

# Trajectories of At-Homeness and Health in Usual Care and Small House Nursing Homes

Sheila L. Molony, PhD, RN,<sup>1,\*</sup> Lois K. Evans, PhD, RN, FAAN,<sup>2</sup>  
Sangchoon Jeon, PhD,<sup>1</sup> Judith Rabig, RN, PhD,<sup>3</sup> and Leslie A. Straka, CFLE<sup>4</sup>

<sup>1</sup>Yale University School of Nursing, New Haven, Connecticut.

<sup>2</sup>Department of Family & Community Health, University of Pennsylvania School of Nursing, Philadelphia.

<sup>3</sup>Masonic Health Systems Institute, Charlton, Massachusetts.

<sup>4</sup>Bowling Green State University, Ohio.

\*Address correspondence to Sheila L. Molony, PhD, RN, Yale University School of Nursing, 100 Church Street South, New Haven, CT 06536.  
E-mail: Sheila.molony@yale.edu

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**Background:** Long-term care providers across the United States are building innovative environments called “Green House” or small-house nursing homes that weave humanistic person-centered philosophies into clinical care, organizational policies, and built environments. **Purpose:** To compare and contrast trajectories of at-homeness and health over time between residents remaining in a usual care nursing home (ucNH) and residents moving from that home to a small house (SmH). **Methods:** Mixed methods longitudinal design with 4 waves of data collection: before the move and 1, 3, and 6 months after the move (or equivalent for nonmovers). **Results:** Prior to the move, individuals who decided to relocate to the SmH had more depressive symptoms and lower levels of at-homeness (measured by the Experience of Home [EOH] Scale). Most participants who chose to stay in the ucNH reported high baseline levels of at-homeness and maintained this over the next 6 months. All EOH scores in the SmH group increased after the move. Individuals who moved to the SmH also had greater less functional dependence over time. Qualitative findings highlight variables that contributed to at-homeness in both groups. **Conclusions:** This study demonstrates that a “one size fits all” approach may not be best because at-homeness is an individualized construct. Complex relationships emerged between perceived self-care ability, functional performance, and SmH nursing homes. Mixed methods enable

deeper understanding of therapeutic environments and inform the development and testing of tailored interventions.

**Key Words:** *Institutional care/residential care, Nursing studies, Organizational and institutional issues*

Approximately 69% of adults who turned 65 in 2005 will need some type of long-term care (LTC) during their lifetime, with more than one third requiring care in a residential facility (Kemper, Komisar, & Alecxih, 2005). LTC providers across the United States are building new residential environments that weave humanistic person-centered philosophies into clinical care, organizational policies, and built environments (Rabig, 2009; Rabig & Rabig, 2008). The small house (SmH) model, first demonstrated in the pilot Green House Project in Tupelo, MS (Rabig, Thomas, Kane, Cutler, & McAlilly, 2006), relocates the resident from the “total institution” (Goffman, 1962) to a place that is believed to better emulate home.

In an ideal home, one experiences familiarity, environmental mastery, autonomy, self-identity, and comfort within a welcoming, personalized, socially supportive environment (Cutchin, Owen, & Chang, 2003; Moore, 2000). Molony’s (2010) metasynthesis of the meaning of “home” reveals that it is both a place-based experience and a

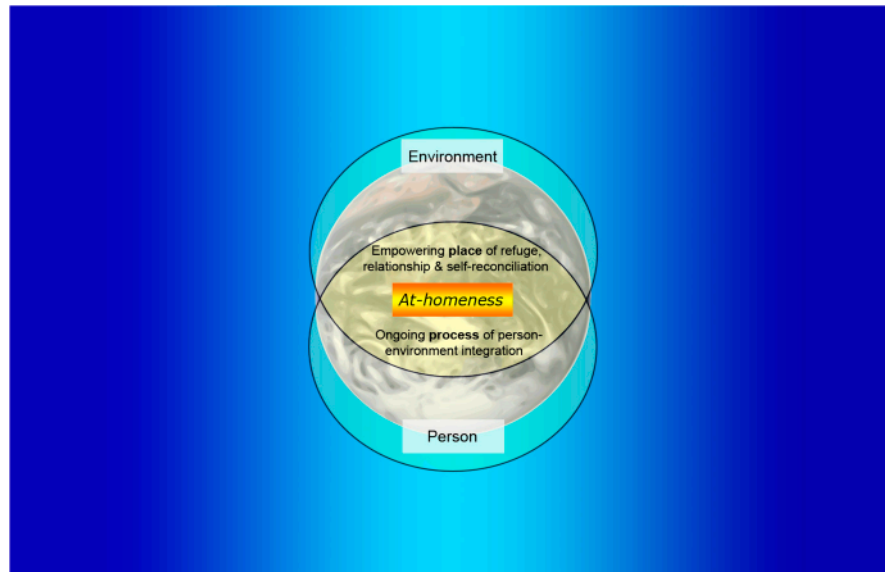


Figure 1. At-Homeness Model.

process of “person–environment integration” that goes beyond the usual connotations of person–environment fit (Figure 1). An authentic home provides individually meaningful experiences of choice, mastery, refuge, relationship, and self-reconciliation. Achieving “at-homeness” involves a relationship, with dynamic interactions within and between the intrapersonal, interpersonal, physical, and transpersonal environment. To create and shape a place that enables at-homeness, caregivers must provide individualized caring based on knowing what matters to that person and what possibilities exist in that situation (environment).

