bereavement led to significant improvement on structured interviews of symptoms of grief, post-traumatic stress disorder, and major depressive disorder, and self-report measures of depression, physical functioning, and social functioning, irrespective of how many days since a death occurred (Acierno et al., 2012). Another study of patients, 65 and older, with mild to moderate cognitive impairment in a geriatric psychiatric facility found that those randomly assigned to eight 30- to 60-minute behavioral activation sessions over four weeks experienced significant decreases in depression (Snarski et al., 2011). Older adults may need to consult with a physician about increased activity, especially if they experience any pain or discomfort.

Key daily health behaviors for older adults are nutritional eating, physical activity, and adequate sleep, and these behaviors appear to mediate the link between the personality trait of conscientiousness and lower mortality (Kern & Friedman, 2008). In a study of people 65 and older living in the community in Great Britain, the combination of moderate physical activity, consumption of fruits and vegetables, not smoking, and low to moderate alcohol consumption lowered the all-cause mortality rate by 58% over nine years (Hamer, Bates, & Mishra, 2011). Another study of older adults assessed physical activity and psychosocial variables at two and five years following a six-month randomized, controlled exercise trial. Older adults with higher levels of physical activity, more positive affect, and higher self-efficacy at Year 2 were more likely to continue to be active at Year 5 (McAuley et al., 2007). In a prospective study of 3,820 Spanish adults, representative of the non-institutionalized population 60 and older, those who slept eight hours or more had higher mortality within seven years as compared to those who slept seven or fewer hours, even when adjusted for health status (Mesas, López-García, León-Muñoz, Guallar-Castillón, & Rodríguez-Artalejo, 2010). It is often helpful to provide current research evidence about nutritional eating, physical activity, and sleep to reassure older adults about the levels of each that relate to health and longevity.

Emotional Exercises

Progressive relaxation is tensing and releasing different muscles to bring about greater physical comfort. One also can imagine enjoyable settings like a park or beach and make the images more vivid by thinking of the level of stimulation to the five senses of sight, hearing, smell, taste, and touch that elicit relaxation. In one study of older women ages 63 to 79, a group randomly assigned to practice relaxation and meditation significantly reduced their state and trait anxiety in comparison to a pseudo-relaxation control group (DeBerry, 1982). At a 10-week follow-up, those who continued to practice relaxation showed decreases in state anxiety, but those who stopped practice returned to their baseline levels of state anxiety. A study of women ages 65 to 75 found similar reductions in state anxiety with continued practice of relaxation and meditation (DeBerry, Davis, & Reinhard, 1989). Imaginal relaxation, where one imagines tensing and releasing muscles, appears to offer comparable benefits to progressive relaxation for reducing anxiety and may be preferred for older adults who experience pain when tensing muscles (Ayers, Sorrell, Thorp, & Wetherell, 2007). A meta-analysis of 19 studies showed that cognitive behavioral therapy for geriatric anxiety did not seem to add anything beyond relaxation training alone in reducing anxiety (Thorp et al., 2009). Older adults may benefit from relaxation activities several times during the day and especially before sleep.

Emotional processing is spending time identifying emotions and trying to understand their cause and meaning (Stanton, Kirk, Cameron, & Danoff-Burg, 2000). Women with breast cancer who coped through expressing emotions surrounding cancer had fewer medical appointments for cancer-related morbidities, enhanced physical health and vigor, and decreased distress during the following three months compared to those low in emotional expression, controlling for age and other coping strategies (Stanton et al., 2000). College students who wrote or talked about their worst life experience for 15 minutes on three consecutive days reported higher levels of well-being and physical health compared to students who thought privately about the experience (Lyubomirsky, Sousa, & Dickerhoof, 2006). Another study found that adults who wrote three things that went well each day and their causes every night for one week had increased happiness and decreased depressive symptoms for six months (Seligman, Steen, Park, & Peterson, 2005). In an intervention for bereaved older adults ages 51 to 85, where they verbally disclosed their thoughts and feelings about the death of their spouse in four 20-minute sessions, participants reported significant reductions in hopelessness at one-month follow-up compared to a delayed treatment control group (Segal, Bogaards, Becker, & Chatman, 1999). For those who completed a one-year follow-up, the initial decrease in intrusive thoughts was maintained at one year. Total distress decreased from pretest and from post-treatment to one-year follow-up. Negative thoughts showed no changes across the initial three periods but significantly declined at one year. Moreover, decreases in negative cognitions were associated with decreases in depression, hopelessness, intrusive thoughts, and avoidance from pretest to one year (Segal, Chatman, Bogaards, & Becker, 2001).

Social Exercises

Altruism and volunteerism are associated with lower risk of mortality for adults above age 55 (Oman, Thoresen, & McMahon, 1999). Several experiments have attempted to understand whether frequency and variation of kind acts affects the volunteer's happiness. College students who performed five acts of kindness in one day reported more increases in happiness than those who did the acts over a week (Lyubomirsky, King, & Diener, 2005). Another study indicated that students who varied their kind acts showed a greater increase in happiness as compared to a group who did the same kind acts (Lyubomirsky & Della Porta, 2010). In an experimental intervention with Japanese college students, their happiness increased by counting their own acts of kindness for one week. In addition, happy people became more kind and grateful through the counting kindnesses intervention (Otake, Shimai, Tanaka-Matsumi, Otsui, & Fredrickson, 2006). Among older adults, there are no experimental kindness interventions, but one study found that individuals with lower income systematically reported more benefits from volunteering. The researchers suggested that adequate training, ongoing support, and stipends contributed to personal benefits and can help with recruitment for volunteering (Morrow-Howell, Hong, & Tang, 2009).

Social support is one's subjective appraisal of connection to others and that others are available and adequate to help if needed. Perceived support has been associated consistently and strongly to good psychological health and low rates of psychological disorder (Barrera, 1986). Received social support is less important to psychological well-being in older adults unless it is provided by a spouse or sibling (Thomas, 2009). Compared to younger adults, older adults' relationships are more positive and satisfying, which may be attributable to others' tendencies to treat older adults more kindly, greater freedom to choose social partners in old age, and increased social expertise at reducing conflict in relationships (Luong, Charles, & Fingerman, 2011). One intervention randomly assigned lonely elderly women who lived alone to social support meetings or a control condition. At a follow-up, the support group was engaged more socially, less lonely, and had decreased blood pressure (Andersson, 1985). In a cognitive enhancement intervention for older adults, groups attended three sessions per week in their assisted living community for three months (Winningham & Pike, 2007). The sessions educated participants about the brain and memory and stimulated memory and cognitive activity. In addition, the activities facilitated social interactions and social support. Participants worked cooperatively as they learned each other's names and memorized interesting information about each other (e.g., state of birth, favorite food item), associated childhood photos with participants, and worked on homework assignments together. After a three-month intervention, participants reported higher perceived social support and less loneliness than a control group. A way to increase perceived social support is to conduct psychological interventions in groups so that participants can converse with others and choose to interact outside the group sessions.

Thoughtful Exercises

Gratitude is an acknowledgement that one has received something of value from others. Gratitude reduces envy and resentment, leads to a focus on the benevolence of others, reduces materialistic strivings, boosts the retrieval of positive memories, and fosters trusting interactions with others (Emmons & Mishra, 2011). In one study where college students wrote and shared a gratitude letter, they experienced greater happiness up to one month later (Seligman, Steen, Park, & Peterson, 2005). Another study found that listing up to five things students were grateful for in a gratitude journal once per week led to greater happiness, unlike another condition of doing so three times per week (Lyubomirsky, Sheldon, & Schkade, 2005). A nationwide survey of retired adults ages 65 and older found that those who felt grateful were less likely to experience symptoms of depression (Krause, 2007). There are no reported gratitude interventions with older adults, but they hold promise for addressing anxiety, depression, grief, and caregiver burden by helping people focus on positive aspects of events that have been associated with loss (Hill, 2011).

Optimism refers to positive expectations of future events (Ferguson & Goodwin, 2010). Optimism is negatively associated with depression, anxiety, hostility, distress, and negative mood, and positively associated with psychological well-being, resilience to distress, satisfaction with life, positive mood, and positive states of mind (Carver, Scheier, & Segerstrom, 2010; Scheier, Carver, & Bridges, 2001). In a study of adults age 65 to 94, optimism predicted both purpose in life and positive affect (Ferguson & Goodwin, 2010). In another study of older adults, optimism was positively related to life satisfaction and negatively related to depressive symptoms. Furthermore, optimism partially mediated the relationship of pain to life satisfaction (Ferreira & Sherman, 2007). One pilot intervention focused on enabling HIV-infected older adults to accurately appraise sources of stress, develop adaptive coping responses, including optimism, and access social support resources. The intervention increased participants' perceptions of social support, perceptions of social well-being, problem-solving, confrontive coping, and future optimism (Heckman et al., 2000). For older adults, the planning of daily and weekly enjoyable events and making reminders easily available may increase optimism.

Multiple Component Interventions

There have been previous multiple component interventions presented individually, online, or in groups. Moskowitz (2010) created a positive affect intervention named IRISS (intervention for those recently informed of their seropositive status) and delivered five one-on-one sessions to participants. A facilitator taught eight skills: (1) noting daily positive events; (2) capitalizing on or savoring positive events; (3) gratitude; (4) mindfulness; (5) positive reappraisal; (6) focusing on personal strengths; (7) goal setting; and (8) small acts of kindness. In a pilot study of 11 participants with HIV, she found a decrease of more than 40% in depression scores between the final intervention session and a four-week follow-up assessment, and an increase in positive effect scores of more than 20% between the start of the intervention and the week after the intervention ended.

One large-scale effort to improve adults' mental health is the Army's Comprehensive Soldier Fitness program for soldiers ages 18 and older (Seligman & Fowler, 2011), which includes areas of emotional, social, family, and spiritual fitness. The Army presented the intervention to soldiers in online modules. An evaluation with nearly 10,000 soldiers showed small effect size (d = .07 to .13) increases in emotional fitness, adaptability, character, good coping, optimism, family fitness, family support, social fitness, friendship, and organizational trust for 18 to 24 year olds. There were increases in only emotional fitness, character, and friendship for those over age 24 compared to control groups (Lester, Harms, Herian, Krasikova, & Beal, 2011).

A test of an earlier version of the present study's three-hour group-based psychological fitness intervention with college students found that the randomly assigned intervention group participants reported significant increases in optimistic thinking, academic competence, positive body image, global self-esteem, and life satisfaction, and significant decreases in anxiety, depression, and anger symptoms compared to a control group (Short, 2006). Since there have been no similar interventions tested with older adults, the following study tested whether a psychological fitness intervention could contribute to older adults' mental health.

The psychological fitness intervention targeted members of a retirement community and included a focus on doing the eight exercises previously described. It was hypothesized that practice of behavioral, emotional, social, and thoughtful (BEST) exercises would decrease anxiety and depression and increase gratitude, optimism, perceived support, social life satisfaction, and amount and satisfaction of physical exercise and sleep for older adults.

METHOD

Participants

The participants included 96 residents of a retirement community (78% female) and their mean age was 81.6 (age range: 69 to 94). Nearly all residents were Caucasian (96%), and the majority (62%) was unmarried, primarily due to spousal death (46% of the total sample). The education levels of participants were 6% less than high school, 32% high school graduates, 21% had some college, 21% were college graduates, and 20% had advanced degrees. There were no demographic differences between the intervention and control groups. They responded to flyers describing the study that they received in their mailboxes. There was no monetary compensation for participation. Nearly all the residents were able to walk to meeting rooms, except for five who used motorized wheelchairs. There was no information on their overall health status.

