

Aging In Place: Unique Considerations for the Middle-Income Senior

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### **Abstract**

The purpose of this qualitative study was to explore the specific needs of middle-income older adults to age in place in an urban setting. Two focus groups were conducted using a series of guided questions. Focus groups were transcribed and coded by the researchers using content analysis with themes and subthemes later identified using these codes. Four main themes emerged from the data: Household Establishment and Management, Environmental Barriers, Community Mobility, and Financial Concerns. Identifying the prospective needs of middle-income older adults helps validate and inform non-profit ‘village’ organizations, support community health care interventions, and allow older adults to safely remain in their homes.

*Keywords:* aging in place, middle income, older adult, senior, Village-to-Village Network, occupational therapy

### **Highlights**

1. Qualitative research design examining the needs of middle-income seniors’ ability to age in place in an urban area.
2. Focus group data revealed that assistance with heavy housework and yard maintenance, in addition to a senior only community center for social engagement and exercise were found to be needs for the middle-income population to age in place.
3. Study design and data interpretation was guided by the occupational therapy Person-Environment-Occupation (PEO) model.
4. Findings may prove useful for a community initiative to promote aging in place.

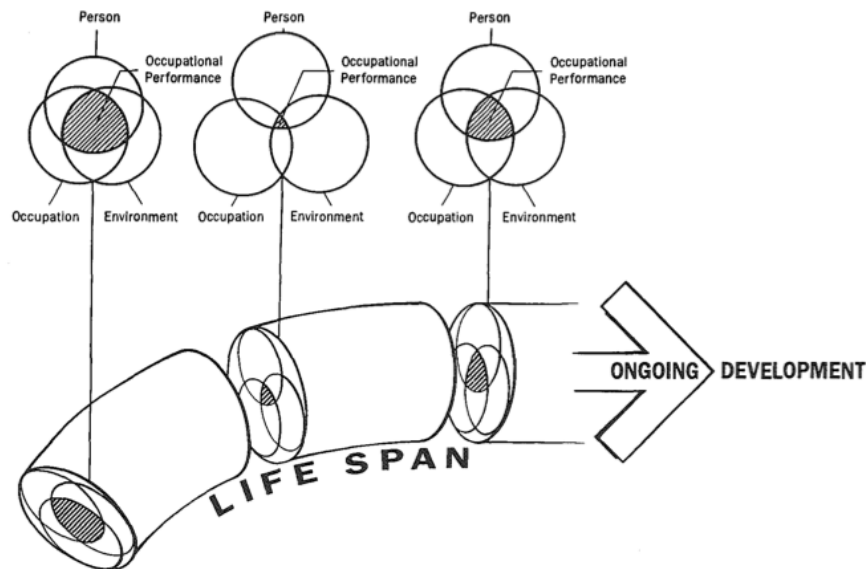
### Aging In Place: Unique Considerations for the Middle-Income Senior

Current gerontological and occupational therapy literature underscores the importance of aging in place (AIP) to the overall health and well-being of seniors (Tanner, Tilse, & Desleigh de Jonge, 2008; Wiles, Leibing, Gurberman, Reeve & Allen, 2012). Despite an abundant range of literature regarding AIP, very few studies have explored the needs of middle-income older adults. AIP depends on a variety of factors, which can include an individual's socioeconomic status (SES), health and well-being, environment, accessibility or proximity to community services, and transportation. Additionally, this concept is linked to what the American Association of Retired Persons (AARP) defines as the idea of a 'livable community.' This is considered an area that provides "...affordable and appropriate housing, supportive community features and services, and adequate mobility options, which together facilitate personal independence and the engagement of residents in civic and social life" (AARP, 2005, p. 4).

The purpose of this mixed-methods study was to identify factors that promote the ability of middle-income older urban adults to successfully age in place. In October 2013, the researchers were contacted by members of a grassroots steering committee in Battle Creek, Michigan interested in creating a Village-to-Village community for older adults. The name for this prospective non-profit seniors' organization in Battle Creek is the "Heart of the Village." As part of their preparation in establishing a village program, the committee sought to determine the needs of self-identified middle-income urban older adults currently living in their own homes. Findings from this study have the potential to inform grassroots organizations wanting to implement a village program and also to support healthcare professionals during home care treatment interventions.

