

Older Adults' Perspectives on Housing and the Role of Occupational Therapy

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Abstract

The purpose of this research is to explore older adults' perceived housing needs, and connect these issues with the profession of occupational therapy (OT). Community-dwelling older adults have expressed a desire to age in place in their preferred residences (AARP Foundation, 2014); previous research has identified this as a more affordable and health-promoting approach. Without appropriate housing, older adults face concerns related to health, finances, engagement in occupations, and wellness. Researchers conducted a mixed methods study using previously-collected housing information from older adults in Northern Ottawa County, MI and led focus groups with members of the Four Pointes Center for Successful Aging in Grand Haven, MI. Questions were focused on the meaning of home, accessibility to services, and barriers which impede successful aging in place. Findings indicate that older adults want to stay in their homes and do not have a desire to relocate. Other themes included the value of social participation while aging in place, and the need for community and home accessibility. Quantitative crosstab analyses found that self-perceived challenges with accessibility and/or mobility in the home or community is impacted by income, modes of transportation, and housing type. Findings indicate a potential role for occupational therapy when addressing older adults' perspectives of housing and their ability to safely and successfully age in place.

Key Words: Housing, Older Adults, Aging in Place, Occupational Therapy

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Background and Significance

According to AARP (2014), the population of adults aged 50 and over is expected to increase to 133 million by 2030, and accessible, affordable housing for these individuals is a growing concern. Remaining in their homes is an expressed desire of older adults; as many as 87% of older adults reported aging in place as an ideal option (AARP Foundation, 2014). However, many of these older adults live in homes that are not accessible due to physical, social, and/or financial barriers. Other housing options, such as assisted living centers, senior communities, or home adaptations can be expensive, and the affordable housing stock is decreasing. According to data collected in 2012, there is a 7.1 million unit shortage of housing for individuals who are considered to be extremely low income (Bolton, Bravve, & Crowley, 2014). Additionally, government funding resources for housing at the federal level influences only 23% of these individuals (Bolton, Bravve, & Crowley, 2014).

While the housing stock is a concern across the nation, the current research is focusing on the housing options available to older adults in Michigan's North Ottawa County. According to a report from the Greater Ottawa County United Way (2015), 1,371 individuals were considered homeless at some point in 2014. The Greater Ottawa County United Way (2015) uses the term "Extreme Housing Burden" to describe any household that is paying more than 35% of their income for costs related to housing. In Ottawa County, 56% of residents fall into this category, with 15% of those being homeowners and 41% being renters (Greater Ottawa County United Way, 2015). Other housing options can be extremely expensive; the average cost of a private, one-bedroom apartment in an assisted living center for older adults in Michigan is \$3,563 per month (Assisted Living Directory, n.d.). As the population of older adults is growing, the

shortage of housing is a serious concern to those who are not able to remain in their homes as they age.

Current Action

The process of relocating older adults to meet their health needs is not well understood and is a frequent area of research (Lofqvist et al., 2013). Older adults may be relocated against their will due to family decisions, financial constraints, or disability. According to the Joint Center for Housing Studies (2014) at Harvard University, professionals in areas such as home design, finance for older adults, urban planning, and social engagement are addressing these concerns. Initiatives such as these may allow more of the aging population to remain in their preferred living spaces. Specifically, financial professionals are adopting initiatives to offer tax incentives for builders to promote universal housing design, provide low-interest grants or loans for in-home accessibility modifications, and volunteer support in these areas through non-profit organizations (Joint Center for Housing Studies, 2014).

Currently, there are a number of housing models in communities around the United States that address aging in place concerns for the older adult population, including naturally-occurring retirement community (NORC) programs, village movements, and shared or co-housing movements (Greenberg & Schwarz, 2010). Most of these models share common goals for the aging in place population, such as enhancing social connection within the community and providing opportunities for information, resources, and supports.

Specific to Northern Ottawa County, Four Pointes Center for Successful Aging is a local agency that has developed programs and services to support older adults. Four Pointes focuses on four components of healthy living: physical, intellectual, spiritual, and social, and aims to promote healthy engagement in these areas (Four Pointes, n.d.-a). All individuals who are 50

years and older and living in Northern Ottawa County have access to the home and client support services and wellness center at Four Pointes (Four Pointes, n.d.-b; Four Pointes, n.d.-c).

Researchers collaborated with Four Pointes to learn more about the current housing situation for older adults in Northern Ottawa County, the perspectives of older adults, and to develop ways for addressing current issues. Four Pointes created a survey for members which requested information about their homes, who they live with, income levels, accessing the community, among other housing-related questions (see appendix A for survey).

Role of OT

The American Occupational Therapy Association (n.d., para. 2) defines occupational therapy (OT) as “the only profession that helps people across the lifespan to do the things they want and need to do through the therapeutic use of daily activities (occupations)”. For those who wish to age in place, occupational therapists can provide an initial evaluation of the home to assess safety and performance based on individual abilities. They can provide home modification recommendations to promote safety, accessibility, and offer suggestions related to transportation, community inclusion, and overall occupational engagement (American Occupational Therapy Association, 2011).