Instruments

Mini-Mental State.

Thirty items from the Mini-Mental State Examination (Folstein, Folstein, & McHugh, 1975) screened participants for cognitive impairment. Research has shown the measure is valid and reliable with "very old" (age 75+) adults (Hopp, Dixon, Grut, & Blackman, 1997). The scale was scored from 0 to 30.

Anxiety.

Ten items from the Symptom Checklist-90 (Derogatis, Lipman, & Covi, 1973) measured anxiety. This measure has assessed the mental health status of adults ages 60 to 88 (Scogin & Rohling, 1989). The items were scored from 1 ("not at all") to 5 ("extremely"). Cronbach's alpha was .91 for this study.

Depression.

Twenty items from the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) measured depression. The CES-D has screened for depression in a sample of older adults with an average age of 72 (Irwin, Artin, & Oxman, 1999). The items were scored from 1 ("less than one week") to 4 ("five to seven days per week"). Cronbach's alpha was .85 for this study.

Social Life Satisfaction.

Five items from the Extended Satisfaction with Life Scale (Allison, Alfonso, & Dunn, 1991), an adaptation of the commonly used Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) by inclusion of the word "social" in each item, measured satisfaction with social life. Older adults ages 65 to 95 have completed the SWLS (Roth, 2009). The items were scored from 1 ("strongly disagree") to 5 ("strongly agree"). Cronbach's alpha was .95 for this study.

Social Support Appraisals.

Twenty-three items from the Social Support Appraisals Scale (Vaux et al., 1986) measured perceived friend and family support. Older adults ages 65 to 95 have completed this scale (Roth, 2009). The items were scored from 1 ("strongly disagree") to 4 ("strongly agree"). Cronbach's alpha was .93 for this study.

Optimism.

Six items from the Life-Orientation Test – Revised version (Scheier, Carver, & Bridges, 1994) measured optimism. Older adults ages 65 to 94 have completed this scale (Ferguson & Goodwin, 2010). The items were scored from 1 ("strongly disagree") to 5 ("strongly agree"). Cronbach's alpha was .74 for this study.

Gratitude.

Six items from the Gratitude Questionnaire (McCullough, Emmons, & Tsang, 2002) measured gratitude. Older adults completed this measure in a large longitudinal study (Krause, 2009). The items were scored from 1 ("strongly disagree") to 5 ("strongly agree"). Cronbach's alpha was .79 for this study.

Amount and Satisfaction of Health Behaviors.

Four items were created for this study. Two items asked "How much do you exercise per week?" and "How much do you sleep per day on average?" The other two items asked about satisfaction with exercise and sleep on a 4-point scale: 0 ("not at all"); 1 ("somewhat"); 2 ("moderately"); and 3 ("very much").

Procedure

A team of research assistants screened participants. In order to participate, the older adults had to achieve Mini-Mental State Examination scores greater than 24 (the mean score was 29 and did not differ by group). Three people did not meet the criteria and were referred to a social worker in the retirement community. One person's data were excluded from analyses after inconsistent reporting of age and education and multiple incorrect responses to the Mini-Mental State Examination. Half of the participants were randomly assigned to receive the intervention immediately after a pretest, and the other half served as a delayed treatment control group. They all completed a pretest at the time of the screening and then a posttest one month later after the immediate treatment group received the intervention for three weeks.

The intervention consisted of three hours (one hour per week for three weeks) of teaching, discussing, and practicing in small groups (five to 10 members) eight behavioral, emotional, social, and thoughtful exercises to improve psychological fitness according to handouts from a guidebook (Short, 2010). The content for the guidebook came from a review of effective psychotherapy techniques, prevention program components, and health promotion strategies with adults. The group leader (a licensed clinical psychologist) presented the BEST model and indicated that change in any one of the behave, emote, socialize, and think dimensions would affect the other three dimensions. The group members learned that behavioral activation and health behaviors contribute to pleasant emotions, optimistic thoughts, and friendly interactions. Members were encouraged to engage in behaviors that bring pleasure to each of the five senses of sight, hearing, smell, taste, and touch on a daily basis. They also received information and strategies to help maintain physical activity and restful sleep. Next, they learned progressive muscle and imaginal relaxation strategies and emotional processing and expression that should lead to optimistic thoughts, approach behaviors, and friendly interactions. Emotional processing and expression was encouraged with a FLAME acronym (feel the sensations, label the emotions, analyze the pattern of the emotions, manage the emotions, and express the emotions). In addition, group members learned that kind behaviors and perceived support should lead to pleasant emotions, approach behaviors, and optimistic thoughts. Group members discussed enjoyable volunteer activities and ways to best ask for and offer help. Satisfying relationships were encouraged with a PECK acronym (perspective taking, empathy, communication, and kind behaviors). Participants learned that optimistic and grateful thoughts contribute to more pleasant emotions, approach behavior, and friendly interactions. They were encouraged to avoid jumping to negative conclusions and examine the evidence for negative thoughts. Group members also discussed what they were grateful for and reported on future positive events that they scheduled. They received folders with eight pages of descriptions of the BEST exercises and were encouraged to try them over the course of the week and discuss their experiences at the beginning of the next group meeting.

RESULTS

Mean score differences on the measures for the immediate intervention group and the delayed treatment control group were tested with repeated measures analyses of variance with two levels of the time variable (Time 1 and Time 2 scores) and two levels of the group variable (immediate intervention and delayed treatment control groups). There was one main effect of group on sleep satisfaction ($F[1, 94] = 7.32$, $p < .01$), with the intervention group reporting more sleep satisfaction than the control group. There were no main effects for time. The interactions of time and group variables provided evidence of effects due to the intervention and are displayed in **Exhibit 2**. Older adults who participated in the intervention reported increases in optimism ($p < .05$) and reductions in anxiety ($p < .05$), and the control group reported no change. There also was a marginally significant decrease in perceived support (*p* < .08) for the control group as compared to the intervention group (who maintained their perceived support). There were no significant groups by treatment interactions in social life satisfaction, gratitude, amount of sleep or exercise, sleep or exercise satisfaction, or depressive symptoms. The partial eta-squared effect sizes are analogous to explained variance (Cohen, 1992) and were .053 for optimism, .048 for anxiety, and .034 for perceived support. Both groups reported means of approximately 4.5 hours of weekly physical exercise and 7.5 hours of daily sleeping that did not change from pretest to posttest one month later. The intervention group members' mean reported use of the altruistic and volunteerism exercises was 4.5 days per week; the thinking exercises of optimism and gratitude was 4.0 days per week; the emotional processing, expression, and relaxation exercises was 2.8 days per week; and the behavioral activation exercises was 1.3 days per week at the posttest.

DISCUSSION AND CONCLUSION

The results indicated the value of a brief psychological fitness intervention to increase optimism and reduce anxiety for older adults. There also was a marginally significant increase in perceived support for intervention participants. The results

Exhibit 2. Mean Comparisons Between Intervention and Control Groups of Older Adults (*n* = 96).

	Intervention Group (*n* = 46)		**Control Group (*n* = 50)**		**Time by Group Interaction**		**Partial**
Variable	**Pretest**	**Posttest**	**Pretest**	**Posttest**	***F***	***p***	**eta squared**
Optimism (SD)	3.87 (.82)	4.11 (.79)	4.05 (.68)	4.01 (.77)	5.19	.025	.053
Gratitude	4.61 (.62)	4.65 (.53)	4.63 (.50)	4.55 (.77)	0.81	.370	.009
Perceived Support	3.42 (.49)	3.43 (.48)	3.46 (.43)	3.36 (.50)	3.25	.075	.034
Social Life Satisfaction	3.39 (1.38)	3.70 (1.20)	3.53 (1.02)	3.53 (1.02)	2.61	.110	.028
Sleep Satisfaction	2.14 (.86)	2.37 (.73)	1.83 (.88)	1.83 (.88)	2.11	.150	.024
Exercise Satisfaction	1.93 (.99)	2.12 (.93)	1.80 (1.03)	1.85 (.84)	1.08	.302	.012
Anxiety	1.42 (.44)	1.31 (.30)	1.43 (.57)	1.46 (.58)	4.55	.036	.048
Depression	1.40 (.43)	1.40 (.37)	1.50 (.55)	1.51 (.55)	0.00	.970	.000

are similar to a psychological fitness intervention for college students that found that a three-hour intervention increased optimism and reduced anxiety (Short, 2006). One difference between the intervention results of the two studies is that the current intervention did not significantly decrease depressive symptoms. This may be due to the relatively low levels of depressive symptoms reported by the participants, the brevity of the intervention, or the persistence of depressive symptoms. Behavioral activation to reduce depressive symptoms may be more effective when there is evidence that people have decreased their physical activity. A single session behavioral activation intervention for university students with moderate depression led to reduced depression and increased environmental reward (Gawrysiak et al., 2009). There was no evidence that participants changed their physical behaviors in this study. Most participants reported moderate levels of daily exercise and moderate satisfaction. They may not have viewed additional physical activity as a primary goal for themselves.

Several exercises may have contributed to reductions in anxiety. Optimism and perceived support, which significantly or marginally increased among the intervention participants, have contributed to reduced anxiety in previous research (Barrera, 1986; Carver et al., 2010). In addition, the participants learned and practiced relaxation, emotional processing, and emotional expression techniques known to reduce anxiety (DeBerry et al., 1989; Stanton et al., 2000). A limitation in this study is the lack of pretest measures of the use of relaxation, emotional processing, and emotional expression. One should measure these exercises at multiple times in future tests of this intervention.

The fitness intervention contributed to increased optimism like previous research (Short, 2006) has shown. Enhanced optimism may have the potential to reduce medical care costs. For example, independent of depression, patients with high levels of optimism were less likely to experience rehospitalization by eight months after coronary artery bypass graft surgery (Tindle et al., 2012). The intervention did not significantly affect gratitude. The entire sample had high ratings of gratitude (means of approximately 4.6 on a 5-point scale) at pretest, and there was not much room for improvement. Some research with adolescents has suggested that gratitude interventions may have limited benefits for those high in gratitude (Froh, Sefick, & Emmons, 2008). Perhaps older adults in settings with fewer resources and fewer support staff might have lower ratings of gratitude and more room for improvement.

The group-based intervention and discussions of family and friend relationships may have contributed to marginally significant increases in intervention members' perceived support. A group-based intervention is more cost-effective than an individual-based intervention but not as cost-effective as an online intervention; however, a group intervention may appeal to some people more than an online intervention. The opportunity to ask questions and receive prompt feedback may contribute to quicker learning and mastery of the presented skills. Group meetings provide an event for members to look forward to, an opportunity for physical activity to walk to the meeting room, the presence of group members to communicate with, and a chance to hear new perspectives.

The fitness intervention consisted of multiple exercises, and there was evidence of improvement on emotional, social, and thoughtful dimensions. The effect sizes for the outcome measures were in the small to medium range (partial eta-squared = .034 for perceived support, .048 for anxiety, and .053 for optimism; .01 is considered small and .06 is considered medium; Cohen, 1992) and were larger than the significant effect sizes reported for the Army's Comprehensive Soldier Fitness program for soldiers (Lester et al., 2011). The Army's program had Cohen's d effect sizes of .13 or less (.2 is considered small and .5 is considered medium; Cohen, 1992). Some researchers have suggested that successful interventions should match the person to the exercise since different exercises may work better for different people (Lyubomirsky, King, & Diener, 2005). A variety of exercises and skills give people alternatives if they are not sufficiently effective or become harder to implement. The knowledge of multiple exercises and freedom to choose particular exercises may help with completion of them. In an online study where adult participants were encouraged to engage in six psychology exercises, individuals who had a high preference for an exercise were more likely to complete the exercise (Schueller, 2010). Recent research also suggests other types of beneficial exercises for interventions, such as savoring, capitalizing, mindfulness, and focusing on personal strengths (Moskowitz, 2010).