The SmH attempts to restore home using a multifaceted approach that includes architecture that reflects a family home (living room, dining room, den, kitchen and private room, and bath for each resident); operations and staffing structures that incorporate core values of home (maximization of holistic wellness, resident autonomy, choice, dignified treatment, function, and self-care); and maintaining individual and sociocultural continuity (Rabig, 2009). Even the most “homey” looking accessible building can feel like an institution, a prison, or at best, a hotel. It is the ability to identify the people, places, things, ideas, and experiences within that environment that address the needs and call forth the strengths and possibilities of the individual resident, that forms the true “hearth” in the SmH. There is an implicit assumption that home-like residential design, amenities, and routines will foster person–environment integration and well-being. This study fills a gap in the

literature by purposefully examining individual trajectories of health and *at-homeness* in both an SmH and a comparable usual care nursing home (ucNH).

There have been very few studies documenting the outcomes of SmHs. Kane, Lum, Cutler, Degenholtz, and Yu (2007) conducted the first SmH study, using a quasi-experimental design with repeated measures to examine differences in resident outcomes in Green House versus ucNHs (Kane et al., 2007). Older adults who moved from ucNHs to a Green House reported better quality of life in multiple domains (privacy, autonomy, dignity, food enjoyment, meaningful activity, and relationships) than a matched cohort who remained in usual care homes. Green House dwellers also had higher levels of residential satisfaction and emotional well-being, lower levels of depression, and less functional (activity of daily living [ADL]) decline than ucNH dwellers. Interestingly, the researchers did not find evidence of relocation stress in the postrelocation period. Lum and colleagues (2007) reported a higher level of family satisfaction in the Green House compared with two usual care facilities. Families were observed to be more actively engaged in the life of the house. It is unclear what aspects of the Green House model contributed to study outcomes. The analysis focused on between-group differences rather than on intra-individual change over time, and the researchers did not measure *at-homeness* nor collect qualitative data to enable understanding of resident experiences within and across residences. If person-centered care is authentically practiced, individual experiences are salient to the analysis of

outcomes. Our study adds to the limited data on SmH nursing homes by replicating the longitudinal design, adding additional measures (including a measure of *at-homeness*), and using mixed methods to enrich understanding of individual experiences nested within group outcomes.

## Purpose

We used mixed methods to examine trajectories of *at-homeness* over time in two groups of older adults who were given a choice to move to an SmH nursing home or stay in their existing residence, a ucNH. The quantitative and qualitative data provided by movers and nonmovers provide insight into the complex relationships between individual needs and desires, the LTC environment, *at-homeness*, and health. Qualitative findings will be presented in greater detail in a separate paper. This report presents (a) quantitative findings of within-group (individual) and between-group (dwelling-based) differences in longitudinal trajectories of *at-homeness* and (b) findings (both qualitative and quantitative) that identify the variables and personal experiences associated with divergent trajectories.

## Design and Methods

A descriptive, longitudinal mixed-methods design with four waves of repeated measures was used to achieve study aims. Interviews were conducted after residents made the decision to stay or move (baseline) and at 1, 3, and 6 months after the mover relocated to the SmH. Interviews with nonmovers were conducted at equivalent times.

### Setting

The setting for the study was a 100-bed nursing home (81 residents at time our study began) within a faith-based continuing care retirement community (CCRC) in the Midwest. The opportunity provided by the CCRC's decision to build five new SmHs and their desire for research data to guide future projects resulted in the opportunity for a natural experiment. Institutional Review Board approval was obtained from the CCRC, the University of Pennsylvania, and Yale University.

### Sample

Residents were eligible to participate in the study if they spoke English, were able to hear,

comprehend, and respond to interview questions. Residents were excluded if they were unable to provide assent or required a proxy decision-maker who was not yet designated. Residents were also excluded if they had an unstable or terminal health condition, were unable to communicate or understand English, or lived in the facility for less than six months. A staff social worker identified 44 residents (54% of facility census) who met the eligibility criteria. If the resident agreed, a one-on-one visit was scheduled to provide information about the study. Informed consent was obtained from participants ( $n = 23$ ) or proxies ( $n = 5$ ; with resident assent). Consent and/or assent was an ongoing process, with each visit beginning with a check-in to assure that participation was voluntary throughout the study. Two participants withdrew before completion of baseline data collection, and one resident was withdrawn by the principal investigator during the initial interview due to a change in the ability to assent. Prior to baseline data collection, all residents had been given the choice of staying in the ucNH or moving to the SmH. Of the 25 study participants with complete baseline data, 10 elected to stay in the usual care home and 15 elected to move to the SmH. During the course of the study, two residents were discharged (one from each group), one resident died (SmH) and one resident relocated nearer family (SmH). The environment in the traditional model nursing home changed over the course of the study. A new buffet-style dining program was initiated, some long-time staff members left to work in the SmHs, and residents who previously shared a room now had private rooms.