A systematic review conducted by Stark, Keglovits, Arbesman, and Lieberman (2017) also provided evidence for the unique role that OT has for community-dwelling older adults, specifically in the area of home modification interventions. Findings showed functional performance improvement, decreased fall risk, and lowered caregiving demand by using OT interventions (Stark et al., 2017). Occupational therapists are able to educate clients and their families on factors of both the person and the environment that may be affecting occupational engagement. When working with older adults, therapists can utilize their theoretical knowledge

bases (Sithong, 2016) as well as expertise in task analysis to determine what is limiting or facilitating participation (Stark et al., 2017).

PEO Theoretical Base

The literature review was organized following the theoretical OT model Person-Environment-Occupation (PEO). This is a common guide for clinicians, developed as a way to view clients holistically, as occupational performance occurs in a transactional manner between person factors (i.e. skills, characteristics, experiences), environmental conditions (i.e. cultural, social, physical, etc.), and occupations (i.e. tasks and activities) (Law et al., 1996).

Person

The literature indicates there are specific person factors that lead to positive health outcomes while aging (Peralta-Catipon & Hwang, 2011). These characteristics, including exercise, diet, social activities, leisure, were shown to have a negative correlation with chronic disease and disability (Peralta-Catipon & Hwang, 2011). Older adults with these characteristics are more likely to avoid unwanted relocation and age in place due to positive health outcomes and prolonged independence.

Older adults expressed strong emotional attachment to their homes and discussed how this influences the desire to age in place. Mackenzie et al. (2015) conducted focus groups with older adults in which almost all participants desired to live in their own homes, had strong attachments to their homes, and intended to remain in their homes for the rest of their lives. Individuals living in homes that are considered supportive (i.e. accessible, usable, safe, allowing independence) reported their homes to facilitate social inclusion, safety in the community, and feelings of connectedness to others (Mackenzie et al., 2015).

Lofqvist et al. (2013) further investigated the meaning of home by interviewing older adults aged 80 to 89 years. The research found that older adults were reluctant to relocate, despite having decreased independence and greater health concerns. The participants were also more likely to disengage from occupations or attempt to adapt occupational performance rather than consider relocation (Lofqvist et al., 2013).

Environment

Specific themes emerged when searching for literature related to how the environment can either facilitate or be a barrier to occupational engagement and wellness. Utilizing the Home Safety Self-Assessment Tool (HSSAT) which identifies potential home hazards, research shows specific factors that may be impeding older adults' ability to remain safely in their homes (Horowitz, Nochajski, & Schweitzer, 2013). Of the 22 community-dwelling older adults in the study, 17 homes had identifiable risks such as throw rugs, clutter, and insufficient lighting (Horowitz, Nochajski, & Schweitzer, 2013).

Literature has shown the importance of home modifications and adaptations to facilitate home safety and aging in place. Home modification services are beneficial in areas of task performance independence, safety and comfort, and increased home meaning (Tanner, Tilse, & de Jonge, 2008). OT has shown value in areas of home safety assessment and modification (i.e. hazard identification, structural changes, education programs, and assistive device recommendations) as participants in one study experienced fewer falls with implementation by an occupational therapist versus that of a nonprofessional (Pighills et al., 2011)

Various housing models have been developed to promote aging in place. Many of these have been initiated by foundations that recognize the immense need for alternative housing options for older adults (Greenberg & Schwarz, 2010). The models described for the purpose of

this study are naturally occurring retirement communities (NORCs), village movement models, and co-occurring housing models.

Although not originally designed as a place for older adults, NORCs are specified and localized communities in which half of the residents are over 60 years of age, thus occurring “naturally” (Greenberg & Schwarz, 2010). These housing models are shown to significantly elicit social interaction (Greenfield, 2015). However, one study concluded that help-seeking behaviors were low among the residents, demonstrating the need for NORC advocacy and education (McClive-Reed & Gellis, 2016).

In 2002, the village movement was initiated as a way to allow older adults to remain in control while aging in place. Villages are developed and directed by the older adults who utilize the provided services, and are based on the needs of the members (Poor, Baldwin, & Willett, 2012). Research concludes that village models promote social engagement, service and healthcare access, and quality of life improvements (Graham et al., 2014).

Co-housing models are similar to communal housing models, in which individuals with similar values share their homes (Greenberg & Schwarz, 2010). Research findings conclude that the co-housing environment, social support, and sense of control facilitate occupational participation (Andresen & Runge, 2002). Specifically, participants felt a sense of environmental safety and accessibility, occupational choice, and social security (Andresen & Runge, 2002).

Occupation

Common themes that emerged in the literature include the importance of occupational engagement and social participation to quality of life, and housing challenges or barriers for older adults. A systematic review by Stav et al. (2012) explored how engagement in a number of activities impact older adults’ ability to age in place. Targeted occupations include work, social

and leisure activities, sleep, and activities of daily living (i.e. bathing, dressing, home maintenance, etc.). Gardening, walking, and home maintenance occupations were related to protection against future functional limitations in older adults (Stav et al., 2012). Similarly, remaining in work or volunteer settings showed improvement in overall health, independence, and quality of life (Stav et al., 2012). However, those who were dependent on other people and could not access their community had a shorter lifespan. Lastly, social activity was linked to improved quality of life, as well as decreased cognitive and physical decline (Stav et al., 2012).