Occupational therapy (OT) is one profession that can benefit from this study, particularly practitioners involved in home care. Occupational therapy is a profession based on the concept that engaging in occupations (i.e., meaningful activities) provides structure and meaning to a person's daily life and contributes to overall health and well-being (AOTA, 2014). In order to successfully age in place, older adults need to independently or interdependently engage in a variety of occupational areas including personal activities of daily living (PADLs), instrumental activities of daily living (IADLs), education, rest and sleep, leisure, play, and social participation (AOTA, 2014). Occupational therapists address these areas of occupation in addition to client factors, performance skills and activity demands, contexts and environments in order to promote maximal functioning and independence, making occupational therapy an ideal health profession to address AIP concerns (AOTA, 2014).

The person-environment-occupation (PEO) model is an applicable theory to frame this study because it conceptualizes interdependency between person, environment and occupation (Law et al., 1996). The PEO model is a transactive model of occupational performance (Figure 1), commonly incorporated into occupational therapy practice, that considers the relationship between the person, their occupations and roles, and the environments in which they live, work, and play. Any dissonance or disruption among these three components can cause irrevocable changes to this relationship, potentially diminishing an individual's occupational performance abilities or the ability to successfully participate in meaningful activities. One example of how the PEO model can be directly applied to this study pertains to the living environments of older adults (i.e., where they live geographically, house or apartment, space, accessibility into home).



*Figure 1.* Visual representation of the Person-Environment-Occupation (PEO) model illustrating hypothetical variations in an individual's occupational performance over three different points during the lifespan (Law et al., 1996, p.15).

### **Literature Review**

Aging in place has become an important concept over the past decade owing to the growing demographic of older adults, specifically the baby boomer generation. The baby boomer generation refers to anyone born between 1946 and 1964 (Federal Interagency Forum on Aging-Related Statistics, 2012). The baby boomer generation is the largest and fastest growing segment of the American population. As this cohort ages, those aged 65 and older are projected to reach 55 million by 2020, a growth of 79% as compared to only a 20% growth of the general population (Wier, Pfunter, & Steiner, 2010). Additionally, the aging baby boomer cohort has led to a substantial increase in Medicare and Medicaid spending, hospital admissions, and discharges to long-term care facilities (Stichler, 2013). Providing sufficient resources and effective service systems will be a pervading issue for future healthcare providers and society at large (Knickman & Snell, 2002; Wier, Pfunter, & Steiner, 2010). While society adapts to meet the needs of this population, a deeper and more complete understanding of issues related to the meaning of home,

and to aging in place, is needed. In the coming decades, support services and additional research on the subject of AIP will become vital due to the sheer number of aging adults who indicate a preference to stay in their homes and communities.

Over 83% of seniors indicate they would prefer to remain in their current homes in the future (AARP, 2003; Kim, 2011; Pekmezaris et al., 2013). Aging seniors hoping to remain in their homes may require additional assistance with daily living activities or home modifications (Finkelstein, Reid, Kleppinger, & Robison, 2012). Other factors to consider related to aging in place, include (a) barriers to aging in place, (b) availability of services, and (c) socioeconomic status.

### **Barriers to Aging in Place**

**The built environment.** According to McClure and Bartuska (2011), built environments can best be understood as everything humanly made, organized or maintained. Components of built environments can include (a) products, including materials and commodities; (b) structures, such as houses, office buildings, and schools; (c) landscapes, including parks, courtyards and national forests or parks; (d) cities, including neighborhoods, districts or subdivisions; and (e) interiors, generally designed to enhance “activities and mediate external factors.” (McClure & Bartuska, 2011, p. 6). Researchers have found that people are more active in accessible neighborhoods that have variation in land use, high interconnections between streets, and higher population densities (Handy, Boarnet, Ewing, & Killingsworth, 2002; Michael, Green, & Farquhar, 2006; Saelens, Sallis, & Frank, 2003). The activity level of older adults in accessible neighborhoods connects with the concept of active aging, which can be understood as the desire and ability of older adults to integrate physical activity into daily routines, such as walking for transportation, exercise or pleasure. Active aging may also include participation in economic or

socially productive activities, such as playing in the park with grandchildren, and working in the home or yard (Michael, Green, & Farquhar, 2006). The built environment that has a considerable impact on an older adult's ability to AIP is the home environment.

**Hazards in the home.** For older adults, the home can be associated with countless different connotations, including: personal identity, security, life history, and providing a familiar environment, which supports engagement in routine daily activities (Horowitz, Nochajski, & Schweitzer, 2013). Home issues can include structural concerns (e.g. foundational cracks, uneven floors, sagging lintels), fall hazards (e.g. steep stairways), and accessibility problems (e.g. unable to walk up a flight of stairs). All of these issues can negatively impact a person's physical and mental health, nutrition, and quality of life. Additionally, these hazards can also lead to an increased risk for falls and accidents (Horowitz, Nochajski, & Schweitzer, 2013; Lawler, 2001; National Center for Healthy Housing, 2008), which may lead to loss of independence and institutionalization (Lau, Scandrett, Jarzebowski, Holman, & Emanuel, 2007).