### Measures

Quantitative data were collected by a research assistant at baseline and 1, 3 and 6 months after the move (or equivalent), and qualitative interviews were conducted at each time wave by the PI, 1–2 weeks later. Variables measured only at baseline included demographics and trait-based optimism (*Life Orientation Test—Revised* [LOT-R]). Repeated measures included self-rated health (poor to excellent), number of daily medications, medical comorbidity (diagnosis count and *Charlson Comorbidity Index*), physical dependency (minimum data set [MDS] 2.0, self-reported ADLs (Katz ADL), cognitive function (*Folstein Mini-Mental State Examination* [MMSE]), depressive symptoms (*Geriatric Depression Scale* [GDS-15]), social

network, and social support (*Norbeck Social Support Questionnaire* [NSSQ]; Brink, Yesavage, & Lum, 1982; Folstein, Folstein, & McHugh, 1975; Gigliotti, 2002; Katz et al., 1963; Norbeck, Lindsey, & Carrieri, 1983; Sheik & Yesavage, 1986). The *Charlson Index*, *Katz ADL*, *MMSE*, and *GDS-15* are valid and reliable measures used extensively in LTC studies (Brink et al., 1982; Crum, Anthony, Bassett, & Folstein, 1993; Katz et al., 1963). The *LOT-R* is a six-item measure of dispositional optimism with support for internal consistency reliability (Cronbach's  $\alpha = .78$ ) and construct validity (Scheier & Carver, 1985; Scheier, Carver, & Bridges, 1994). The NSSQ allows respondents to list social support network members and then collects data about contact frequency, emotional, and tangible support (Gigliotti, 2002; Norbeck et al., 1983). Both the *LOT-R* and the NSSQ have been used with community-dwelling older adults.

Measures of person-environment fit included questions about dwelling tenure, perceived amount of choice about the decision to move, involvement in the move, premove familiarity with the current residence, overall housing satisfaction, and degree of disturbance by other residents. *At-homeness*, an indicator of optimal person-environment fit, was measured with the *Experience of Home (EOH) Scale*. Reliability and validity have been supported with older adults living in diverse residential settings (Molony, McDonald, & Palmisano-Mills, 2007). The option to use a dichotomous "yes or no" response was added to the *EOH Scale* to enhance usability for cognitively impaired participants. Several abstract items were also modified or replaced. For example, the item "*I have invested some of myself in this place*" was reworded as "*I feel a part of this place*."

One week after quantitative data collection at each time wave, qualitative interviews were conducted by a separate interviewer. Participants who could describe their dwelling experience and share thoughts and feelings about *at-homeness*, either in the past or present, were included in the qualitative sample. Eleven of 15 residents in the SmH group (73%) and 7 of 10 in the usual care group (70%) participated in at least two qualitative interviews (one before the move and one after the move or equivalent time frame). Interviews began with grand tour questions such as "tell me what it is like for you to live here," "describe your relationship with this place?" "Has your relationship changed over time?", and "what does home mean to you?"

Interviews continued with probes to elicit detailed descriptions of day-to-day life in the dwelling. Each interview was recorded, transcribed verbatim, and entered into NVIVO 8.0 for data management and analysis. A separate paper will detail all qualitative findings. A portion of qualitative data will be presented in this paper to add explanatory value to the quantitative findings.

## Analysis

To examine differences in trajectories of health, function, and *at-homeness* within and across dwellings, a mixed model was employed, using PROC MIXED, SAS version 9.1. All possible interactions between time and covariates were examined, and only significant interaction terms and additive terms were kept in the final model. The models were built up from a base model including the interaction between time and group. Then the three covariates including housing satisfaction, GDS, and MMSE total score were added. The interaction term between time and each of the covariates was tested, and significant interaction terms (i.e., time-by-group and time-by-housing satisfaction) remained in the model. The covariance matrix (the within-subject correlation between repeated measures) was selected from the base model, which included the time by group interaction term. Using the likelihood ratio test, autoregressive covariance was selected for both regression models. Least square means were estimated at each time point including baseline after controlling for three covariates (housing satisfaction, depression, and mental status). The least square means did not control for baseline differences in ADL's or *at-homeness* because the analysis focused on group differences in trajectories (i.e., change over time).

The Kolmogorov-Smirnov test was used to examine the normality of residuals to assure that assumptions of the model were met. Five participants used the yes/no response option on the *EOH Scale* or varied between Likert and yes/no responses between waves or within the same interview. All Likert responses were therefore dichotomized. A "1" was used as the score for *strongly agree*, *agree*, or *yes* responses and a "0" for *neutral*, *disagree*, *strongly disagree*, and *no* response. The average dichotomized scores across *EOH* items were used for the analysis.

The PI analyzed qualitative texts using a grounded hermeneutic method, comparing and contrasting intra-individual and between-group



experiences over time (Crabtree & Miller, 1999; Munhall, 2007; Polit & Beck, 2007). Key issues and processes involved in creating or maintaining *at-homeness* were identified. Peer audits of the emerging coding scheme were conducted to reduce early closure and minimize bias. The first audit involved parallel independent coding of nine transcripts by the PI and a second qualitative researcher who was not familiar with the participants or research site. Consensus was reached regarding themes and patterns of intra-individual change over time. Member checks were completed with several study participants to provide feedback on the credibility of emerging qualitative interpretations. A second audit was conducted near the end of the analysis. Doctoral nursing students and postdoctoral fellows in an advanced qualitative methods course reviewed all interpretive codes and narrative summaries and provided critique to confirm findings and/or prompt renewed dialogue with the texts. In the quantitative–qualitative analysis, qualitative data was examined for experiential descriptions that validated, disputed, clarified, or explained quantitative findings.

## Results

Most participants were White (100%), female (84%), and graduated high school or had some college education (72%). Age, self-rated health, comorbidity, cognitive function, social support, and housing satisfaction were not significantly different between the groups (Table 1). Many participants experienced difficulty responding to the LOT-R, and this measure was excluded from further analyses. Significant between-group differences were found at baseline in depressive symptoms and *at-homeness*. Prior to the move, individuals who decided to move to the SmH had more depressive symptoms ( $p$  value = .05) and reported lower levels of *at-homeness* ( $p$  value = .0475) while dwelling in the ucNH. There were no significant between-group differences in MDS-ADL dependence at baseline. There was a trend toward higher self-rated ADL scores in the SmH group, but this did not reach statistical significance. MDS-rated dependence and self-rated ADL ability were highly correlated but not identical ( $r = -.78$ ).