Future studies should include longitudinal follow-ups of the intervention, component analysis of the different aspects of the intervention, and daily experience sampling to determine immediate impact of specific exercises on mood, behaviors, and social interactions. There should be further efforts to refine the intervention by focusing on the most effective psychological exercises and greater use of technology to teach, monitor, and provide feedback on progress toward improved mental health.

This brief, structured, group psychological fitness intervention may be an economical way to enhance mental health for older adults in a variety of settings. Chiles, Lambert, and Hatch (1999) conducted a meta-analysis of 91 studies published between 1967 and 1997 that included patient groups undergoing surgery, patients with a history of health care system overuse, and patients receiving treatment for psychological disorders. Overall, cost savings due to psychological interventions were in the range of 20% to 30% across studies, and 90% of studies reported evidence of cost offset.

Although the program was conducted by a psychologist, that is probably not essential for program success. One could evaluate different types of leaders and styles of program presentation in the future. In addition, family and other caregivers to older adults also may benefit from these techniques and could model the use of them for others. Brief psychological interventions hold promise for wider implementation through innovative programs and use of technology and may prove beneficial for greater numbers of older adults in the future.

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Does Functional Independence Influence Satisfaction Among Assisted Living Residents?

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ABSTRACT

The assisted living marketplace includes a wide variety of services, options, and caregiver skill levels. Criteria for admission vary between states and facilities, resulting in a wide range of resident needs. We investigated the influence of functional independence, defined by the types of assistive services utilized, on satisfaction with activities, caregivers, management, and overall facility satisfaction among a large, multistate sample of assisted living residents. We hypothesized that more functionally independent residents would express higher levels of satisfaction. Data came from the 2008 Press Ganey Assisted Living Survey (n = 1,246) and were analyzed through structural equation modeling. We found that satisfaction with caregivers, activities, management, and self-rated health increased overall facility satisfaction. Unexpectedly, instrumental activities of daily living (IADLs) independence directly predicted lower levels of satisfaction with caregivers and the facility overall. Independence with activities of daily living (ADLs) directly predicted higher overall facility satisfaction but had no significant influence on satisfaction with activities, caregivers, or management. Results indicated that the relationship between functional independence and resident satisfaction within assisted living facilities is complex, that there is a differing influence of IADLs versus ADLs assistance on the resident experience, and that increased service offerings specifically aimed toward instrumental needs may positively influence satisfaction scores within assisted living facilities.

INTRODUCTION

The term assisted living facility (ALF) describes residential care environments that have emerged in response to consumer demand for the 24-hour supervision, security, and services normally associated with nursing facilities while maintaining resident autonomy, privacy, and comfort in a manner more consistent with a home environment (Zimmerman, Sloane, & Eckert, 2001). Government regulation, oversight, and the definition of assisted living level of care differs between states, an issue that is further complicated by the use of terms such as board and care homes and personal care homes to describe residential care environments (Eckert, Carder, Morgan, Frankowski, & Roth, 2009; Mollica & Johnson-Lamarche, 2004; Polzer, 2012). There are approximately 31,000 ALFs in the U.S. serving more than 700,000 Americans (Caffrey et al., 2012; Polzer, 2012). Admission criteria, the amount of service, and level of care available within these facilities varies between ALFs, states, and regions (Polzer, 2012; Stevenson & Grabowski, 2010).

The assisted living model of care has seen growth in recent decades due to an increase in the aged population, the desire for environments that allow relatively independent elders to age in place, and consumer avoidance of more institutional nursing facilities (Rantz et al., 2011; Stevenson & Grabowski, 2010). Public reimbursement of ALFs remains limited; the United Center for Disease Control estimates that only 19% of this type of residential care is paid by Medicaid, and the number falls to 10% for residents age 85 and older (Caffrey et al., 2012). Thus, the expansion of ALFs appears primarily consumer driven (Carder, Wright, & Jenkens, 2005; Stevenson & Grabowski, 2010). There is evidence that aging Americans would prefer to remain at home, but when that becomes impossible, they and their families prefer a residential environment that supports independence and choice, and ALFs have responded to meet this consumer demand (Rantz et al., 2011).

Functional independence, or the ability to meet one's own physical needs, is a central element of quality of life among aged individuals both within and outside long-term care facilities and remains a key component in the vision of healthy or positive aging (Lowry, Vallejo, & Studenski, 2012; Sloane et al., 2005). Existing literature addressing satisfaction and the related topic of quality of life among long-term care residents has focused primarily on residents of nursing homes and indicates that functional independence has a positive influence on the resident experience (Andersen et al., 2004; Sloane et al., 2005); however, the influence of functional independence on resident perceptions may differ between the more medically driven nursing home industry and the consumer-driven assisted living industry, where assistance from staff may be marketed or conceptualized as a service or amenity, and information about the type and amount of assistance available may play a considerable role in consumer choices (Mollica, 2006). Assisted living providers are faced with the dilemma of providing both the level of service and assistance desired while maintaining resident independence and autonomy (Ball et al., 2004). In this study, we examined the influence of resident independence with activities of daily living (ADLs) and instrumental activities of daily living (IADLs), as defined by the type of facility providing services that are utilized, on resident-reported level of satisfaction with ALFs, caregivers, management, and overall facility satisfaction. Using a multistate sample of assisted living residents, we addressed the following research questions: (a) Does functional independence (ADLs and IADLs) influence ALF resident satisfaction with activities, caregivers, management, and overall facility satisfaction?; (b) Does the influence of independence with ADLs differ from the influence of independence with IADLs on resident satisfaction with activities, caregivers, management, and overall facility satisfaction?; and (c) Does satisfaction with caregivers, activities, and management mediate the influence of functional status on overall facility satisfaction?

Background

ALF residents vary in terms of functional ability, and ALFs vary in terms of their ability to meet the functional needs of residents (Zimmerman et al., 2005). State regulations vary in terms of staff training and licensure requirements, and even within states, the ability of facilities to address functional disability is variable (Mollica, 2006; Polzer, 2012). Most ALF residents require assistance with one or more ADLs, approximately one-third have issues of bladder incontinence, and up to one-third of residents have some level of cognitive impairment (Kane, Chan, & Kane, 2007; National Center for Assisted Living, 2001). Of particular importance to ALFs is IADLs dependency, or dependency on the facility for services such as meal preparation or housekeeping. The National Center for Assisted Living (2001) found between 50% to 80% of ALF residents receive IADLs services, and these services are often primary motivators for selection of an assisted living environment. As residents within AFL facilities age in place, the need for functional assistance may increase significantly. Thus, although ALF residents are more functionally independent than residents of traditional nursing facilities, ALF residents may present significant issues of functional dependence. This situation means that ALF management is particularly challenged to address the dilemma between assistance and independence, given consumer preference for the ability to independently age in place and the importance of consumer choice to the assisted living industry.

The concept of a person-environment fit, with level of dependence being determined by the interplay between the environmental demands placed on an individual and the ability of an individual to meet those demands (Iwarsson, 2005; Mitty, 2010), is useful in understanding the relationship between needs and assistance within long-term care environments. Within an ALF, this is manifested as the balance between providing services when needed while creating an environment where residents can demonstrate a maximum level of functional independence. The ability to achieve this balance within an assisted living environment remains largely unexplored. It is possible that as individual capacity for independence decreases (functional dependence increases), demands on the facility to provide an environment that promotes independence and thus maintain the proper person-environment fit becomes more challenging (Iwarsson, 2005). In that case, resident independence would decrease demand on providers and likely increase provider ability to provide a satisfying environment; however, it also is possible that independence with ADLs and IADLs tasks, as measured through use of ALF services, may result in a perception that services are not offered or available, that the ALF is a poor value, or that placement in a residential care environment is a poor personal fit. Such a scenario would result in functional independence having a negative influence on facility satisfaction. The influence of functional independence may be especially salient in the case of tasks associated with IADLs, a mainstay of ALF services, which are heavily influenced by the nature of the provided environment. Based on previous literature noting the positive influence of functional independence on resident outcomes in other long-term care settings, as well as the concept of person-environmental fit, which notes that as demands on the environment in terms of resident needs increase the ability to meet environment needs becomes more difficult, we proposed an exploratory hypothesis that functional independence will demonstrate a positive influence of self-reported overall facility satisfaction.

Hypothesis 1: Resident independence with ADLs tasks will predict overall resident satisfaction with his/her ALF.

Hypothesis 2: Resident independence with IADLs tasks will predict overall resident satisfaction with his/her ALF.

The fit between resident need and environmental assistance is potentially impacted by the interpersonal dynamics of caregiving assistance. Direct caregivers within long-term care facilities are called on to provide highly personal care within the structure of an organization and, more specifically, in accordance to the demands of their employer. This creates tension, or situational role conflict, between demonstrating caregiving behavior that is family-oriented, or "homelike," and the business of providing care (Abrahamson, Suitor, & Pillemer, 2009; Roth & Eckert, 2011). How well caregivers provide care, and in their daily interactions address a resident's function needs, likely influences the level of overall facility satisfaction with their ALF, as well as the relationship between functional independence and overall facility satisfaction. Thus, in accordance with the concept that person-environment fit becomes more difficult for a facility to achieve as resident needs increase, we expect that ADLs independence and IADLs independence will have a positive effect with satisfaction with caregivers, and that caregiver satisfaction will then positively predict resident satisfaction with their ALF.

Hypothesis 3: Resident independence with ADLs tasks will predict resident satisfaction with caregivers.

Hypothesis 4: Resident independence with IADLs tasks will predict resident satisfaction with caregivers.

Hypothesis 5: Resident satisfaction with caregivers will predict overall resident satisfaction with his/her ALF.

An additional predicted mediator to the relationship between functional independence and satisfaction is the provision of meaningful activities. The fit between individual capacity and the availability of satisfying activities within an environment is an important aspect of positive aging and an especially salient issue for ALF management, given the role of activities in the consumer selection of assisted living (Horowitz & Vanner, 2010; Lowry, Vallejo, & Studenski, 2012). It is possible that residents who are highly independent will demand less from their ALF environment in terms of activities, attend activities less frequently, or have less involvement with facility staff. This independence with activities could result in decreased self-reported satisfaction with activities; however, to remain consistent with our proposition that as demands on the environment decrease, satisfaction increases, we hypothesized that facilities will have an easier time providing activities for residents with higher functional capacity, and therefore, those residents who are independent with both ADLs and IADLs will express higher satisfaction with activities. In turn, satisfaction with activities will predict overall satisfaction with their ALF.

Hypothesis 6: Resident independence with ADLs tasks will predict resident satisfaction with activities.

Hypothesis 7: Resident independence with IADLs tasks will predict resident satisfaction with activities.

Hypothesis 8: Resident satisfaction with activities will predict overall resident satisfaction with his/her ALF.

We also investigated the relationship that ALF management plays in overall satisfaction and whether that relationship was influenced by functional independence. Again, it is possible that more independent residents, measured in terms of assistive services utilized, could perceive that the ALF is a poor fit in terms of service provision and environment; however, we proposed in this study that environmental fit is more easily achieved with more independent residents, and therefore, satisfaction with management will be positively predicted by functional independence.

Hypothesis 9: Resident independence with ADLs tasks will predict resident satisfaction with management.

Hypothesis 10: Resident independence with IADLs tasks will predict resident satisfaction with management.