Semi-structured interviews conducted by Shank and Cutchin (2010) discussed the meaning of social participation and relationships with three older adults. One participant discussed strong social support from her neighbors, who affirmed her role and worth in the community. Another participant had developed a morning routine, which involved opening the curtains in her kitchen while preparing her breakfast; her neighbor was to check for this every morning to ensure the participant was well (Shank & Cutchin, 2010). Social support is a key contributor to an older adult's wellness and ability to age in place.

Methods

Research Design

This research was conducted as a convergent parallel mixed-methods study, in which qualitative and quantitative data were collected and analyzed independently of each other, and then brought together for comparison, determining whether the results verify each other or not (Creswell, 2014). Quantitative data was collected through housing surveys created and distributed by Four Pointes in 2016. This was then paired with qualitative data in the form of focus groups (see appendix B for list of focus group questions).

Sample

The study was conducted at local community centers familiar to the sample group. The participants, a group of individuals who completed the 2016 housing survey, were recruited through convenience sampling. 241 individuals completed this survey in 2016 (S. Howel-Stuk, personal communication, 2016).

Three focus groups were conducted with 12 participants. The inclusion criteria for the study required that the participants reside in their own homes in Northern Ottawa County, are 50 years or older, and had completed the survey.

Data Collection

Quantitative data was collected via the 2016 Four Pointes Housing Survey sent out to participants via Four Pointes staff. Participants filled out the survey manually or online. Researchers conducted three separate focus groups with community dwelling older adults to supplement survey data. Three focus groups were held with 12 participants total. All individuals were provided a letter of consent and information about the study. All three researchers were present for the focus groups and asked a series of 6 questions consecutively.

Data Analysis

Researchers analyzed quantitative survey results and qualitative data obtained from focus groups. Quantitative data was analyzed via SPSS, and all three co-researchers analyzed qualitative data, crosschecking results using triangulation. Pre-OT students from Grand Valley State University (GVSU) transcribed the focus group recordings verbatim after signing a waiver of confidentiality. Each researcher produced various themes and/or codes from the transcribed document separately, and met again to discuss and compare results.

Results

Quantitative Data

Among the participants who completed the 2016 Four Pointes Housing survey, 7.9% were aged 50-64 years, 54.1% were aged 64-79, and 37.9% were 80 years or older. Additionally, 23.0% of respondents were male and 76.9% were female. Regarding municipality residency, a majority of the participants (55.6%) resided in Grand Haven City or Township, followed by those living in Spring Lake Village or Township (29.1%), and the remaining participants resided in surrounding municipalities in Northern Ottawa County (i.e. Allendale, Coopersville, Robinson, etc.). The four highest represented housing types were house (55.9%), apartment (20.3%), condominium (14.0%), and mobile home (7.6%). Lastly, 76.9% of participants owned their homes versus having a mortgage.

To determine significant findings among the variables included in this study, crosstab analyses were conducted via SPSS. The main comparison analyzed was between the number of participants who reported mobility and accessibility challenges among all other variables. Findings displayed a significant correlation between mobility/accessibility challenges and income (Table 1). Among participants, 12.6% reported challenges and 87.39% did not. Of the participants who conveyed challenges, there was a statistically significant difference between those who make less than \$25,000 and those who make between \$25,000 and \$45,000 ($p = 0.004$). Also, there was a statistically significant difference between those who make less than \$25,000 and those who make above \$45,000 ($p = 0.004$). That is, those who reported to earn less money are more likely to also report challenges with accessibility or mobility.

Another significant correlation was found between mobility/accessibility challenges and the type of transportation used. Specifically, findings demonstrated that transportation options (i.e. driving, walking, bicycling, and public transit) impact perceptions of mobility and accessibility in the home or community. The last significant difference was found between the

current housing type that participants reside in and whether they experience mobility/accessibility concerns. That is, when looking at the different types of housing (i.e. apartment, duplex, condominium, co-op, house, mobile home), a statistically significant difference was found between at least one of the comparisons ($p = 0.03$). This finding displays that housing type does influence whether a person experiences challenges with accessibility or mobility in the home or community.

Although not significant, it is important to show the findings between who the participant lives with and whether they reported accessibility/mobility challenges. Although it may seem that living alone would correlate with more challenges versus living with other individuals, this was not consistent with the data provided. Participants reported living alone (50.6%), with a spouse/partner (42.7%), with family (7.1%), or with friends (0.5%). However, there was no significant difference between these variables and that of accessibility challenges ($p = 0.421$).

The final crosstabulation was the correlation between income and rent. Findings indicate that some participants who reported an income under \$25,000 per year were paying a significantly higher rent in proportion (Table 2). Specifically, 15 participants who reported an income under \$25,000 were paying rent that was between \$500-\$749 per month. In addition, four participants who indicated an income under \$25,000 were paying rent that was above \$750 per month.

Qualitative Data

After transcribing, coding, and theming all qualitative data from the focus groups, four common themes emerged. Among these themes, there are various sub-themes specific to research findings. The four common themes are: housing relocation, social participation,

community accessibility, and home accessibility. These themes contribute to the older adults' perceptions of housing and the potential role that OT can have with this population.

Housing Relocation. All focus group participants identified their homes as their desired place to live and were not interested in relocating. Rather than relocating due to declining health, all of the older adults who had previously relocated reported doing so because of financial concerns, family request, property owner difficulty, or home maintenance burden. Many of the participants stated they would rather have in-home health care than move to an assisted facility. Additionally, the participants discussed subthemes including attachment to home, future plans of relocation, and the ability to relocate.