### Longitudinal Trajectories

There were no significant between-group differences over time in social support, comorbidity, self-rated health, or number of medicines. Divergent

**Table 1. Baseline Characteristics: Residents Who Chose to Stay in Usual Care Nursing Home Versus Move to Small House**

|  | Small house,<br>N = 15 | Usual care,<br>N = 10 |
|--|------------------------|-----------------------|
|  | N (%)                  | N (%)                 |
| Gender                                       |                        |                       |
| Female                                       | 12 (80.0)              | 9 (90.0)              |
| Male   | 3 (20.0)               | 1 (10.0)              |
| Education                                    |                        |                       |
| <High school                                 | 1 (6.7)                | 0 (0)                 |
| High school                                  | 11 (73.3)              | 6 (60.0)              |
| >High school                                 | 3 (20.0)               | 4 (40.0)              |
|  | Mean (SD)              | Mean (SD)             |
| Age  | 84.9 (9.3)             | 82.7 (11.3)           |
| Comorbidity index                            | 8.2 (4.0)              | 8.1 (3.8)             |
| Self-rated health <sup>a</sup>               | 4.2 (0.9)              | 3.8 (0.9)             |
| Housing satisfaction <sup>a</sup>            | 4.1 (1.0)              | 4.7 (0.7)             |
| Resident disturbance <sup>b</sup>            | 1.9 (0.8)              | 1.8 (1.0)             |
| GDS <sup>*c</sup>                            | 3.7 (2.1)              | 2.2 (2.1)             |
| Cognitive function (MMSE) <sup>d</sup>       | 22.9 (4.8)             | 22.9 (4.7)            |
| Cognitive function (MMSE error) <sup>e</sup> | 6.6 (5.0)              | 5.6 (5.1)             |
| EOH Scale <sup>*f</sup>                      | 0.7 (0.3)              | 0.9 (0.1)             |
| MDS-ADL <sup>g</sup>                         | 25.9 (5.5)             | 28.7 (6.9)            |
| Self-rated ADL <sup>h</sup>                  | 2.8 (1.8)              | 1.6 (1.8)             |

Notes: ADL = activity of daily living; EOH = Experience of Home; GDS = Geriatric Depression Scale; MDS = minimum data set; MMSE = Mini-Mental State Examination.

<sup>a</sup>Self-rated satisfaction: 1 = *very poor*, 2 = *poor*, 3 = *fair*, 4 = *good*, 5 = *very good*.

<sup>b</sup>Disturbance by other residents scores: 1 = *never*, 2 = *rarely*, 3 = *sometimes*, and 4 = *often*.

<sup>c</sup>GDS scores: 0–15 with higher value = more depressive symptoms.

<sup>d</sup>MMSE scores: 0–30 with higher value = higher cognitive function.

<sup>e</sup>MMSE error scores: 0–30 with higher value = more errors (lower cognitive function).

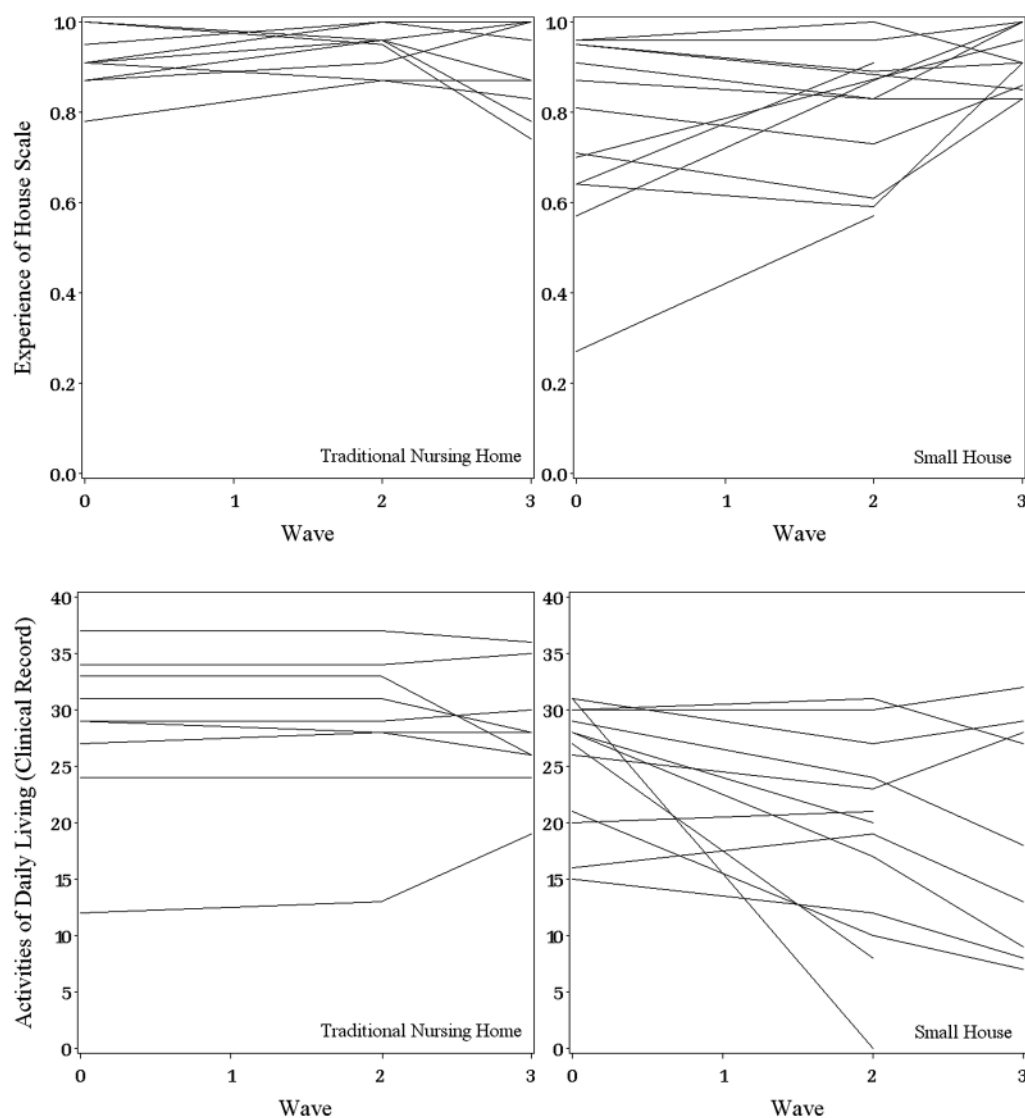
<sup>f</sup>EOH scores 0–1.0 with higher score = higher levels of *at-homeness*.