Hypothesis 11: Resident satisfaction with management will predict overall resident satisfaction with his/her ALF.

In summary, we hypothesized that independence with both ADLs and IADLs tasks will directly predict overall satisfaction with the ALF and will indirectly predict satisfaction through increased satisfaction with caregivers, activities, and management.

METHOD

Data

Our analysis examined the influence of resident independence with ADLs and IADLs tasks, measured through the types of services utilized, on satisfaction with caregivers, activities, management, and overall resident satisfaction with his/her ALF. Data for analyses came from the 2008 Press Ganey Assisted Living Survey. The Assisted Living Survey was designed by investigators at Press Ganey and Associates, an independent research organization, in response to requests from trade associations, providers, and consumers to create a validated measure of resident satisfaction addressing the multiple dimensions of services offered by facilities within the assisted living marketplace. Survey items were developed through focus groups and structured interviews, with a multistate sample of assisted living residents, direct care providers, and administrators. Discussions of the complex array of services provided within assisted living environments were followed by requests for residents and families to rate aspects of the assisted living environment in terms of importance. Survey items were developed based on this information and pilot tested among a multistate sample of 825 assisted living residents.

The 2008 Assisted Living database included 1,246 surveys received from residents residing within 67 facilities between January 1, 2008, and December 31, 2008. The average response rate across facilities in the database was 51.4%. Response rates ranged from 4.8% to 100%. The average number of surveys mailed was 46.5 (range = 2-191). The average number of surveys returned was 23.0 (range = 1-99). The average number of surveys not returned was 22.8 (Range = 0-91). Very few surveys were “undeliverable” (mean = 0.7, range = 0-5). All facilities conducted a census of their residents. Questionnaires were sent to all residents at least one month after service began. For residents who did not require assistance with their mail, the survey was distributed in sealed, addressed envelopes along with the rest of the residents’ mail. In order to reduce bias within the sample toward those residents who are functionally able to independently complete the survey, residents who required assistance with their mail were delivered the survey through a volunteer or a staff member who was not directly involved in the resident’s care or the satisfaction measurement process. When help was needed, volunteers were instructed to help the resident read the cover letter. They further assisted by reading the questions to the resident and circling the responses generated by the resident. Volunteers were instructed to explain that all responses were confidential and would not be shared with facility management. Volunteers did not write the name of the resident on the survey and were instructed not to mention the resident’s name in the open-ended questions (e.g., “Sara thinks…”); however, despite efforts to include residents who have a high level of functional impairment in this study, our sample remained more functionally independent than national statistics demonstrate (Caffrey et al., 2012).

A “locked box” was made available for depositing completed surveys on site. In addition, a postage-paid envelope was offered, and residents were told they could complete the survey whenever it was convenient and mail the survey back to the facility. The box was placed away from the “front desk” in a neutral area. Residents were given the option of filling out the survey in private (i.e., it was not acceptable for the patient to have no option but to fill the survey out at the front desk or in proximity to a facility employee).

Our analyses included survey results from a multistate sample of 1,246 assisted living residents residing in 58 ALFs located in 19 states (Arizona, California, Colorado, Conneticut, Florida, Illinois, Indiana, Minnesota, North Carolina, Nebraska, New Jersey, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Virginia), representing all nine American Hospital Association regions.

Measures

An advantage of structural equation modeling is that both the measurement and the structural model contribute to the calculation of model fit. Perfect measurement is not assumed; instead, latent variables are modeled to represent the constructs of interest. Two latent variables (one for ADLs independence and one for IADLs independence) were created by modeling individual survey items, measured as 0 = receives services, 1 = independent with the task, as factors loading on a single construct (ADLs or IADLs independence). The latent variables representing independence with ADLs and IADLs tasks were constructed from survey items asking if the resident receives assistance with separate ADLs (e.g., bathing, dressing, eating, toileting, and mobility) and IADLs (e.g., meal preparation, financial management, transportation, medication management, laundry, shopping, and housekeeping) tasks. Survey items to create the latent variables of satisfaction with caregivers, activities, ALF management, and overall ALF satisfaction were presented to respondents in Likert-style format, with response categories of "very poor," "poor," "fair," "good," and "very good" (1 = "very poor," 5 = "very good"). Items addressing overall facility satisfaction asked residents to rate their satisfaction on a five-point scale ranging from "very unsatisfied" to "very satisfied." Measures of validity and reliability determined the subscales used in this analysis (activities, caregivers, management, and overall satisfaction) to be psychometrically sound for this sample. A measurement model was constructed for these four latent variables (caregiving, activities, satisfaction with management, and overall facility satisfaction). The error terms associated with the latent variables were allowed to be correlated. Model fit statistics for the measurement model were acceptable: Tucker-Lewis Index (TLI) .915, comparative fit index (CFI) .928, and root mean square error of approximation .054. Survey items, results of factor analyses, and subscale alpha levels are displayed in **Table 1**.

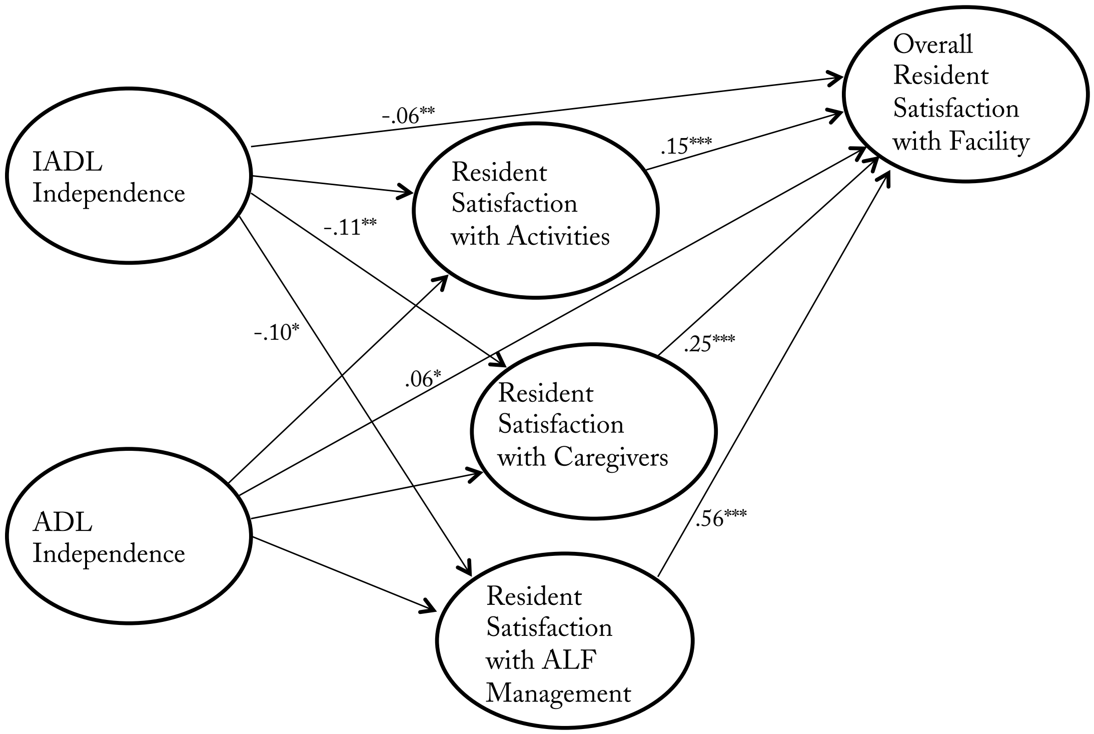
ANALYSIS

We tested the hypotheses using structural equation modeling (SEM), which allowed us to examine the direct and indirect relationships between variables concurrently and also allowed for the construction of latent variables drawn from multiple survey indicators to measure the complex construct of satisfaction. The Analysis of Moment Structures (AMOS) computer program was used to test the hypothesized model (Arbuckle, 2005). Specification of our hypothesized model was done a priori, based on theory and previous literature prior to analysis. Based on the potential for resident age, length of stay in the facility, and self-rated health status to influence resident satisfaction, those variables were included in the specified model. Race/ethnicity, income, and level of education were not included due to the lack of available data for these measures. Error terms for the exogenous latent variables ADLs independence and IADLs independence were allowed to correlate, as were the error terms for the latent variables of caregivers, activities, and management. Missing data were addressed by maximum likelihood estimation through the estimation of means and intercepts in the AMOS program. Missing data were at or under 11%, and in most cases under 5% for the examined survey responses, with the exception of the satisfaction with caregivers scale, in which 21% had at least one missing survey item response. Additionally, information regarding length of stay was missing for 39% of survey respondents. Use of the Maximum Likelihood Estimation as available in the AMOS program has been shown to be a highly reliable method of addressing theoretically important variables with missing data while retaining all available

Table 1. Survey Items, Factor Loadings, and Subscale Reliability for Current Sample.

Subscale Dimension and Item Wording	Factor Loading	Reliability Coefficient (alpha level)
Activities		**.84**
Extent to which activities are well organized	.716	
Extent to which activities meet your interest	.785	
Information about activities	.740	
Aides		**.93**
Aides concern for your well-being	.886	
Emotional assistance offered by aides	.886	
Helpfulness of aides	.892	
Aides ability to anticipate your needs	.855	
Management		**.93**
Extent to which management is accessible	.904	
Handling of complaints or grievances	.952	
Responsiveness of management to your ideas	.947	
Extent to which management provides a well-run and organized operation	.878	
Overall Satisfaction		**.78**
The facility provides value for your money	.829	
Overall rating of assistance/care in this facility	.896	
Likelihood of recommending this facility to others	.905	
How satisfied are you with your life these days?	.661	

Figure 1. Hypothesized Model with Significant Parameter Estimates.



$^{*}p \le .05$, $^{**}p \le .01$, $^{***}p \le .0001$

cases for analysis (Garson, 2012; Kline, 2005). The specified model of hypotheses is displayed in **Figure 1**.

RESULTS

Survey respondents were 71% female, and more than half had resided in the facility for more than a year. Eighty-three percent of resident survey respondents were older than age 80, and 68% rated their current health status as "good" or "very good." In terms of assistance with ADLs and IADLs, more than half of survey respondents received assistance with house cleaning (77%), laundry (72%), transportation (64%), medication management (54%), and meal preparation (53%). Less than half received assistance in the areas of bathing (41%), shopping (33%), personal finances (28%), dressing (22%), toileting (10%), getting out of a bed or chair (10%), and eating (5%). Thus, we had a highly independent sample, perhaps indicating sampling bias toward those who could independently respond to the survey. Sixty-four percent of residents had an average score on the caregiving scale of "good" or "very good," and 65% of residents averaged "good" or "very good" on the activities scale. Seventy-one percent of residents reported they were "satisfied" or "very satisfied" with their overall current life situation, and more than half noted a very strong likelihood that they would recommend their facility to others.

We hypothesized that independence with both ADLs and IADLs tasks, measured in regard to the types of services received, would directly predict overall facility satisfaction and would indirectly predict overall facility satisfaction through increased satisfaction with caregivers, activities, and management. Unexpectedly, ADLs independence did not predict satisfaction with caregivers, activities, or management. ADLs independence did, however, positively predict overall facility satisfaction. Residents who were independent with ADLs tasks were more satisfied, overall, with their ALF. Interestingly, independence with IADLs tasks negatively predicted satisfaction with caregivers, management, and overall ALF satisfaction. Residents who were independent with IADLs tasks, meaning, that they did not receive facility provided assistance with IADLs tasks, were actually less satisfied in these areas. The relationship between IADLs independence and satisfaction with activities was not significant. Satisfaction with caregivers, activities, and management was significantly related to overall facility satisfaction. The outcome variable of overall facility satisfaction also was positively influenced by self-rated health; the influence of age, gender, and length of stay was not significant. Additionally, the exogenous variables of age, gender, length of stay, and self-rated health were allowed to correlate with each other as well as with the latent variables of ADLs and IADLs independence in the model, and no correlation exceeded .25. Model fit statistics for the specified model were acceptable, though not optimal, and indicated that the current model would benefit from respecification (Garson, 2012; Kline, 2005): Tucker Lewis Index (TLI) .891, comparative fit index (CFI) .910, and root mean square error of approximation (RMSEA) .054. Standardized parameter estimates are found in **Table 2**.