Attachment to Home. Many participants discussed how much they enjoyed the location of their homes (i.e. close to Lake Michigan, community accessibility, and summer activities). Participants in the third focus group had built their own homes, and reflected on the subsequent emotional attachment. Specifically, one participant installed a pond in her backyard and the sounds of the pond were relaxing and emotionally meaningful. However, as the participants reported home attachment, they stated this was stronger to things that were nonmaterial; rather, the ability to host family gatherings, spend time in their gardens, and engage in relationships with neighbors was more important. A participant reflected on her attachment to her home being more than just the physical house, saying, "I think where you live is what you make it to be ... [we are] very fortunate, you know."

Ability to Relocate. The participants all identified a shortage of available housing options in Northern Ottawa County. They discussed the financial strain that accessible housing places on older adults - decreasing their options, and potentially requiring them to move to a different town with a larger housing stock. One participant said, "I know women that get less than five hundred

dollars a month. How do you live on that? ... the new apartments, they're not senior, you know, they can't afford twelve hundred dollars a month." Participants discussed additional housing barriers related to move-in waitlists (i.e. five to seven years, approximately). They also discussed that older adults may have to move into housing that is not their preference or is unable to meet their needs, such as nursing homes. However, their options are financially limited. Another barrier to relocation is obtaining information about housing opportunities, which is often done through technology, such as the internet and social media. The participants reported this to be a barrier and one stated, "They assume we all have computers, we all don't ... how do we get it [information]?"

Future Plan of Relocation. Some participants did recognize that things could change and discussed their plans for relocation; however, were still reluctant to consider these options. A participant stated: "I'm glad I don't have to make a decision right now." Many of the participants discussed how they would utilize supportive relationships to remain in their homes, such as their children and neighbors. Still, even this was not ideal, as stated by one participant:

There may come a point where I have to [relocate], that's the catch, as long as you're healthy, great, but if something happens, not so great. Then you have to make that awful decision. Not awful, I do have daughters I mean come on, but I'd have to leave here, which I don't want to do.

One group of participants who had built their own homes agreed that they may not be accessible to them in the future without modifications, but still do not have plans to relocate:

It is a wonderful home for us. And it means a lot, although I do know that it's not the end-all. I mean I do have some recognition that at some point in time we will

have to make other decisions...We just don't feel like we have...we don't have to do anything right now.

Social Participation and Support. The participants perceived social participation and support to be a strong indicator of overall ability to age in place. Participants' responses varied, based on either experiencing significant engagement in or lack of social participation in their current housing situations. This theme was categorized into different aspects of social participation and support, including relationships in the subsidized housing apartments, the role that neighbors play to facilitate aging in place, local access to activities, and social engagement as related to detachment from material home possessions.

Subsidized Housing. The six participants from the subsidized housing apartments placed significant value on social participation. When discussing prior living situations, many participants asserted their new housing to provide more social opportunities. One individual stated, "we're family," and all of the participants mentioned the significant support. One participant spoke about the support she received when first moving to the new apartment, and mentioned how the social interaction facilitated engagement in other activities, "...I do depend on my friends...when I came in she was the first friend and I kind of took over and made her get going and doing things." Some participants mentioned recent health declines, and agreed social support was vital to their comfort and wellness while aging in place.

Neighbors. Participants regularly mentioned the importance of neighbors when discussing aging in place support systems. One participant mentioned the importance of neighbors by stating, "...we have a wonderful neighborhood...we look out for one another." One participant stated that she and her neighbors take care of one another, and emphasized the importance of neighbor support:

We were gone over the weekend of the storm and we had one friend come in and take all our food out of our freezer because they had a generator. We had another friend who used their generator to hook up to the pump of the, of the pond so that the fish survived. So we are having fun up north and our friends are taking care of us, you know all within a few houses of where we live. So I mean that's, that's really, that means so much.

Activity Engagement. Many participants discussed activity engagement as a facilitator for aging in place, as it promotes social participation. For instance, regarding her membership at Four Pointes and the support it has brought to her and her husband, one participant stated: "Four Pointes has been a great part of our life, so, yeah, the friends we've made here...it's been wonderful." Activity participation and social connectedness was perceived to decrease by one group following forced relocation due to financial constraints or health problems. When discussing forced relocation, a participant stated:

It goes, it's gone [social support]. And especially if you're all alone...You don't want to move from where you are, how long you've been here, no. And it's harder as you get older, to go out and make friends. And do things.

The participants at the subsidized housing apartments also noted the activities offered at their housing unit as a facilitator to social interaction. For instance, holiday entertainment, birthday parties, coffee groups, and religious opportunities are provided. However, aside from the positive activities provided at this facility, one participant expressed "I'd say that not even 50% of the people take part in this stuff."

Detachment from Material Goods. When participants discussed moving from one home to another, the need to detach from material things as the realization of more important things

came to light (i.e. family, friends, and overall social engagement) was mentioned more than once. When talking about relocating, one participant mentioned having to part with many of her material possessions due to space limitations: “mhm, yeah. It’s just stuff.” Similarly, another participant stated:

But you know, we learned it’s only stuff. You need a certain amount of stuff to get by in this life. But, you know, we get too attached to our stuff. It tends to own us, we don’t own it.

Instead of placing significant meaning on material goods and possessions, many of the participants emphasized the importance of social connectedness and community within their new living environments.