<sup>g</sup>MDS-ADL scores: 0 to 44 with higher value = more dependent.

<sup>h</sup>Self-rated ADL scores: 0 to 5 with higher value = less dependent.

\* $p < .05$ .

trajectories of *at-homeness* and ADL function were identified by statistically significant time-by-dwelling (time-by-group) interactions. Person-centered care also warrants inspection of individual variation, and therefore, Figure 2 depicts participant trajectories of *at-homeness* and ADL dependency over time. Most participants who remained in the ucNH reported high baseline levels of *at-homeness* (EOH scores of 0.8 or greater) and maintained this high



**Figure 2.** Individual trajectory of the Experience of Home and activity of daily living scale across three waves among individuals who stayed in the usual care nursing home and individuals who moved to the small house.

level over the next six months. Approximately half of participants in the SmH group reported an *EOH* score below 0.8 at baseline (when they lived in the

**Table 2.** Estimated Least Square Means and *SE* on the *EOH* and *ADL* Scale

|      | EOH Scale <sup>a</sup> |              |              | <i>p</i> value |
|------|------------------------|--------------|--------------|----------------|
|      | Baseline               | Wave 2       | Wave 3       |                |
| SmH  | 0.76 (0.04)            | 0.79 (0.04)  | 0.90 (0.04)  | .0206          |
| UcNH | 0.88 (0.04)            | 0.94 (0.04)  | 0.87 (0.05)  |                |
|      | ADL scale <sup>b</sup> |              |              | <i>p</i> value |
|      | Baseline               | Wave 2       | Wave 3       |                |
| SmH  | 25.67 (2.14)           | 18.48 (2.20) | 16.91 (2.32) | .0383          |
| UcNH | 29.05 (2.47)           | 27.74 (2.52) | 27.55 (2.67) |                |

*Notes:* ADL = activity of daily living; *EOH* = Experience of Home; SmH = small house; UcNH = usual care nursing home.

<sup>a</sup>*EOH* scores: standardized (dichotomized) scores of 0.0–1.0.

<sup>b</sup>MDS-ADL scores 0–44 with higher scores = more dependency (lower scores = better function).

ucNH), and all *EOH* scores in this group increased to 0.8 or greater by the end of the study. Housing satisfaction was significantly associated with *at-homeness* ( $p$  value = .0036) prior to the move but not thereafter. The interaction between dwelling and time on *at-homeness* was significant in the mixed model at the 0.05 level, after controlling for baseline differences in depressive symptoms, cognition, and housing satisfaction (Table 2). Qualitative descriptions provided insight into group similarities and differences as well as within-group variance.

### Convergence and Divergence Between Groups

Aspects of the milieu associated with *at-homeness* in both groups included (a) closeness and involvement with family, (b) relationships

with staff members who “really cared” [emphasis added], (c) having fun (with staff or other residents), and (d) having attentive health care. Several participants spoke of proximity to family (and resulting ease of visiting) as a factor influencing their choice to stay in usual care facility or move to SmH (which was located about 15 miles away from the usual care facility). Qualitative findings associated with staff relationships and the relationship between attentive health care and home will be discussed in a separate paper. Of note here is the need to enhance or maintain these environmental qualities whether usual care or SmH model care is used.

In both the ucNH and the SmH, high levels of *at-homeness* were associated with perceptions of freedom, often expressed as “*I can do what I want*” or “*I can come and go as I please*.” Perceptions of freedom varied widely across individuals. Many residents, who elected not to move, felt they could relax in comfort, engage in desired activities, and come and go as they pleased in their current dwelling. For two usual care dwellers, having a car or van in the parking lot outside was symbolic of freedom (even if rarely used). Freedom of “placement” of both one’s body and one’s possessions was also important. Being able to stand up, get up, move, or lie down whenever and wherever one wished and being able to leave one’s “stuff” anywhere desired (without worrying about it being relocated or taken) were markers of personal freedom. Premove narratives of residents who had decided to move included more perceptions of restricted freedom: being scolded for mobilizing independently, feeling compelled to engage in group activities, and feeling restricted by the spatial realities of double (or triple) occupancy rooms (e.g., navigating an obstacle courses of wheelchairs, walkers and furniture, sharing one bathroom, having two televisions in close proximity, etc.).