DISCUSSION

In general, the literature is well developed regarding satisfaction with services in long-term nursing facilities. Because nursing facilities are primarily guided by models of health care delivery, providers

Table 2. Standardized Parameter Estimates for Structural Model.

	Activities	Caregivers	Management	Overall Facility Satisfaction
IADLs independence	-.07	-.11**	-.10*	-.06**
ADLs independence	-.00	.01	-.00	.06*
Activities				.15***
Caregivers				.25***
Management				.56***
Age				-.04
Length of Stay				-.02
Self-Rated Health				.09***

*$p \le .05$, **$p \le .01$, ***$p \le .0001$; Notes: Model fit statistics: TLI = .891, CFI = .910, RMSEA = .054

and managers of long-term nursing facilities have data to draw on when designing and implementing their services. On the other hand, the ALF environment is rife with complexities that are only now being examined. The philosophy of assisted living encourages providers to embrace a more consumer-oriented approach to residential care for residents. Thus, an ALF provides consumers with environments that include modified activities, functionally built environments, and human assistance in order to maximize residents' independence.

Key to our understanding of the ALF environment is the concept of person-environment fit, which notes that independence results from an appropriate match between individual capacity and environmental demands. Because an ALF often tries to achieve a homelike feel on an individualized level, we expected that facilities would have an easier time providing this adaptive environment for those residents with a higher level of function. Our first research question asked if the level of functional independence influenced satisfaction, both with the identified domains and overall, with ALF. The answer was yes—but in unpredicted ways. We hypothesized that IADLs independence would increase satisfaction (hypotheses 2, 4, 7, and 10) and found that IADLs independence decreased satisfaction with caregivers, management, and overall and had no significant relationship with satisfaction with activities. ADLs independence, also hypothesized to increase satisfaction (hypotheses 1, 3, 6, and 9), demonstrated non-significant relationships to satisfaction with activities, caregivers, or management; however, as predicted, ADLs independence did positively influence overall facility satisfaction. Research question two questioned if the relationship with satisfaction differed between IADLs and ADLs dependence; results indicated that type of service received does influence level of satisfaction in the examined domains. Research question three asked if the relationship between functional independence and overall facility satisfaction was mediated by satisfaction with caregivers, activities, and management (hypotheses 5, 8, and 11). Each of the examined subdomains exerted a significantly positive influence on overall facility satisfaction, although mediation was not demonstrated clearly.

The fit statistics demonstrated by our specified model were acceptable, though not optimal, indicating that further investigation of the relationships between these variables in terms of model respecification was warranted (Garson, 2012). Several hypothesized relationships were not significant, most notably the influence of ADLs independence on satisfaction with caregiving and activities and the unexpected negative relationship between IADLs independence and satisfaction. Although model fit statistics could likely be improved through model respecification, the nature of our analysis was a priori, meaning that we sought to confirm our theoretically driven model. The modeling of those insignificant links provided important insight into the relationship between independence and satisfaction and how that relationship may uniquely manifest itself in the assisted living setting. While our findings with regard to IADLs independence and satisfaction were unpredicted, we suspect that this may be due to the complexities of the ALF environment. Residents of ALFs are often in a gray area between dependence and independence. Their own satisfaction with services may exist in the balance between the ALFs' ability to deliver appropriate services in a manner that seems homelike and the residents' willingness to receive services.

Importantly, we conceptualized functional independence as the lack of receipt of facility-provided assistive services. The types of services required to meet ADLs needs (e.g., toileting, bathing, eating, and mobility) are deeply personal, have a close connection to what is generally considered nursing home care, and have potential to impede on resident dignity and privacy. Services within the IADLs domain (e.g., housekeeping, meal preparation, and transportation) are frequently marketed to ALF consumers as amenities or what is desirable about selecting an ALF environment. It is possible that residents who do not receive these services, whether due to independent functional ability or lack of service offerings, feel as if their environments are not providing the desired level of care. Additionally, some ALF may offer IADLs-type services, such as meal preparation, to all residents regardless of functional ability, a situation that may be perceived by residents as added value to their assisted living experience and comfort. Thus, our results may reflect that ALFs differ from nursing facilities in terms of how caregiving is conceptualized (dependence versus receipt of a service), and although dependence on staff may be perceived negatively within nursing home environments, receipt of such assistance may have positive connotations when viewed as a service or amenity.

Our sample indicated a high level of satisfaction with their facilities. Given this finding, it is possible the influence of functional independence on satisfaction differs between highly satisfied assisted living populations and populations that are less satisfied overall. It is important to note that our analysis was limited by data collection that took place within the facility context. The potential for interviewer influence as well as respondent consideration of recent events or experiences within the facility were a concern. Also of importance to our analysis was the potential for respondent self-selection, meaning that residents who were very unsatisfied may have left the facility and therefore removed themselves from our sample. Press Ganey does not maintain information about non-responders. Thus, differences between responders and non-responders cannot be examined. While the risk of selective sampling bias was a potential limitation, with those residents who were most satisfied also being most likely to remain in the facility and return the survey, the focal point of our analysis was the relationship between level of functional independence and satisfaction, a relationship that should not have been significantly altered by the high level of satisfaction found among the surveyed residents; however, it may provide valuable insight to investigate the relationship between functional independence and satisfaction with a sample that is more diverse in terms of overall satisfaction with the assisted living environment.

Additionally, this analysis was limited by the lack of available data addressing facility-related factors such as facility size, ownership status, urban/rural location, and reimbursement type. Also of importance, response rates varied between facilities, and facilities with low response rates may differ in terms of organizational characteristics from those facilities with high survey response rates. Data addressing facility characteristics were not available at the time of this current analysis. The addition of facility-level characteristics, as well as data addressing a more comprehensive set of resident demographics such as education or income in future analyses, could expand on our findings. Our analysis was completed at the individual level, examining influences on the perceptions of individual residents. Future research would benefit from utilization of multilevel models to assess the influence of these facility characteristics on individual resident perceptions.

A limitation of confirmatory model testing with cross-sectional data is the inability to address reciprocal or endogenous relationships between variables. Parameter estimates attained estimated the relationships between variables as specified and do not reflect the reciprocal relationships variables may have on each other. For example, we investigated the influence of satisfaction with activities on overall satisfaction, though it is a likely possibility that residents who perceive greater satisfaction also may perceive that activities are available and interesting. It may be that residents who feel that they have more choices may be more satisfied or that satisfaction might increase if activities are available that more closely mirror those that were available to them prior to admission to the ALF. Future research would benefit from longitudinal studies addressing the nature of influences on resident satisfaction over time.

CONCLUSION

ALF providers are guided by assumptions about their residents. A key assumption would be that most consumers are capable of making choices about whether assisted living is the right option for them. Because a continuing dilemma faced by ALF providers is how to rectify the residents' need for assistance with the desire for independence, it is incumbent on providers to provide potential residents and their family members information needed to make informed choices. This decision can be especially problematic for residents making the transition from home to assisted living. In many cases, materials provided to potential residents and their family members have been developed for marketing the facility rather than for educational purposes about how care is provided in an assisted living environment. Our findings suggested that administrators may need to revisit the estimated impact of specific ALFs activities from residents' and family members' perspectives. Resident satisfaction can be interpreted as a proxy for the degree to which residents and family members understand the benefits and limitations of residing in an ALF and how well that ALF environment "fits" their personal needs.

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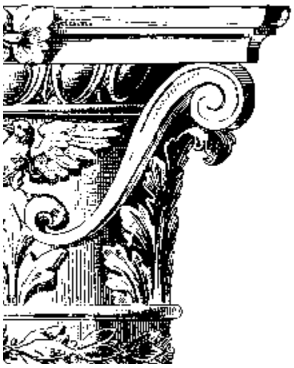

Understanding and Assessing the Impact of Nursing Home Approach to Care and Physical Design on Residents and Their Families: A Synthesis of the Literature

Pamela Fancey, MA; Janice Keefe, PhD; Robin Stadnyk, PhD; Emily Gardiner (née White), MA; Katie Aubrecht, MA

ABSTRACT

In this article current knowledge on changes in nursing home approach to care (i.e., staffing models) and physical design were reviewed with a view to the impact of change on residents and their families. A comprehensive search of English-language, peer-reviewed and gray literature concerning nursing home care published during the period of 1989 to 2012 was conducted. The results were synthesized using constructs that emerged from the literature: quality of life, quality of care, and resident satisfaction. The literature yielded empirical evidence suggesting that a resident-centered approach to care and physical design can improve resident quality of life and increase family involvement. Our synthesis points to a need for research that considers how the constructs and methods used to identify and assess change inform whether and how the experiences of residents and families are understood.

INTRODUCTION

Nursing homes have experienced significant changes since the mid-1990s. Over the past 18 years, new developments in approaches to care in nursing homes reflect an interest in a resident-centered perspective (Calkins & Cassella, 2007; Calkins, 2002; Capitman, Leutz, Bishop, & Casler, 2004; Weiner & Ronch, 2003). Within these approaches, there is an emphasis on resident choice, autonomy, and dignity, as well as increased social interaction among residents and between residents and staff (Calkins, 2002; Rahman & Schnelle, 2008; Wiersma & Pedlar, 2008). Increased partnering between staff and families is also a goal (Baker & Steber, 2005). Contributing to this shift in philosophy are the changes taking place in how space is utilized and designed, which is believed to exert great influence on both resident quality of life and family involvement (Gaugler, 2005; Weiner & Ronch, 2003; Day, Carreon, & Stump, 2003). Such changes are apparent in innovative physical designs (e.g., homelike features and settings instead of hospital-like wards), the importance placed on resident-centered, individualized care with particular attention to persons with dementia and emphasis on staff roles and scope of practice.

The recent interest in resident-centered approaches to care and physical design are often associated with what has been termed a "culture change" movement within nursing homes (Koren, 2010; Weiner & Ronch, 2003). The movement supports the deinstitutionalization of long-term care through the introduction of structural changes that promote the autonomy of nursing home staff, residents, and their families, and encourages a greater sense of "home" within nursing homes (Miller, Miller, Jung, Sterns, Clark, & Mor, 2010). More specifically, according to Foy White-Chu, Graves, Godfrey, Bonner, and Sloane, "The process of culture change in long-term care involves a shift in philosophy and practice toward resident-directed, consumer-driven health promotion and quality of life. Fundamental to this shift is a focus on the importance of the relationship between the resident and direct care staff" (2009, p. 370). Models associated with this movement include the Eden Alternative, and more recently, the Green House® model.

Our review of the literature featured the Eden Alternative and Green House model as significant developments in nursing home approach to care and physical design; however, the intent of the search was not to understand or assess the culture change movement. This article identifies current literature that discusses the impact of changes in physical design and approach to care on the experiences of residents and family involvement. Our examination focuses on changes cited in the literature as current "best practice" and presents the supporting empirical evidence offered (and the measures and assessments used). This makes it possible to identify areas of research that require more attention (i.e., physical design and family outcomes), expand awareness of literature on the impact of change on residents and families, and provide evidence of advancements in nursing home practice and policy.