Community Accessibility. When asked about their ability to access the local community, participants felt they had optimal resources. Within this theme, specific subthemes that emerged were transportation, access to services, and safety.

Transportation. All three focus groups mentioned the availability of public transportation. Specifically, they mentioned Harbor Transit, a low-cost service allowing residents to be picked up at their homes and taken anywhere in the neighboring communities. One participant discussed her regular use of the service and its reliability for her needs: “And when they say they’re going to be there, I mean they have no problem... They’re great.” The subsidized housing participants discussed Harbor Transit in addition to a shuttle service provided specifically to residents in their housing unit. The community bus will take residents anywhere within a 50-mile radius, and arranges specific trips (i.e. mall, farmers market, restaurants) for those who are interested.

Some participants mentioned that they are still comfortable driving, but of those who did not drive, they mentioned relying on family members. Participants discussed the convenience of having supportive relatives nearby for transportation, while still maintaining their independence: “But I don’t drive every day. I don’t dare. I just...I go to the Four Pointes. Usually that’s the only place I go...And I have a great and wonderful sister-in-law and she takes me up north.”

Access to Services. All focus group participants felt they had adequate access to services throughout the community because of the various modes of transportation available to them. These services include doctor’s appointments, shopping, and dining. In the first focus group, participants discussed their homes’ walking proximity to places of interest and how meaningful it was to be close to the community: “I live almost in the middle of town, so anything that’s going on, I can get to my balcony and see it.” Participants in the first focus group mentioned the value of services provided by Four Pointes, such as durable medical equipment and recreational activities (i.e. exercise classes and BINGO). However, a common thread between two of the groups was a feeling that many of the classes at Four Pointes were not entirely meeting older adults’ needs:

...I don’t know many seniors that are taking the, um, kickboxing classes, or the um paddle boarding...not the seniors I mean we’re not able to do that kind of stuff, ya know, so I don’t know. It’s just that everything is geared to the younger generation now.

Safety. Whether participants drove, walked, or took public transportation, they all agreed they felt safe navigating through their respective communities. A number of participants in the subsidized housing community felt that they were able to walk to places in the community. The only concern was discussed by one participant regarding her ability to walk around the housing

community. She was advised to be “very careful” at night; she specifically said she “won’t cross the highway” if walking to a nearby restaurant. Still, participants in the subsidized housing community felt that both the grounds of the community itself as well as the surrounding area were safe for walking.

Home Accessibility. When asked about home accessibility, the participants mainly felt that their homes were accessible based on their current health statuses. However, some had made minor modifications, and among individuals who had built their own homes, they agreed that they did not design or construct their houses with their future aging needs in mind. More specific themes were identified related to home accessibility: home management, personal modifications to the home, and benefits/drawbacks of subsidized housing.

Home Management. Participants who lived in ranch-style, one-level homes spoke of the accessibility benefits of this type of housing regarding home management activities. In addition to fewer steps, participants agreed that a one-level home would require less upkeep. Along with indoor home maintenance, participants mentioned challenges regarding outdoor maintenance, such as gardening and snow/leaf removal. One participant stated that she had relocated several years ago due to these challenges. Another participant is still responsible for maintaining her front and back yards, stating, “...I’m cleaning up 17 bags [of leaves] and that’s a lot of work, that’s the only disadvantage I have in my home right now, is the upkeep outside...Quite a drawback when you’re in your eighties.”

Many participants mentioned challenges regarding access to laundry facilities. The participants who live in multi-level homes mentioned that their laundry facilities were downstairs, which posed problems moving about their homes and completing instrumental activities of daily living (IADLs). Participants from the subsidized housing apartments discussed

that their apartments did not have individual laundry machines; rather, there are two laundry rooms on different floors with limited machines throughout the building.

One participant's daughter lives with her to assist with home management tasks. Other participants mentioned that they have access to family support when needed, such as for transportation. For instance, when asked about driving, one participant stated that her son or daughters would "do anything for her" if she did not feel comfortable driving herself.

Personal Modifications. In the subsidized housing group, modifications made to the apartments included grab bars, call lights, and walk-in showers, among others. From those living in houses, one participant shared that she made some modifications to her home when her late husband became disabled. Also, another participant voluntarily made her bathroom accessible after caring for her mother in her own home:

...We had taken care of my mom... because she wanted to stay in her own home... and of course things that we had to do for her so I knew I would have to do for my husband, so we knew to do that [modifications].

Regarding the potential for future modifications, participants in the first group discussed the availability of adaptive equipment from Four Pointes should they need it at any point. One participant stated, "there's one thing we do have here at Four Pointes which is medical equipment which I took great advantage of. Wheelchairs, commodes, anything you need, for five dollars and you can use it as long as you want."

Subsidized Housing. Participants living in the subsidized housing community felt that their apartments were safe and accessible. The apartments are one level, have two call buttons in each, as well as walk-in showers and grab bars in the bathroom. One complaint residents had about their apartments was the flooring, which is high-pile shag carpeting. Many participants

said that the style and color of the carpet was undesirable, so they would cover it with throw rugs, which other participants agreed could cause falls in the home. When further questioned about the carpet and safety, one participant acknowledged the safety concerns of using a walker on this type of flooring:

We had a resident that lived here and he kept falling and kept trying to tell them, it's the carpeting. But they didn't listen to him. And I notice it's more difficult walking in, in my apartment than it is walking in here or walking down the hall.