Reducing hazards and creating safe home environments is vitally important for seniors to age in place. Researchers in the field of home safety and AIP have illuminated a variety of different interventions that have the potential to support AIP. These interventions include: education related to emergency response, removal of home hazards, provision and training older adults regarding the use of assistive devices, and addressing safety concerns related to daily activities (Sheffield, Smith, & Becker, 2013). A person's home environment can have a positive or negative effect on community living, autonomy in daily activities, physical and mental health, and long-term care needs (Horowitz, Nochajski, & Schweitzer, 2013).

**Falls.** One of the most pressing concerns for older adults living at home is an increased prevalence for unintended injuries, including falls. Risk factors associated with unintended

injuries include solitary living arrangements, lack of home adaptations (i.e., handrails, walk-in showers, grab bars), poor nutrition, lack of social supports, and functional impairments (Lau et al., 2007). According to the Centers for Disease Control and Prevention (CDC), one in every three adults age 65 falls each year (CDC, 2012; Tromp et al., 2001); however, less than half of this cohort discuss falling episodes with healthcare providers (CDC, 2012; Stevens et al., 2012). Falls can cause moderate to severe injuries, including hip fractures and head trauma, and can increase the likelihood of an early death (CDC, 2012).

There are intrinsic and extrinsic factors related to falls. Environmental hazards and inadequate footwear are examples of extrinsic factors. Age-related physiological changes in vision, balance, endurance and hearing are examples of intrinsic factors (Garcia, Marciniak, McCune, Smith, & Ramsey, 2012). Social service organizations that offer a variety of assistive services, including environmental modifications, to community-dwelling seniors are a vital component to mediating the risk factors associated with seniors aging in place (Lau et al., 2007) including the risk of falls.

### **Available services**

Although older adults have many needs that can be met through existing organizations, many older adults do not utilize the services available because they are unaware these services exist or that particular needs are unmet (Cohen-Mansfield & Frank, 2008). Services identified by Cohen-Mansfield and Frank (2008) included services seniors wanted but were unsure how to gain access to within their communities. Some of these services included social participation, mobility, escorts to medical appointments, instrumental activities of daily living (IADLs) (e.g. shopping, community mobility, home establishment and management), mental and physical health, and memory-enhancing activities (Cohen-Mansfield & Frank, 2008). These services can



be addressed using community-based organizations to meet the needs of the growing senior population.

Regarding specific community-based programs, there are a wide variety of options available such as the establishment of a village community. The Village is primarily conceptual in nature and provides older adults with access to many nonprofessional services including companionship, housekeeping, referral services, and transportation while living at home (Scharlach, Graham, & Lehning, 2011). It is consumer-driven and person-centered, and has the potential to postpone or even negate the need for institutional care (Accius, 2010). Furthermore, a national organization called the Village-to-Village network connects villages with one another across the United States through an informative website and mapping service.

According to Accius (2010) regarding Village-to-Village communities, some advantages of establishing and maintaining a village include: (a) delaying or even preventing the older adult's need for institutional care, (b) giving members a voice regarding the types of services provided and how they are provided, (c) having a flexible membership fee, based on the needs and services provided to members, (d) encouraging volunteerism, reducing social isolation, and creating a sense of community among members.

### **Socioeconomic status**

Socioeconomic status (SES), which encompasses personal savings, financial stability, education, occupation, and place of residence, may determine how well seniors are able to pay for growing expenditures to meet their burgeoning needs (Cyrus-David, 2010; Goodridge, Hawranik, Duncan, & Turner, 2012; Yilmazer & Scharff, 2014). Although the SES of seniors is difficult to determine, current research indicates that seniors in the 'upper class' socioeconomic bracket (i.e., those earning  $\geq$  \$150,000 per household/annually) retain greater levels of functional

mobility and lower levels of mortality when compared to seniors from lower middle class (i.e., those earning  $\leq$  \$32,500) (House, Kessler, Herzog, Mero, Kinney, Breslow, 1990). Seniors with a higher SES often have greater access to health care and protective resources than seniors in the lower middle class and poverty levels. This inevitably puts individuals in these lower income levels at greater risk for developing disease and disabilities (Kim & Richardson, 2012).