### *Trajectories of At-Homeness*

For many SmH dwellers, home was portrayed on a continuum, and the SmH was referred to as “a little closer to home,” “second best,” or “home away from home.” For others, home was a threshold idea—it either was, or was not, home. One SmH dweller enthusiastically declared “*this is home!*” and another exclaimed, “*I love it here!*” The use of the word “*love*” was unique to SmH transcripts and was associated with the highest

levels of *at-homeness*. In contrast, one SmH resident stated, “*It’s nice. It’s cozy. But it’s not home. That’s gotta be in all the things. Not home.*” All SmH residents in this study unanimously expressed a preference for the new environment. SmH residents expressed an increase in temporal, spatial, and behavioral freedom:

... not like an institution—it’s more like home! There’s fewer people here . . . our time is more free. We get to do what we want. We can go outside or we can stay in or play cards or whatever.

... I don’t miss anything about [the ucNH] . . . it’s too regimented. It has to be, I understand . . . [but] this is more like home. You have your own room; you decorate it any way you want. You eat and sleep—you do things like you do at home.

... I liked the people there [at the usual care home]—they were very friendly and nice. But this is home. This has your own room by yourself. You can do whatever you want, when you want to do it . . . And I usually eat my breakfast in my pajamas and they don’t say anything about it. They say that’s okay—it’s your home—you can do whatever you want, within reason, I mean.

We’re freer to move around . . . seems as though there wasn’t any place to go over there . . . to your room, or to the meeting you’re attending, or to a meal . . . and then you’re on your way back to your room again . . .

When asked, this last participant agreed that the pattern of movement described was not very different from the usual care home, but it somehow felt different; the SmH had an atmosphere of greater freedom. Another resident also expressed this difference: “*Well, you can go and come here.*” Interviewer: “*Were you not able to do that before, when you were at [usual care home]?*” Resident: “*No . . . well, you had to tell them if you were going.*” Interviewer: “*And here you don’t have to do that?*” Resident: “*Yes . . . you do . . . but it isn’t so bad . . . it’s more like I’m leaving the house now.*”

Some SmH dwellers also reported a difference in social relationships with staff members and other residents after the move. These perceptions differed by individual house, highlighting the importance of the unique social milieu in each dwelling. “*They [the staff] seem closer to me here . . . I enjoy that—I like to feel like I’m needed.*” Another resident said, “*. . . when it’s time to eat, they [staff] call me, and if they don’t, my neighbor gets me. Over there [referring to the ucNH], they*

*didn't care.*" The household atmosphere was described by residents as one of privacy, personalization, and individuality. *"It's a whole different story than [the usual care home]. It's more relaxed . . . more private."*

Roommate relationships were associated with worry, watchfulness, and caregiver-type relationships in the ucNH (e.g., one roommate would watch another or call for help to be sure a roommate would not fall). In the SmH, former roommate relationships were more likely to reflect fun and friendship:

. . . we've become real good friends [referring to former roommate]. We laugh and joke and kid around with each other. And she'll bump into me and she'll say, "Get out of my way! (laughing) and I'll bump into her and I say, "Get out of my way! She has a grabber and I have a grabber and we tease each other with it . . . We have more fun!

### *Trajectories of ADLs*

Individuals who moved to the SmH had greater decline in MDS-ADL scores (in other words, less functional dependence or better function) over time, whereas those who stayed in the ucNH maintained relatively consistent MDS-ADL scores. After controlling for baseline depressive symptoms, cognitive function, and housing satisfaction, the estimated mean of MDS-ADL scores declined about 8.8 points over time ( $p$  value = .0383). However, participants who stayed in the ucNH lowered scores by only 1.5 points over time (Table 2). Individual case analyses revealed that participants who were ambulatory at baseline (with assist or independently) were the most likely to show improvements in ADL function in the SmH. There was no significant change in function over time in the usual care group (Figure 2). High housing satisfaction at baseline was associated with lower MDS-ADL (less dependence and better function) before the move but was not significant at Waves 2 and 3 ( $p$  value = .0020). Both groups associated home with doing things for themselves. Remembrances of a past home were usually associated with able-bodied performance, and the distinction between the present environment and "home" was often described by contrasting what the resident "used to do" and is no longer able to do. One said, *"I mean, if I were at home and able to, like before, then I'd be busy with my artwork and different things, other work. I'd be more busy."* Another added: *"Well, [here] you have to be waited on. Home I used to do everything myself."* The concept of

freedom and physical function was closely related as residents associated *"Doing what I want to do"* with doing *"what I used to do."*

Well, I don't get to do what I want to do all the time. I have to do what they present us to do. And I don't cook, I don't go in my garden and work, I don't mow my lawn. I don't go walk uptown anymore. I don't do the activities I did when I was home, is the main thing.

Many residents perceived improvement in their health and function after the move to the SmH. Interviews revealed an increase in mobility within their new private rooms.

. . . here you don't have to wait. You can go into your own bathroom . . . I'm dressing myself . . . not all the time, but sometimes . . . I take good sponge baths and I do that by myself . . . it takes me quite a while, but I get there! And I'm sleeping in my bed and I didn't over there [at the ucNH] . . . I tried to . . . but I couldn't even lift up my legs . . . Here, I can get myself out of bed, in bed, I can roll over, I can pick my legs up. [Resident had her own personal bed and mattress.]