Discussion

Person

Aging in place is highly dependent upon individual skills and perspectives of older adults. All participants in this study stated their homes were their desired place to live and have no intention of relocating. This is consistent with current literature on aging and older adults (Lofqvist, 2013; AARP Foundation, 2014). The participants continued to voice their preferences for remaining in their homes and communities as they discussed influences, both positive and negative, on their levels of independence (i.e. support, mobility, and health changes). From the literature review, older adults reported disengaging in occupations rather than considering relocation (Loftqvist, 2013). This was consistent with participants in the focus groups, as they were able to identify potential barriers to remaining in their homes, but were not making modifications or developing a relocation plan for the future. An occupational therapist has the ability to develop or remediate skills needed to remain at home, as well as assess and modify the environment to increase the independence and occupational success of older adults who are living in their homes. Occupational therapists can support older adults as they age in place,

which was the expressed desire of the participants in this study and in the current literature (Loftqvist, 2013; AARP Foundation, 2014).

Current literature on the aging population identifies specific person factors that are associated with positive health outcomes, such as exercise, leisure pursuits, and social participation (Peralta-Catipon & Hwang, 2011). These are all opportunities participants stated to be offered by organizations in the community, such as Four Pointes, through exercise classes, social gatherings, and group leisure activities. This displays the deeper purpose of community resources such as Four Points and provides evidence for supporting them through funding and advocacy. The evidence provided by Peralta-Catpion & Hwang (2011) demonstrates the long-term, positive impacts that organizations like this can have on the health of older adults. They promote specific person-factors and skills that lead to greater occupational engagement and performance, which ultimately leads to an increased ability to successfully age in place.

The focus group conversations confirmed the deeper meaning older adults place on their homes, how their homes are associated with meaningful occupations, and how this would be impacted if forced to relocate. In both the literature review and focus group responses, attachment to home was stronger to nonmaterial things associated with home, such as relationships with family, neighbors, and the occupations associated with home (Mackenzie et al., 2015). Participants fondly discussed their types of home, activities such as gardening and home management, and how these were tied to emotional responses. This demonstrates why older adults are reluctant to move, and how forced relocation would impact wellbeing and potentially lead to occupational disengagement or health concerns (Mackenzie et al., 2015).

As discussed by focus group participants, the combination of a small housing stock, housing waitlists, high costs of living, and barriers to information sharing make it extremely

difficult for older adults to make an effective plan for relocating and finding a housing option that meets their needs. These barriers, along with the desire to remain in their homes, make aging in the place the clear solution to older adults' current concerns. Occupational therapists have the ability to support older adults as they age in their home, assist with developing a relocation plan if necessary, and creating preferred solutions to housing concerns.

Environment

Participants mentioned the impact that the low housing stock has on the overall community and older adults' ability to age in place. Regarding the ability to relocate, it was commonly stated that the available housing is either not available, too expensive, or not accessible for future health-related concerns. These findings correlate with previous research conducted by the Greater Ottawa County United Way (2015) determining the low housing stock in this area that is affordable. Additionally, even with a plan to relocate, many older adults are not even aware of the wait-lists or costs associated with these options. It may be necessary to educate these older adults on other housing options, or initiate housing model designs that facilitate aging in place within the community. For instance, housing models such as the NORCs, village models, or that of co-housing (Greenberg & Schwarz, 2010) may be necessary to bring awareness of alternative options.

The quantitative survey data further showed the available housing concerns as indicated in the focus groups. Regarding the crosstabulation between income and rent, it was found that some of the participants could possibly be among the individuals in Ottawa County who are designated as living in "Extreme Housing Burden" (Greater Ottawa County United Way, 2015). This supports previous data that older adults are paying a significant portion of their income on housing-related costs, further affirming the need for alternative housing options that are

available, affordable, and accessible. Along with the option of housing models described above, occupational therapists could help to advocate for current action as designated by Harvard University (Joint Center for Housing Studies, 2015). This includes universal housing design, low-interest grants or loans regarding necessary home modifications, and/or local non-profit support, such as Four Pointes (Joint Center for Housing Studies, 2015). As the American Occupational Therapy Association (2011) conveys the role of OT for aging in place, this profession can have a vast impact on the local Northern Ottawa County community with promoting home safety, home and community accessibility, modification recommendations, and/or occupational support as it relates to current housing situations.

Among the participants involved in the quantitative survey data, it was determined that those who reported a lower income were more likely to experience challenges with accessibility and/or mobility. This may be due to the fact that these participants do not have the financial means to increase their home safety (i.e. purchasing adaptive equipment, paying for community resources, etc.). The data also showed that the type of community transportation utilized also influenced whether someone was having challenges with accessibility/mobility. Although the data did not specify which type of transportation correlated with these challenges, this data may relate back to income; it is possible that participants of lower income may not have safe, accessible, and desired transportation, which may impact their perceptions of accessibility/mobility challenges.