The emergent conceptual framework offers a tool that can be used to map relations between and across resident and family perspectives, with implications for how constructs such as quality of life, quality of care, and resident satisfaction expand and/or constrict interpretations of nursing home care. The framework provides a model that can be used to clarify some of the current ways that resident and family outcomes are interpreted across a broad spectrum of persons involved in nursing home care, including practitioners, policy makers, and nursing home administrators; however, the "reality" of the extent to which the changes we have examined are actually implemented is beyond the scope of this article. The presentation of findings is descriptive in nature and includes information on the types of design when available in the literature. Current knowledge regarding the impact of changes to approach to care and physical design from the perspectives of residents and families is synthesized and organized using the constructs central to resident-centered care, and opportunities for further elaboration are highlighted. [1]

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[1] It is recognized that the staff perspective is important; however, the scope of the literature search did not include that specific body of research. Reference to staff is made in this article in relation to the results relating to residents and families only.

DESIGN

Search Strategy, Selection Criteria, and Research Synthesis

A comprehensive search of five databases (AgeLine, PsychArticles, PsychInfo, MedLine, ProQuest) and two search engines (Google and Google Scholar) was systematically conducted from 2009 to 2012 for English-language, peer-reviewed and gray literature (e.g., technical reports, working papers not published commercially or indexed by major databases) from Canada, the U.S., England, and Australia. The scope of the search focused on research published between 1989 and 2012, and provided scientific evidence and evaluation results from the perspective of residents and their families. The search parameters

Exhibit 1. Literature Organizing Matrix.

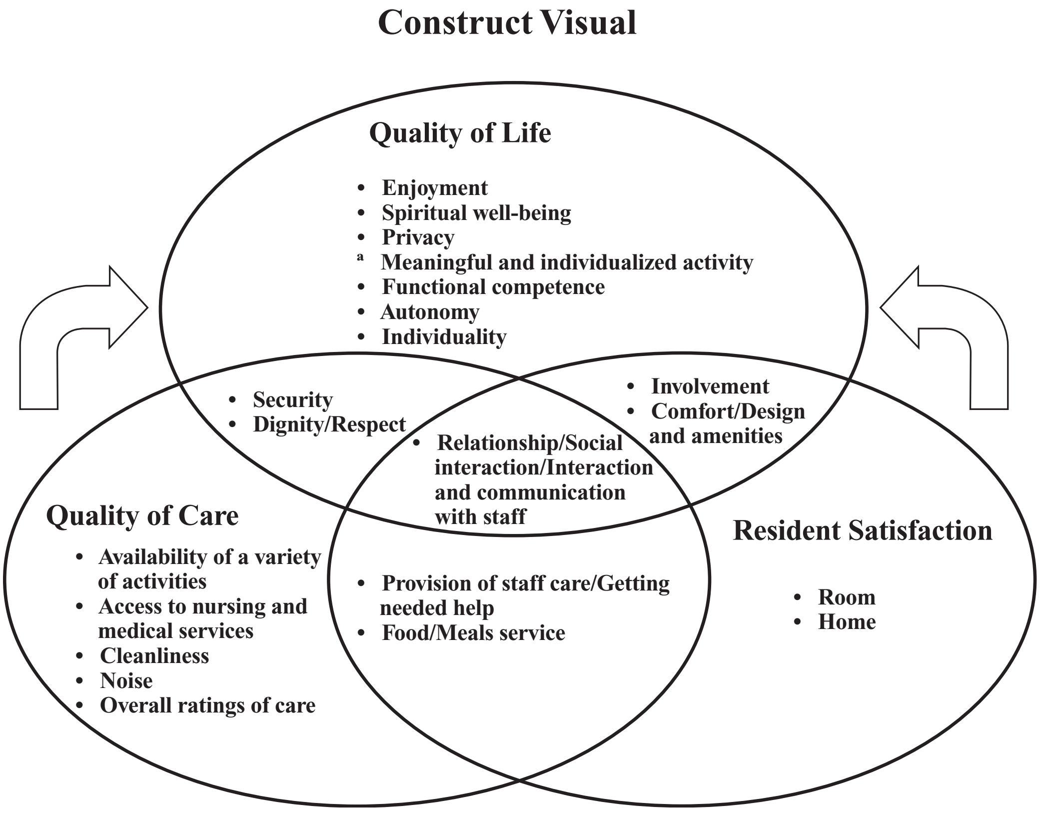
	Resident Quality of Life	Family Involvement
Physical Design	Boyd, 2003 Calkins & Cassella, 2007 Campbell, 2003 Cioffi et al., 2007 Cutler et al., 2006 Kane et al., 2007 Parker et al., 2004 Schwarz, Chaudhury, & Tofle, 2004 Tellis-Nayak, Shiverick, & Hernandez, 2010 de Veer & Kerkstra, 2001 Wiersma & Pedlar, 2008	Calkins, 2002 Cioffi et al., 2007 Gaugler, Anderson, & Leach, 2003 Lum et al., 2008-2009 Schwarz, Chaudhury, & Tofle, 2004 Train et al., 2005
Approach to Care	Bishop et al., 2008 Campbell, 2003 Chou et al., 2002; 2003 Koren, 2010 Kruschke, 2006 Lucas et al., 2007 Parsons, 2004 Paulus & Jans, 2005 Sudbury & Gnaedinger, 2007 Tellis-Nayak, Shiverick, & Hernandez, 2010 Wheatley et al., 2007	*Aveyard & Davies, 2006 Rosher & Robinson, 2005 Davis & Nolan, 2006 *Dijkstra, 2007 Gaugler, Anderson, & Leach, 2003 Gaugler, 2005; 2006 Keefe & Fancey, 2000 Levine et al., 2010 Logue, 2003 Lum et al., 2008-2009 *Maas et al., 2004 Nakrem, Vinsnes, & Seim, 2011 *Persson, 2008 Port, 2004 *family involvement interventions

used were physical design, approach to care (i.e., staffing models), resident quality of life, and family involvement. The included literature referred to individuals with varying levels of cognitive impairment. Discrepancies existed regarding the language that is used to refer to nursing homes ("aged care home" versus "nursing home") and care provider ("caregiver" versus "carer"). The search yielded 122 publications, of which 38 were deemed salient to the work and critically analyzed.

In the literature, resident and family outcomes were organized in terms of resident quality of life and family involvement, and conceptualized as impacting resident satisfaction, quality of life, and quality of care. We organized our search in terms of the impact of the changes in approach to care and physical design on residents and families (**Exhibit 1**). Each concept was considered to measure distinct, yet at times overlapping, items (Keefe, Stadnyk, White, & Fancey, 2009).

A construct visual was created for resident outcomes to illustrate the overlap that exists between and across resident quality of life, resident quality of care, and resident satisfaction (**Exhibit 2**). Although the resident outcomes described in the literature encompass much more than just resident quality of life, given the conceptual overlap that exists, the construct "resident quality of life" is employed as a unifying concept. Furthermore, we recognized that family involvement can have a significant impact on resident quality of life, and approach to care and physical design can influence the nature and extent of involvement. Since our interest was in understanding the impact of changes occurring within nursing homes on resident quality of life, we limited the scope of the research on family outcomes to studies that examined the impact of approach to care and physical design on family involvement.

Exhibit 2. Construct Visual of Resident Outcomes.



RESULTS

Approaches to Care and Physical Design

Newly constructed nursing homes demonstrate a neighborhood design also known as clusters or pods (Boyd, 2003; Kane, 2001; Schwarz, Chaudhury, & Tofle, 2004). These typically serve between 20 and 40 residents and allow individuals the privacy they desire, as they feature single rooms with private baths (Brush, Calkins, Kator, Wyatt, & Miller, 2008; Rabig, Thomas, Kane, Cutler, & McAlilly, 2006). They also often have large bay windows that bring the outdoors in for those who cannot go outside to enjoy it (Cioffi, Fleming, Wilkes, Sinfield, & Le Miere, 2007). Rooms are personalized with residents' meaningful possessions and centrally located near nursing stations, lounges, and dining areas. In these environments, choice and interaction are of utmost importance. For example, residents have the freedom to decide when and what to eat, when to sleep and awaken, and how to fill their days (Komarek, 2004).

Relationship formation is a key component of neighborhood design, and its implementation involves training staff to work in multifunctional, empowered care teams in which caregivers perform many tasks for only a few residents. It is believed that such an approach will better meet residents' needs (Boyd, 2003). Research comparing U.S. nursing homes with and without such teams demonstrated that increased contact occurs between certified nursing assistants (CNAs) and a smaller number of residents. Greater interpersonal contact between staff and residents creates opportunities for staff to learn and remember individuals' preferences and to more sensitively serve them. The small design also allows residents to get to know their neighbors, and they form more fulfilling friendships as a result (Kruschke, 2006; Yeatts & Cready, 2007).

The Eden Alternative, a widely cited example of a program that has pioneered the aforementioned approaches to care and changes in physical design, aims to decrease resident loneliness, helplessness, and boredom (Tavormina, 1999). Since its inception, many organizations intending to improve residents' quality of life have adopted the model's key elements, including relinquishing the institutional/medical approach to care; including pets, plants, and children in order to foster a more spontaneous and homelike environment; providing ample opportunity for social interaction and relationship formation; promoting resident choice and participation; and continually reassessing how residents' needs can be met (Tavormina, 1999; Thomas, 2003).

The noted benefits of implementing such a model include decreases in behavioral incidents (defined as altercations between two or more residents) and use of restraints, as well as reductions in rates of staff absenteeism and turnover. A series of behavioral studies conducted before and after Eden implementation at Providence Mount St. Vincent in Seattle also found increases in resident satisfaction and activity engagement (Boyd, 2003; Thomas, 2003). Interviews conducted at two other facilities in the U.S. that had implemented this model revealed residents' beliefs that their lives had improved, and that the goals of alleviating resident loneliness, helplessness, and boredom had been achieved (Kruschke, 2006; Parsons, 2004).

The latest illustration of the Eden Alternative is the Green House initiative (Thomas, 2003). The Green House initiative is an alternative model to the nursing home in the provision and design for long-term care, first built in Tupelo, Mississippi, in 2003 (Lum, Kane, Cutler, & Yu, 2008-2009). These small facilities house approximately seven to 10 residents. The aim is to promote individual growth and development and foster excellent resident quality of life "under normal rather than therapeutic circumstances" (Kane, Lum, Cutler, Degenholtz, & Yu, 2007, p. 834). They feature a family-style, open kitchen with a large dining table and private rooms and baths around a central area (Rabig & Rabig, 2008). In these environments, staff known as the

"Shahbazim" or "shahbaz" (universal workers) are CNAs and are responsible for cooking, cleaning, and doing laundry as well as caring for residents (Bowers & Nolet, 2011; Kane et al., 2007; Rabig et al., 2006).

Green House residents, as well as those living in two comparison sites, were interviewed in order to assess their quality of life in relation to 11 domains: physical comfort, functional competence, autonomy, dignity, privacy, individuality, meaningful activity, relationships, enjoyment, security, and spiritual well-being (Kane, 2001; Kane et al., 2003, 2007). Residents demonstrating a range of cognitive impairment[2] reported higher quality of life in seven domains (privacy, dignity, meaningful activity, relationships, autonomy, food enjoyment, and individuality) in comparison to one of the sites, and higher in four (privacy, dignity, autonomy, and food enjoyment) in relation to the other (Kane et al., 2007). Although the results differed in relation to the two comparison sites, Green House residents reported overall higher emotional well-being and were more satisfied with their living arrangements. They also were more likely to participate in organized activities on and off site, and were less likely to be on bed rest or to be depressed.