The current literature regarding SES presents a dichotomous view of the effects of SES on health by failing to address how those individuals in the middle socioeconomic bracket use resources to support health and functional ability as they age. Although low SES seniors may face more health concerns and have limited access to private care, low SES seniors often receive Medicaid and/or support services through government agencies, whereas middle-income seniors do not qualify for Medicaid (Scharlach, Graham & Lehning, 2011). Due to this growing need for affordable services for middle-income seniors, the Village concept model was developed to provide community-dwelling older adults with a variety of nonprofessional services, including transportation and housekeeping services (Scharlach, Graham & Lehning, 2011).

### **Summary**

The evidence presented suggests a growing number of aging adults in the United States prefer to remain in their own homes as they age. The ability of older adults to AIP is influenced by a variety of factors including barriers in the built environment, limited availability of current services, and SES. There is little research regarding prospective needs of middle-income seniors for aging in place. Although social and economic circumstances have been found to be powerful determinants of health and wellbeing, research regarding SES has been conducted with a focus on older adults who are at or near the poverty line (Goodridge, Hawranik, Duncan & Turner, 2012; Kim & Richardson, 2012). It is important to address the needs of middle-income seniors to

guide program implementation for well elders in the community to prevent unnecessary decline and decrease healthcare costs (Tanner, Tilse, Desleight de Jonge, 2008). The present study aimed to fill this gap by identifying the prospective needs of a unique and understudied population of older middle-income adults and how these needs support the ability and success of aging in place.

### **Research Question and Purpose**

The purpose of this study was to identify the prospective needs of older middle-income adults interested in aging in place in Battle Creek, MI in order to support the development and implementation of a Village-to-Village Network. This information may serve other communities throughout the country and abroad, serving as a means of framing future policy decisions, made by community leaders and healthcare providers, in supporting opportunities for older adults to successfully age in place. Thus, the research question posed by the researchers was, “What are the prospective needs or factors that promote the ability of middle-income older adults to age in place?”

### **Methods**

The researchers utilized a qualitative approach examining prospective needs of middle-income older adults residing in Battle Creek, Michigan. The researchers recruited and lead two focus groups (N=10). A quantitative survey completed a year earlier (2013) by members of the Village steering committee, was also analyzed and compared with focus group themes and codes.

Qualitative research is best understood as an inductive process, which focuses on the “...meanings, actions, and values embedded in social life.” (Dillaway, Lysack & Luborsky, 2006, p. 373). According to Stewart, Shamdasani and Rook (2007), focus groups are useful, as a means

of generating verbal and observational data about an area of interest for which little is known. Focus groups commonly involve a small homogeneous group of six to nine participants, who are led by a moderator asking open-ended questions (Nardi & Petr, 2003). Advantages of using focus groups in an exploratory inquiry include: being contextual, raising awareness, enabling new information, and sharing taboo subjects among participants; focus groups are interactive, which highlights the primacy of relationships (Kitzinger, 1994; Litosseliti, 2003; Moloney, 2010; Wilkinson, 1999).

In quantitative research, the goal is to explain rather than describe relationships between one or more variables (Dillaway, Lysack & Luborsky, 2006). Through the use of numerical analyses, quantitative research allows researchers to explain or predict the cause-and-effect between independent and dependent variables (Dillaway, Lysack & Luborsky, 2006). Results from the 2013 survey helped the researchers identify and validate themes uncovered from the focus groups during the qualitative data analysis phase. It is important to note that in any mixed-methods study, the underlying assumptions of one core research method (i.e., quantitative or qualitative) are "...prioritized and reflected in the study purpose, methodological decisions, and overall analytic approach." (Corcoran, 2006, p. 411). In the case of this study, the researchers primarily adhered to a qualitative methodology while later, during data analysis, integrating results of the 2013 quantitative survey to support their findings.

According to Shenton (2004), Guba's model (1981) is a commonly accepted form of trustworthiness in QL research. It is a conceptual model framing trustworthiness in research and is comprised of 4 components, which include (a) Credibility, asking the question of how congruent the findings are with reality, (b) Transferability, (c) Dependability, and (4) Confirmability. An article published in the American Journal of Occupational Therapy (AJOT)

by Krefting (1991) examined the efficacy of including the Guba Model of trustworthiness in qualitative research. In the current study, the researchers used the Guba Model of trustworthiness as a means of establishing credibility throughout the research process.