The physical environment of the SmH inspired self-care. Some SmH dwellers made specific comparisons between the ucNH and the new dwelling. *"I can . . . take a shower. I didn't appreciate taking a shower at [usual care home] because somebody had to be in there with you."* Another said, *"I can't remember that I was ever out of my wheelchair at [usual care home]. Now I have that freedom."* At least two SmH dwellers reported making their own beds. Both emphasized this would "take a while" and might involve making one half of the bed at a time, resting, and then completing the other half. One SmH resident was observed washing her own laundry. Being able to engage in self-care was associated with freedom and better care:

. . . I think I'm better taken care of here than I was there. Because I really like to . . . be my own boss when I need a shower or use the bathroom. 'Cause there'll be nobody in there to keep me from going in . . . I get up and I can dress myself. If I need a shower, I take a shower . . . and I like the fact that I can . . . get ready for bed. *Interviewer:* Is that different from [usual care home]? *Resident:* "Oh definitely so. You have to wait your turn at [that place] and I couldn't get around like I can here . . . I can go along without that [walker] or the wheelchair . . . here in this room . . ."

One SmH dweller not as fond of self-care was being encouraged to dress independently, resulting



in the resident feeling ill-treated and underserved. The disparity between the ADL assistance given in the ucNH and new expectations encouraging self-care in the SmH colored perceptions of staff intentions and quality of care and affected some resident-staff relationships.

Although some SmH dwellers missed the formal recreational activities of the ucNH, most expressed appreciation for the atmosphere of the SmH. The SmH environment was described as “normal,” “more natural,” “more relaxed,” and “more private.” Many SmH dwellers spoke warmly about the sense of community and social environment in the new setting. Smaller residential density and family-style dining increased perceptions of belonging. A resident shared, “*I think they’re more clannish over there [referring to other residents at usual care home] . . . the groups.*” Another SmH resident stated, “*You’re amongst your own folks. You’re individuals.*”

### Trajectories of Psychosocial Well-being

Significant between-group differences in depressive symptoms present at baseline disappeared between 3 and 6 months after the move, with a trend toward increased GDS scores in the ucNH dwellers and a trend toward decreased GDS scores in the SmH dwellers. Neither of these trends reached statistical significance in the mixed model.

Qualitative interviews emphasized the importance of social relationships to feeling at home. Relationships with roommates, former roommates, and dining room tablemates were often described. Outings with spouses, girlfriends, or children; visits with grandchildren; and time spent with “buddies” or “girlfriends” were valued in both settings. Numerous interviews provided evidence of close interpersonal relationships with members of the staff. In contrast, individual staff members were rarely mentioned in the quantitative measure (the NSSQ). Even when prompted to consider different supporters, including caregivers, participants did not identify individual staff members on the measure. When completing the NSSQ, participants mostly limited their responses to family members. Social support was described qualitatively in stories of gatherings that made the ucNH feel more like home, such as barbecues and picnics that were open to families and community members. When asked to describe an experience that “really felt like home” in the ucNH, one resident (who elected to move to the SmH, citing the desire

for more privacy and more space) cited two examples. The first example was a time when the ucNH enabled the resident to host a large family celebration. The second example was a time when nurses recognized that the resident was experiencing an acute medical emergency and took quick life-saving action. These qualitative exemplars illustrate the individualized nature of *at-homeness* and the necessity of smooth integration of both the “social model” and the “medical model” of care.

### Implications

The data reveal that for some individuals, the ucNH can feel like home. These individuals may have reached a state of posttransition equilibrium referred to as full integration (Rossen & Knafl, 2007). They had more self-perceived freedom than those with lower levels of *at-homeness*, who elected to move. The single lowest score of *at-homeness* was from a resident who had lived in the traditional facility for 6 months for whom the discrepancies in freedom between life in the community and life in the ucNH were very prominent.

Having fun, going on outings, spending time with family members, and relating to staff who really care contribute to *at-homeness* in both usual care and SmH models. *At-homeness* is an individualized construct, however, and is not synonymous with residential satisfaction. Some nursing home residents viewed a full calendar of structured recreational activities as a welcome opportunity to socialize and fill the hours between breakfast and bedtime. For other residents, the structure felt restrictive and the activities reinforced a perceived lack of freedom as residents felt compelled to attend events not of their choosing. For some nursing home dwellers, social norms, spatial limitations, and movement constraints felt more oppressive, and the temporal, behavioral, and spatial freedoms of the SmH were associated with increased *at-homeness*. Private rooms and private bathrooms were uniformly valued and may have contributed to improvements in *at-homeness*. Notably, the biggest improvement in ADL function occurred between baseline and 3 months, whereas the biggest improvement in *at-homeness* occurred between 3 and 6 months after the move. The physical environment perhaps played a greater role in ADL function than other elements of the SmH model, whereas *at-homeness* may require the full scope of intervention inherent in the SmH philosophy. Field notes suggest more complete

implementation of the model at Wave 3 due to stabilization in staffing and increased organizational experience with the model. Other possible explanations include that experiencing *at-homeness* in a new dwelling takes at least six months or that improvements in ADL function mediate *at-homeness*.