Synthesis

Evaluating research on the existence and impact of such large-scale changes is a challenging yet necessary task. Three main concepts were used to organize the changes identified in the body of research reviewed: quality of life, quality of care, and resident satisfaction (Keefe et al., 2009). The relationship between these three constructs was then examined in terms of the impact on resident quality of life and family involvement.

Recent research demonstrates that quality of life is largely subjective and as a result relates to residents' perceptions of key psychosocial domains (Peters, 2004). These may include feelings of being a meaningful contributor to one's family and community, perceptions regarding exertion of control and freedom of choice, and feelings relating to physical comfort, safety, and security (Kane, 2001, 2003). Quality of care also incorporates many of the aforementioned subjective components. Instruments assessing this concept, however, may uniquely include service- or facility-related domains such as nursing and medical services, availability of help, staff-related factors, cleanliness, noise, facility milieu, and cost (Rantz et al., 1998, 1999; Sangl et al., 2007). Finally, resident satisfaction measures seem to demonstrate an equal item distribution relating to both subjective and objective components. Domains addressing room and home design, as well as those referring to social interaction and community life, are included (Chou, Boldy, & Lee, 2001, 2002, 2003; Paulus & Jans, 2005).

In the contemporary Western context, what is known about changes in nursing home care and how these changes are examined depend in large part on how quality of life, quality of care, and resident satisfaction are operationalized (Kane, 2003). Although overlap exists, the way in which each construct is approached provided us with new and different information in terms of resident outcomes. The organization of our review and synthesis emphasized how specific elements relating to physical design and approach to care affect individuals. This article now turns to a consideration of the impact of approach to care and physical design on resident quality of life and family involvement, summarized in **Exhibit 3**.

Resident Quality of Life and Approach to Care

Knowledge of changes in approach to care was widespread within nursing home research. The changes cited in the literature involved placing greater emphasis on resident choice, involvement, and empowerment, and encouraged resident-staff relationships. Research appeared to consider quality

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[2] Cognitive impairment was measured by the Minimum Data Set (MDS). Possible range of scores is 0-6, with a higher score indicating greater cognitive impairment. Mean MDS = 2.8 for participating Green House residents.

Exhibit 3. Key Factors That Impact Resident Quality of Life within the Context of Resident-Centered Care.

	Resident Quality of Life	Family Involvement
Physical Design	Private Rooms Private Bathrooms Smaller, Personalized Settings	Private Rooms Visiting Space
Approach to Care	Decentralized Staff Organization (Horizontal and Participatory) Knowledgeable Staff Staff Job Commitment Resident and Family Councils	Family Councils Family Involvement Interventions Family – Staff Communication

of life through two perspectives: the impact of staff on resident satisfaction and quality of life, as well as the influence of family councils. The Eden Alternative illustrates how such changes are reflected in every aspect of homes and highlights the associated positive results (Kruschke, 2006; Parsons, 2004). An "Edenized" facility in British Columbia, Canada, features five villages for residents with and without dementia, and all enjoy private rooms. Residents have close contact with animals and children, provide care for plants, pets, and each other, and offer input through a Resident Council (New Vista Society, 2008). Results from a client satisfaction survey administered to residents, families, staff, and community partners indicated that residents appreciated being treated with dignity, respect, kindness, and care, and found staff to be knowledgeable, competent, responsive, and available for interaction. They also felt that their privacy was respected and their independence encouraged (New Vista Society, 2005).

A key component of the new approach to care is staff organization. Staff members are being decentralized, empowered, and are working in teams in order to better meet residents' needs. Research also demonstrated the existing significant relationships between this aspect of care facilities and resident quality of life and satisfaction. The first relationship that emerges is between nursing assistants' job commitment and resident quality of life. Across 18 Massachusetts nursing homes, residents on units with nursing assistants who had higher levels of commitment were found to be more satisfied with their relationships with staff and demonstrate higher quality of life (Bishop et al., 2008). Nursing assistants demonstrated higher job commitment when they perceived that their supervisor showed them respect, was available to provide needed help, and worked with them to solve problems. These results exemplified how changes in care models affect individuals at all levels within a facility, including the residents. They also indicated that establishing conditions that foster job satisfaction and staff commitment will indirectly and positively influence resident quality of life (Boldy, Chou, & Lee, 2004).

Other research on the Eden Alternative further highlighted the important role of staff in resident well-being, as satisfaction with staff care has been found to exert a positive effect on all other dimensions of satisfaction (i.e., with room, social interaction, meals service, and resident involvement) (Chou et al., 2002, 2003). In addition, CNA staffing has been found to positively affect total resident satisfaction (Lucas et al., 2007). Residents perceive staff as influencing environmental warmth, the equitable (or inequitable) ways in which residents are treated, place great importance on staff friendliness, and express care and concern for their professional caregivers (Campbell, 2003). Staff play a central role in almost every aspect of residents' experiences and are the direct means through which changes in approach to care are delivered (Campbell, 2003; Chou et al., 2002). For example, approaches to care that involve the decentralization of staff have been found to lead to decreases in medication errors and resident infection and falls (Sudbury & Gnaedinger, 2007). It is clear that staff members are important to residents. At the same time, it is apparent that further research is needed regarding the impact of other aspects involved in approach to care. Thus far, the majority of evaluative studies have focused on staff-related factors such as their job commitment and approach (team versus individual) (Bishop et al., 2008; Sikorska-Simmons, 2005).

Opportunities for choice and meaningful involvement have been identified by residents as important to their quality of life and satisfaction and may be facilitated through a number of avenues (Kane et al., 2003; Paulus & Jans, 2005; Train et al., 2005; Wheatley et al., 2007). One such example is allowing residents to take part in discussions and to provide input regarding the care issues that affect them. Resident interviews have demonstrated that such opportunities promote residents' perceptions of self-worth, and in turn, their feelings of empowerment (Campbell, 2003). Families also act as advocates for their relatives (Levine et al., 2010). Another means through which resident involvement may be facilitated is through family councils. These allow family members to act as correspondents and spokespersons for residents, and provide a direct way in which residents can voice their concerns and opinions and participate in center-level decision-making. Research has demonstrated that residents and their families are significantly more satisfied in facilities with family councils. This may be due to the fact that such homes are more likely to be resident-centered and open to input (Lucas et al., 2007).

Resident Quality of Life and Physical Design

Environment has been identified in much of the literature as one of the key domains in quality of life, quality of care, and resident satisfaction (Chou et al., 2001; Ettema, Dröes, de Lange, Mellenbergh, & Ribbe, 2007; Kane et al., 2003; Keating, 1998; Paulus & Jans, 2005; Rantz et al., 1998, 1999). Increasingly, facilities are offering single rooms with bathrooms to residents, as the importance of allowing individuals to maintain their privacy and dignity while living in congregate housing is understood. De Veer and Kerkstra (2001) noted that the experience of privacy is intimately related to feelings of being at home. Research also has shown positive associations between private rooms and resident quality of life. Not only do they afford greater privacy, but individuals can make the space their own with art, pictures, and furniture; residents appreciate and find this empowering (Campbell, 2003; Keating, 1998; New Vista Society, 2008). Private rooms also appear to positively impact psychosocial factors such as feelings of privacy and control. Research conducted with residents and staff regarding three types of rooms—traditional shared; enhanced shared, in which a dividing wall allows residents sharing a room to have a degree of privacy; and private—revealed that residents living in private rooms are more likely to experience better psychosocial outcomes than those sharing (traditional or enhanced), likely because it enables greater control over one's space. Related research from acute care settings also indicated that patients found their visits with families to be better and more frequent when in single rooms (cited in Calkins & Cassella, 2007).

An Australian study that investigated resident and staff perceptions following relocation from a traditional facility to a dementia-specific special care unit (SCU) revealed similar results (Cioffi et al., 2007). This unit featured private rooms and bathrooms that could be personalized with decorations and pictures, a central kitchen and dining area, large bay windows, and an open garden. Informants overwhelmingly saw the change as positive. Three themes relating to family home, therapeutic environment, and work environment emerged from their discussions. Relatives and staff felt that the SCU had a pleasant milieu and noted the benefits experienced by residents, including weight gain, decreased agitation, fewer disturbances, better sleep, and greater ease in activity participation. Families no longer felt guilty about leaving their relatives there and were also more inclined to visit, as the environment was a more welcoming one. Staff also felt that they could provide better care, as accessibility to equipment in residents' rooms had been improved. Overall, it was believed that quality of life had improved (Cioffi et al., 2007). Others have corroborated the results of this single site. For example, research assessing the impact of Eden implementation (which involves change in physical design and in care approach) at a large American nursing home, Providence Mount St. Vincent, found associated improvements in resident quality of life (Boyd, 2003). An evaluation study of a Green House alternative found similar results, as residents reported higher overall emotional well-being and satisfaction with living arrangements than those reporting from traditional facilities (Kane et al., 2007).

Instruments used to assess physical change vary and include Professional Environmental Assessment Protocol (PEAP), the Sheffield Care Environment Assessment Matrix (SCEAM), and Environmental checklists. Items contained within the PEAP address eight dimensions of environmental experience, including awareness and orientation; safety and security; privacy; regulation and quality of stimulation; functional abilities; opportunities for personal control; continuity of self; and facilitation of social contact. A study published by Schwarz, Chaudhury, and Tofle in 2004, in which staff completed the PEAP and participated in focus groups, found that changes in environment, similar to those noted previously, resulted in maximized awareness, orientation, privacy, social contact, and resident-staff interaction. The more homelike and less institutional nature was also noted as positive.

The SCEAM assesses 10 domains in three categories: universal, physical, and cognitive requirements (Parker et al., 2004). Universal requirements refer to privacy, ability to personalize surroundings, choice and control, and connection with the wider community. Physical requirements include safety and health, support for physical frailties, and comfort. Finally, cognitive requirements involve support for cognitive frailties, awareness of the outside world, and normalness and authenticity, which emphasize a domestic environment as opposed to one that is institutional. This instrument has been used in England to examine the relationship between quality of life and facility size. Smaller facilities were found to be related to higher quality of life in a number of areas, including choice and control, comfort, support for cognitive frailties, awareness of the outside world, normalness, and authenticity (Parker et al., 2004). This study also revealed significant relationships between these particular domains and positive emotion (assessed by Affect Rating Scale [ARS]), well-being (assessed by Dementia Care Mapping [DCM]), and activity levels. Interestingly, although larger facilities scored higher on the safety and health domains, this was determined to be associated with lower scores in enjoyment of activities (assessed by Pleasant Event Schedule-AD [PES-AD]). Larger facilities also demonstrated low personalization, a factor that is extremely important to residents (Campbell, 2003). These results further demonstrate the importance of embracing changes in physical design that advocate smaller, personalized, and private settings.

Although changes in physical design can positively impact resident quality of life, problems still exist. Environmental checklists (developed by Cutler, Kane, Degenholtz, Miller, & Grant, 2006) identified deficiencies in facilities, nursing units, and residents' room and bath environments in 131 nursing units and 40 facilities in five states in the U.S. The following areas were noted to be problematic: lack of lounge space; overcrowded bathrooms; long distances between rooms, bathrooms, and other areas;

hall clutter; and noise. Other issues included poor ventilation, low light, and inappropriate switches and storage areas. Such inadequacies can negatively affect the quality of life domains of dignity, privacy, comfort, security, and functional competence, and, as the literature suggests, efforts should be made to specifically assess these areas and ameliorate associated challenges.