Although participants in the subsidized housing group felt as though their housing community facilitated aging in place through aspects of home accessibility, social engagement, and leisure pursuits, they did perceive that only half of the residents actually benefited and/or participated in the available resources. This relates to the findings regarding the NORC housing

model (McClive-Reed & Gellis, 2016) in which the model facilitated social engagement and wellbeing, but those who actually utilized the resources were quite low in proportion to the entire community of residents. This confirms the necessity of OT intervention, education, and support for this community. The OT practice framework deems advocacy and client education as essential interventions toward occupational engagement and overall wellbeing (American Occupational Therapy Association, 2014). OT can help to advocate for NORC-related services (among other successful housing models), along with provide education to residents on the benefits of such resources, thus increasing participation and overall quality of life.

While discussing home accessibility, although the participants in the subsidized housing group were generally content with their homes, they mentioned the fall-risk associated with the carpeting. This is consistent with the literature findings that home modifications may be beneficial for increasing safety and comfort among older adults (Tanner, Tilse, & de Jonge, 2008). Although those living in their own homes did not express as many concerns with home accessibility, this may be due to their current well-elderly status; that is, they may not currently be concerned, but it is a possible concern for the future. This aspect of the research study emphasizes the importance of OT with this population. For instance, OT can utilize a skilled knowledge of home safety to determine possible hazards in the home, which could increase older adults' fall risk (Pighills et al., 2011). Additionally, OT can use specific home safety assessments as fall prevention measures, such as the HSSAT, to determine aging in place concerns (Horowitz, Nochajski, & Schweitzer, 2013).

Occupation

Common themes from the literature review included the importance of social engagement and participation as positive contributors to quality of life in older adults. The literature shows

the importance of remaining close to family members, neighbors, and friends to age in place with as few limitations as possible (Shank and Cutchin, 2010). This data was consistent with the current study focus groups' discussion of relationships playing more of an important role in occupational engagement than having physical items in their homes. The individuals in the subsidized housing community particularly discussed at length the feelings of closeness, support, and being "like a family" and how these feelings contributed to wellness.

All focus group participants felt that their occupational needs were met in their homes, whether they had been adapted for any changing needs or not. This included occupations related to self-care, mobility, and social participation. Previous research by Stav et al. (2012) concluded that older adults engaging in social participation activities, among other occupations, were able to age in place more successfully. The similarities between existing literature and the current study indicate that social participation is highly beneficial for older adults who are aging in place. The participants consistently felt that their activity engagement and social participation were facilitated in their current housing situations. Having to move somewhere else would not provide the same sense of connectedness and support from family, friends, and services within their community that provide a sense of belonging and meaningful activity participation.

Discussion among the subsidized housing community members was positive with regard to activities facilitated through the community, including group outings, games, and community mealtimes organized by residents. Additionally, members of Four Pointes generally felt that although activities offered at the organization were occasionally not fit for their age group (i.e. exercise classes that participants felt were above their physical ability), Four Pointes still offers a variety of opportunities for engagement in meaningful occupations independently or with other members. Many of the activities within the housing community and offered by Four Pointes are

done with a group of people, reinforcing the impact that activity engagement with subsequent social participation has on an older adult's ability to successfully age in place. Participants' perceptions of group activity involvement and social participation was consistent with the literature from Shank and Cutchin (2010), which discussed the meaningful relationship that independent older adults had with one another and how these relationships contributed to their feelings of health.

In addition to the importance of social engagement, all participants discussed their abilities to manage their homes independently, demonstrating the meaning of IADLs and how this connects to feelings of productive aging in place. Previous research by Stav et al. (2012) discussed the value of IADL participation to productive aging; specifically, participation in home maintenance occupations was related to fewer functional limitations in older adulthood (Stav et al., 2012). Some participants discussed difficulties with leaf and snow removal when maintaining their own homes, and relied on family members to take care of these tasks, further demonstrating the importance of other supportive individuals to facilitate staying in one's own home. However, according to Stav et al. (2012), older adults who relied heavily on the support of others to participate in occupations were found to have shorter lifespans. This demonstrates the importance of OT for encouraging older adults to continue engaging in their chosen occupations to promote healthy aging, and to continually assess the safety, mobility, and accessibility associated with these tasks.

Overall, participants' feelings about their meaningful occupations, access to these occupations, and social supports facilitating engagement indicate a positive relationship between occupational performance and successful aging in place. Individuals who discussed potential

barriers to occupations - such as those needing assistance with IADL tasks - may benefit from a home evaluation and suggestions provided by an occupational therapist.

Limitations and Future Research Recommendations

Various study limitations must be taken into account. First, the data cannot necessarily be generalized to other communities in the US, as participants were solely living in Northern Ottawa County, MI. Additionally, many of the participants (both from the survey data, as well as the focus group data) were from one specific area in Northern Ottawa County. Focus group data may have been significantly different if participants were pooled from more locations throughout Ottawa County. Future research should focus on expanding the participant pool to other areas in the county and/or in the state of Michigan. Additionally, there were only twelve participants included among the three focus group sessions; future research should increase the qualitative sample size to further generalize results.

Although the quantitative data yielded meaningful crosstabulations among challenges with accessibility/mobility and other participant-stated information, future research should focus specifically on what these challenges are. This will help to determine what limitations older adults are experiencing within the community in terms of accessibility and mobility. Additionally, although this research did not focus specifically on quantitative data related to housing communities and/or participant reported nutritional assistance, future research should focus on these variables, and determine whether they correlate with aging in place among older adults. Survey questions should be developed with assistance from a statistical consulting center to validate the accuracy and simplicity of future analyzing. Lastly, the quantitative survey was developed by Four Pointes staff, specifically for their organization, and thus does not have reliability/validity properties. Aside from these limitations and future recommendations,

meaningful results were gained from this study, and it is evident that occupational therapy has a significant role with housing concerns among the older adult population regarding the ability to age in place.