The improvement in ADL function in SmH dwellers is consistent with the findings in the Green House study. For many residents, walking inside their room, making their bed, serving themselves food, and doing laundry were all “natural” activities in the new environment. Future research is needed to document functional trajectories of non-ambulatory more disabled dwellers. Individuals moving to the SmH rated their own premove function at a slightly higher level than the MDS-scored rating. It is possible that varying levels of “functional self-efficacy” influenced the postmove results. Future studies would benefit from including subjective and objective measures of function. A rating of subjective functional self-efficacy would also be useful. The findings of this study raise the question: Do residents with higher expectations for self-care experience different longitudinal outcomes after controlling for objective functional measures? Do different spatial configuration and/or staff/group norms for autonomy and self-care mediate these outcomes? Qualitative data regarding engagement in ADLs reflected the need for both privacy and sufficient time to complete activities. Small steps interspersed with rest periods, “cruising” short distances, and engaging in intermittent periods of activity (sometimes independently and sometimes with help) are markers of gradual functional improvement that are not well captured by current quantitative measures. Also, as recounted by residents in this study, physical and spatial features are not the only barriers to perceived freedom. Social expectations and norms can powerfully shape perceptions of the ability to come and go and alter the experience of not only freedom and separateness but also belonging and connectedness. A balance or harmony of these two qualities may be key to individualized *at-homeness*.

It is noteworthy how prominent the theme of freedom was in the SmH dwellers. These individuals felt they could ‘*come and go as they pleased*’ and ‘*do what they wanted to do*’ in the new environment in contrast to the ucNH. This type of freedom is one of the explicit goals of the SmH model. Future studies would benefit from observational data regarding actual spatial mobility outside

of the room and outside of the house as well as data regarding changes in environmental, social, cognitive, and behavioral engagement.

This study highlights several important points that have not received sufficient attention in the culture change/SmH literature. Whether a resident moves into a traditional nursing home or an SmH environment, individual perceptions change over time. There is an adjustment period when the present dwelling is being compared with previous dwellings. Future studies should compare and contrast perceptions as residents move from community home to various settings. It is possible that using the community home as the “standard” for comparison will result in different findings than in this study. The changing perceptions of freedom, choice, control, and caring milieu should be followed over time. The different dwelling choices made by residents in this study as well as the differences highlighting what was most salient in each dwelling experience indicate that there is no “one size fits all” model. Although the SmH environment prompts normalized domestic routines for both staff and residents, our findings suggest that it may be more important to understand what is most salient to each resident rather than to design an idealized built environment. The study participants described instances of feeling at home as the result of medical urgencies that called for and received a caring response. This highlights the artificial dichotomy between “social model” and “medical model” care and reinforces the need for “person centered” to include the embodied person, someone with medical, psychosocial, and spiritual needs.

This study highlights the value of combining quantitative and qualitative methods in studies involving frail nursing home residents. Participants who struggled with Likert-type scales or wording of quantitative measures were able to articulate clinically significant experiences in the qualitative interviews. MDS ratings of functional improvement may be more confidently attributed to intra-individual change over time when viewed in association with qualitative reports of bed making, laundering, and walking to the bathroom. Qualitative data alone would not achieve the study aims, however. Qualitative stories provided rich description, depth, and experiential detail, but changing perceptions over time, memory impairments, and renarrating experiences would have made it impossible to cite changes in *at-homeness* over time with any certainty without the associated quantitative measure.

The *EOH Scale* demonstrated sensitivity to change over time and utility as a measure to sensitive to intra-individual and between-group changes. Qualitative support for our findings provided additional support for *EOH Scale* validity in a more cognitively diverse sample than in previous studies. Future refinement of the *EOH Scale* would enhance response variability and therefore enhance usefulness in populations with more heterogeneous cognitive and/or educational backgrounds and/or intermittent fluctuations in cognitive ability. The tone and words in the phrase “I love it here!” were unique in our clinical experience in nursing homes. The word “love” may be a meaningful marker of optimum person-environment relationship and will be included in future versions of the *EOH Scale*. Home may be perceived on a continuum or as a threshold concept, and the *EOH Scale* may need to reflect this by allowing a choice between Likert-type or yes-no responses.

The inability of the NSSQ to capture the social support from staff evidenced in qualitative interviews may be a limitation of the NSSQ measure in this setting. Residents may not recall individual names of staff members or may not have listed individual staff members because there are so many caregivers encountered on a daily or weekly basis; it would be difficult to name discrete individuals. Future studies should include a social support measure that better captures support provided by staff as well as family, friends, and other residents.

## Limitations

Study limitations include nonrandom sampling and sample size with insufficient power to enable full multivariate multilevel modeling. The duration of the study was too brief to examine postmove effects that may occur after 6 months. Historical effects on internal validity included changes in physical and social environments in both groups during the study. House-to-house variation in SmH model implementation may also have affected results. It is possible that “social desirability” accounted for some of the higher *EOH* ratings or that adjusting to the usual care facility resulted in a shift in perspective to reduce cognitive dissonance. It is unknown whether retrospective perceptions of the usual care facility would later change if residents moved to an SmH model. If residents opt to return to usual care model facilities, it will be important to seek them out and gather their stories. The decision to move or stay was already

made before study participants were recruited and retrospective data were not obtained about the decision. It would have been helpful to add a specific research question about the reasons for the choice and who was involved in the decision.

## Conclusions

The qualitative examination of *at-homeness* in SmH and ucNHs illuminates the qualities that residents feel distinguish one setting from the other and may help LTC facilities make resource allocations and care decisions in a manner consistent with this population’s needs and wishes.

This study demonstrates that a “one size fits all” approach may not be best because *at-homeness* is an individualized construct that is not synonymous with residential satisfaction. Additional studies are needed to understand the complex relationships between perceived self-care ability, functional performance, and *at-homeness*. Mixed methods enable deeper understanding of therapeutic environments to inform development and testing of tailored interventions to optimize person-environment relationship in all residential LTC settings.

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