Family Involvement and Approach to Care

Families' continued involvement in nursing home care is important to residents. Although research has shown that involvement does continue post-placement, a number of factors may influence the level of involvement and visit frequency (Baker, 2007; Gaugler, 2005; Keefe & Fancey, 2000). The impact of current approaches to care on family involvement in long-term care facilities, primarily in the form of visiting, must be investigated. A well-cited example of a current care model that has been associated with improvements in resident quality of life is the Eden Alternative (Kruschke, 2006; Parsons, 2004). Research has demonstrated that adopting such an approach also may positively impact family involvement, as more family-oriented facilities are associated with greater family involvement (Gaugler, Anderson, & Leach, 2003).

Families surveyed with the Family Questionnaire (measure of families' perceptions regarding caregivers' skill and caring nature, quality of activities, environment, resident contentment, and their relationships with facility administration) pre- and post-Eden implementation revealed the improvements that families observed and most valued (Rosher & Robinson, 2005). They perceived staff to be more respectful and found the environment more conducive to visiting. Supporting these findings was the noted increase in daily visits as well as in activity participation such as gardening, assisting with animal care, and helping with special events (Rosher & Robinson, 2005).

Although few studies have explicitly examined how an overall change in a facility's approach to care impacts family involvement, many have explored associated outcomes of family involvement interventions. These initiatives allow families to provide input, learn about the facility, and establish relationships with staff. This is an area that requires attention, as an association between poor family-staff relationships and less frequent visiting has been found (Port, 2004). An intervention involving residents, relatives, and staff was implemented successfully in a dementia-specific residential care setting in England. The researchers observed the facility, sought staff and relative experiences through questionnaires, held off-site events where staff could discuss priorities for change, assembled a monthly action group involving relatives and various staff members, and held another off-site event in which progress was discussed. Interviews with staff and relatives revealed participants' positive perceptions of the intervention.

Such opportunities allow families and staff to develop a better understanding of each other's perspective, experience improved communication, and to establish trust, openness, and recognition (Aveyard & Davies, 2006; Dijkstra, 2007; Maas et al., 2004). This is particularly important as research indicated that families and staff hold different perceptions regarding each other's roles and responsibilities (Keating, 1998). Moreover, participation in such groups allows both parties (residents and families) to feel more confident in their abilities to go forward with mutually agreed-upon goals and initiatives. Residents are also indirectly positively affected, as the existence of family councils has been linked with improved resident input and greater appreciation of their surroundings (Gaugler, 2006; Lucas et al., 2007).

Despite these encouraging outcomes, obstacles still exist. For example, families may be unsure of how influential their input really is. Although they participate in initiative development, they appear to lack confidence that their ideas will come to fruition. Other challenges, such as including residents with cognitive impairments, finding time to attend meetings, and being frustrated with the lag between idea development and implementation, have been noted

(Aveyard & Davies, 2006; Dijkstra, 2007). Families also may hesitate, as they are unfamiliar with medical jargon, and may feel intimidated by medical personnel (Dijkstra, 2007; Logue, 2003). Staff and family turnover may further disrupt meeting continuity and decrease families' desire for involvement (Persson, 2008). Facility-level obstacles such as staff resistance to institutional change and inadequate availability of staff and space also may contribute to a lack of enthusiasm surrounding family councils (Logue, 2003). Some noted recommendations that may help to ease the family council development process include clearly defining relevant issues; setting realistic goals and timelines; including those who are interested in the group's goals and those who have the power to implement suggested changes; identifying obstacles; and keeping the ultimate goal of improving resident quality of life at the forefront (Persson, 2008).

Family Involvement and Physical Design

There is a paucity of literature addressing the impact of changes in physical design on family involvement. For the most part, research has addressed family involvement in general and may only touch on the relationship between family involvement and a specific aspect of physical design within a broad overview. One such example is private rooms. Our review of the literature revealed that visitors also appreciate the increased privacy associated with single rooms, and both residents and visitors noted that they help to facilitate more meaningful visits. This is especially the case during the "death or dying process," as "[m]ost family members want to be close to the dying relative but are sensitive to the fact that they are also in someone else's room" (Calkins & Cassella, 2002, p. 173).

Visitors appreciate the increased privacy associated with single rooms, and research suggested that they help to facilitate more meaningful visits. Staff members observed that more family members visit, the duration increases, and that relatives use residents' private rooms more freely (Calkins & Cassella, 2002; Schwarz et al., 2004). This is likely due to the fact that visitors find these environments more homelike and therefore more inviting (Cioffi et al., 2007). Others have noted that the presence of animals makes it easier to bring children (Rosher & Robinson, 2005). Lum, Kane, Cutler, and Yu's (2008-2009) longitudinal quasi-experimental study on the effects of a Green House nursing program on residents' families with two comparison groups in the U.S. illustrated that less involvement does not necessarily mean families are dissatisfied with care. This large-scale, multifaceted study found no significant difference in the overall family involvement between a Green House and the traditional nursing home environments included in the study; however, there were significantly better outcomes in family satisfaction, especially with respect to privacy and physical environment and autonomy (Lum et al., 2008-2009).

Research also demonstrated, however, that residents and families may hold different interpretations of visiting space. Satisfaction surveys with residents and families involved with the New Vista Care Home in British Columbia, for example, indicated that residents are generally more satisfied with visitor space than families (New Vista Society, 2005). Residents gave this aspect an A-, whereas families only gave it a B grade (New Vista Society, 2005). In their recent study in the U.S., Tellis-Nayak, Shiverick, and Hernandez (2010) observed important differences between resident and family perspectives on nursing homes. Their sample comprised 2,430 responses from residents and 3,779 responses from family members to satisfaction surveys from 89 nursing homes in 30 states. Perceived differences in perspective were contextualized in terms of the specific nature of each party's relationship to the nursing home, both in terms of needs and desires and roles and obligations. More research is needed to determine how these different perspectives impact the ways in which families are involved. Preliminary results, however, were encouraging as to the effect private rooms can have on not only residents but on family involvement as well.

DISCUSSION

Within the context of aging populations, nursing homes are expected to provide an increasingly important site in the care of older adults (Nakrem, Vinsnes, & Seim, 2011). Our review yielded evidence regarding the potential impact of contemporary designs, models, and assessment methods on residents and families. An emphasis on a more holistic, resident-centered philosophy of care was observed as a common characteristic in the current literature on nursing homes. Overall, the research in the literature reviewed supported a move away from institutionalized, hospital-like environments and medicalized approaches to care to neighborhood designs featuring more private homelike environments that provide opportunities for increased interaction; however, the results of our review are not necessarily a reflection of the reality within nursing homes and in no way capture the perspectives of all residents and their families. It is possible that the newness of some of these models may have attracted the attention of the researchers who reported about new trends in the field, leading to overrepresentation of one model over other alternatives. This is further justification for more systematic and methodologically sound research.

Although other structured reviews of the literature on nursing home approach to care and physical design exist (e.g., Hill et al., 2011), our review of practices currently espoused in the literature and the practical impacts of such changes presents important evidence to suggest that when resident-centered approaches are adopted, resident autonomy and perceptions of empowerment are enhanced, and general improvements in resident satisfaction and quality of life follow. Furthermore, evidence exists that suggests families tend to visit more frequently and are more involved in assisting with resident care. These findings are important, as they indicate that approach to care and physical design impact interactions between family and residents in positive ways and, perhaps, normalize resident-family relations in what could be considered an abnormal environment. More research in this area is needed, however, as few studies have specifically examined how an overall change in the social and physical environment can impact family. Research indicated that this shift toward a resident-centered approach to nursing home design and care, as exemplified in the Eden Alternative and Green House models, also often involved decentralized staffing models. This presents an opportunity for examining the impact on staff satisfaction.

Rather than accept the presence of studies supporting the positive impact of resident-centered approaches on residents and their families in the literature as evidence of a global transformation in the meaning, design, and practice of nursing homes, we could question how what we know about transitions in nursing home care is a product of our chosen method of inquiry. Within the literature reviewed, most of the published research on the impact of approach to care and physical design from the perspective of residents and their families made use of case studies or qualitative or mixed-methodologies, and was largely evaluative, featuring small sample sizes. Although small sample sizes can yield rich qualitative data and provide for close interpretations and thick descriptions, questions can be raised concerning the representativeness and external validity of the published results. The prevalence of descriptive or single case studies and small sample sizes can be interpreted as indicating a possible limitation of contemporary nursing home research (Koren, 2010).

CONCLUSION AND FUTURE DIRECTIONS

The recognition of the need for future research that can "enlarge the empirical base to support culture change" (Koren, 2010, p. 314) presents a unique opportunity to build reflexivity into the research practice. Various instruments can capture the nursing home experience from the resident and/or family perspective, and these instruments have varying utility in terms of understanding how transitions impact the nursing home experience as related to resident quality of life; they are limited by the way in which they respectively define the concept (e.g., satisfaction versus quality of life versus quality of care). Although the specific constructs used to assess changes in the values and practices of contemporary nursing homes (e.g., quality of life, quality of care, and resident satisfaction) help to define the meaning and reality of a resident-centered approach, changes in physical environment and approach to care cannot be understood in isolation of these instruments and measures, as they are predisposing our knowledge by the way in which they are conceptualized.

A consideration of assessment instruments can offer a view to the ways in which social constructs organize how we know and perceive change. On a more macro level, the research methods used to frame questions and approach and engage the material shape the particular view we have and the kinds of results that can be expected. Many of the studies featured evaluative research (e.g., Aveyard & Davies, 2006; Keating, 1998). Within this research, "change" was represented both in terms of a "model" and an outcome, which could then be situated within existing research. This made it possible to make comparisons, which, in turn, made change visible.

The synthesis offers a site for rediscovering the relationships between models and methods, design and approach. Despite a shared interest in resident well-being, new developments in nursing home physical design and approach to care are heterogeneous. New conceptual models such as the Eden Alternative and Green House model can facilitate knowledge translation and exchange regarding nursing home care, as they represent a way of understanding the impact of both philosophical and practical implementation changes and the associated implications for those involved. Examining these models and their underlying constructs can help generate knowledge about transitions in care. Such models are, however, implemented in diverse locales, under presumably different conditions and therefore should be assessed in relation to the practice and policy contexts in which they are implemented. For example, our search identified literature on changes in facility design and approach in England, Australia, and the U.S. but generated very little information about changes in the Canadian context. Although there is knowledge to be gained from this review, there are important policy and practice distinctions between nursing homes, particularly in different geographic regions, that can influence how quality of life, quality of care, and resident satisfaction are understood and assessed.

Assumptions about the meaning and value of resident-centered approaches are in need of examination and from multiple perspectives. Critical analyses of the constructs that organize understanding and experience of resident-centered approaches to care can provoke new questions concerning the domains, instruments, and measures employed in evaluative studies. We restricted our focus to the perspectives of residents and their families. This decision reflected our interest in and commitment to privileging these commonly underrepresented voices within research on nursing homes. The inclusion of the perspective of the family in the proposed study recognized the important role that families have and can continue to have when a relative transitions into a long-term care facility. At the same time, an area of further inquiry could be the differences that are noted to exist between the two perspectives and the reasons for such differences (New Vista Society, 2005).

By concentrating on the perspectives of residents and their families, this article addressed an important gap in existing research. In excluding a consideration of the role of organizational and systemic factors, which facilitate or impede the implementation of resident-centered initiatives, it also created new gaps. The challenge this article presented concerns how to place residents at the center of research on nursing homes while, at the same time, accounting for the definitive role facility administrators, stakeholders, and social policy play in the implementation and assessment of change.

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