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Appendix A

Four Pointes 2016 Housing Survey***Housing Survey***

Four Pointes Center for Successful Aging is collecting information about the current housing status and needs of residents 50+ in northern Ottawa County so as people age they can continue to thrive in their communities. The information gathered will be used to explore housing options for individuals 50+ in the community as well as provide input on future housing planning. All data collected will be kept confidential and used in aggregate form only. Please return the questionnaire to the Four Pointes Wellness Center by September 9, 2016. You may also complete the survey by visiting www.fourpointes.org. If you have any questions regarding this survey, contact Susan Howell-Stuk, Four Pointes Executive Director at 616-842-9210.

We greatly appreciate your participation in this survey and look forward to receiving your completed survey. Thank you!

Are you currently a Four Pointes member?

Yes No

1. What is your gender?

Male Female

2. What is your age?

50-54 55-59 60-64 65-69 70-74 75-79 80-84 85+

3. In which municipality do you reside?

Allendale	Ferrysburg	Robinson	Spring Lake Village
Chester	Grand Haven City	Tallmadge	Spring Lake Twp
Coopersville	Grand Haven Twp	Wright	
Crockery	Polkton		

4. What is your current housing type?

Apartment Duplex Condo Coop House Mobile Home

5. If you live in a house, do you own it outright or are you paying a mortgage?

Own Mortgage Reverse Mortgage

6. Do you live in any of the following?

American House/Lloyds Bayou
 American House/Oakcrest Independent Living
 Evergreen Village
 Liberty Woods
 Pinewood Place
 River Village
 The Depot
 Village of the Pines

7. Do you experience challenges with accessibility and/or mobility?

Yes No

8. Who do you live with? (Check all that apply)

Self Spouse/Partner Family Friend

9. For daily activity, which modes of transportation do you utilize? (select all that apply)

Public Transit Drive Walk Bicycle Other: _____

10. What is your annual household income?

Under \$14999
 \$15000 - \$24,999
 \$25,000 - \$34,999
 \$35,000 - \$44,999
 \$45,000 - \$54,999
 \$55,000 - \$64,999
 Above \$65,000

11. What is your monthly rent/mortgage?

Under \$499
 500 – 749
 750-999
 1000-1249
 1250-1499
 1500-1749
 1750 – 1999
 Above 2000

12. Do you receive nutritional assistance? (Check all that apply)

AgeWell Meals on Wheels
 Commodities
 Feeding American Mobile Pantry
 Food Pantry

Senior Project Fresh

Supplemental Nutrition Assistance Program (SNAP)

13. Would you like the opportunity to receive the Four Pointes newsletter via email?

Yes

No

14. Would you like to receive email notices about special upcoming opportunities at Four Pointes?

Yes

No

*Appendix B***Focus Group Questionnaire**

- **Question 1: Tell us about your home.**
 - Do you live in a home, apartment, etc. Are you an owner or a renter?
 - How long have you lived there?
 - Who lives with you?
- **Question 2: Describe what your home means to you.**
 - Does your home hold sentimental value?
 - Do you feel comfortable in your home?
 - This can be the meaning of the home itself, or the objects within, or individuals within your home or nearby.
- **Question 3: Describe how your home may help or hinder your daily routine.**
 - Are there features in your home that make it difficult to do what you need to do?
 - Does your home have any modifications or adaptations that make it more accessible to you?
- **Question 4: Describe your ability to get into your community and do what you need to do.**
 - What types of transportation do you use? Family and friends?
 - How do you get to Four Pointes, Doctor's appointments, grocery store, etc.
 - Knowledge about OT and their possible role with community dwelling older adults.
- **Question 5: Do you have a future housing plan, and/or do you have thoughts about the possibility of relocating later on?**
 - Family support? Are you the main "decision-maker" on this matter?
 - Mention - current housing movements.
- **Question 6: If there is one thing you could change about your home or housing policy in general, what would it be?**
 - Accessibility? Affordability? Access to services/transportation?

Table 1*Crosstabulation of Income and Challenges with Accessibility and/or Mobility*

<u>Income</u>	<u>Challenges: Yes</u>	<u>Challenges: No</u>	<u>Total</u>
Below \$25,000	20 (22.5%)	69 (77.5%)	89
\$25,000 - \$44,999	5 (7.0%)	66 (93.0%)	71
Above \$45,000	3 (6.3%)	45 (93.8%)	48
Totals (N=208)	28 (13.5%)	180 (86.5%)	208

Table 2*Crosstabulation of Income and Rent*

<u>Income</u>	<u>Rent Below \$499</u>	<u>Rent \$500-\$749</u>	<u>Rent Above \$750</u>	<u>Total</u>
Below \$25,000	48 (71.6%)	15 (22.4%)	4 (6.0%)	67
\$25,000 - \$44,999	16 (47.1%)	9 (26.5%)	9 (26.5%)	34
Above \$45,000	7 (31.8%)	4 (18.2%)	11 (50.0%)	22
Totals (<i>N</i> =123)	71 (57.7%)	28 (22.8%)	24 (19.5%)	123