### **Participants**

Focus group participants were recruited from Battle Creek, Michigan. The focus group sessions were advertised using a variety of different media forms including local radio, television, newspapers, monthly senior newsletters, and the internet using Facebook and a blog website created by the researchers. Flyers were placed at local community centers and a health fair. Two of the researchers participated in a public television broadcast, in early June 2014, to explain the purpose of the study and to invite older adults in the community to participate in moderated focus group discussions.

### **Data Collection**

The two focus groups were conducted in June 2014 and July 2014 (N=10). Flexible guided questions (Appendix A) designed by the researchers were used during both focus group sessions. During the June focus group, one researcher moderated the discussion; another monitored the audio recording, while the third researcher took extensive field-notes. Both June and July sessions were audiotaped. No names were used during the focus groups in order to maintain participant confidentiality.

In 2013, members of the Battle Creek Village-to-Village steering committee administered an area survey for designing a Village-to-Village community to older adults in the community (N=42). The mean age for survey respondents was 75, and the oldest respondent was 97 years old, and the youngest respondent 59 years old. Seventy-five percent of survey respondents were female and 75% of all the participants were current members of AARP. Using a 5-point ordinal

rating scale, participants were asked to rate how important various services were to their overall quality of life. Survey questions addressed eight primary types of services and opportunities (Table 1). Results of this survey were provided to the researchers and used to triangulate themes and subthemes extracted from the researchers' 2014 focus group sessions. Following completion of the July 2014 focus group, the researchers believed data adequacy had been met. The term 'adequacy' is often interchangeably used with 'data saturation' in qualitative studies, which indicates the moment in the research process when sufficient data has been collected in order to provide a comprehensive and credible analysis (Kerr, Nixon & Wild, 2010).

Table 1

*Core themes addressed in the (2013) Battle Creek Area Survey for Designing a Village-to-Village Community*

Services and Opportunities	Sub-Topics addressed in (2013) Survey
Home Maintenance Services	<i>House cleaning</i> <i>General handyman</i> <i>Snow removal</i> <i>Professional services (plumber, electrician)</i> <i>Yard or tree maintenance</i>
Personal Financial Assistance Services	<i>Bill paying assistance</i> <i>Medicare and Medicare part D information</i> <i>Preparing for retirement</i> <i>Tax preparation</i> <i>Legal advice and representation (wills, Power of attorney)</i> <i>Maintaining finances in retirement</i>
Daily Living Services	<i>Meal preparation assistance</i> <i>Meal Delivery</i> <i>Phone buddy to help with isolation</i>

	<i>Laundry/Dry Cleaning assistance</i>
	<i>Pet care assistance</i>
Community Services	<i>Public transportation</i>
	<i>Shopping opportunities (groceries etc.)</i>
	<i>Recreational opportunities (parks, walking)</i>
Health Assistance Services	<i>Prescription delivery</i>
	<i>Health buddy/Health advocate</i>
	<i>Help filling health or insurance forms</i>
	<i>Nutrition assistance</i>
	<i>Available medical equipment</i>
Continuing Education Opportunities	<i>Health and wellness information</i>
	<i>Consumer information</i>
Organized Social Activity Opportunities	<i>Hobbies/Crafts</i>
	<i>Volunteer opportunities</i>
	<i>Book club</i>
Organized Physical Activity Opportunities	<i>Schedule exercise programs</i>
	<i>Gardening</i>

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### **Data Analysis**

The researchers used content analysis, which is one of the most commonly used methods for analyzing qualitative data (Shields & Twycross, 2008). The first stage of content analysis is transcribing participant dialogue and checking for accuracy after listening to audio recordings of both focus group sessions. The data were gathered from two focus groups and then the transcripts were typed word-for-word by two different researchers. All three researchers reviewed the transcripts to ensure correct capturing of participant dialogue. The next stage involved rereading transcriptions and identifying emergent themes. Each researcher was

provided with a copy of the transcripts to review and code independently. Coding involved grouping together similar data within the focus groups.

After the researchers coded individually, they met to negotiate and reach consensus on individual codes. This involved a comprehensive discussion regarding how the researchers interpreted the data and considered ways in which to consolidate themes and subthemes. Having all of the researchers analyze data separately prior to discussing their interpretations as a group enhanced objectivity and validity. There was good agreement between the researchers (over 85 percent) in identifying themes, which enhanced the validity of the content analysis (Shields & Twycross, 2008).

The quantitative data from the 2013 Battle Creek survey was analyzed using SPSS (20) and correlated with the qualitative focus group findings. The overall design of the data analysis most closely resembles an exploratory sequential mixed-methods approach (Creswell, 2014). This type of design is most appropriate when qualitative research is completed prior to the quantitative phase (Creswell, 2014). However, in the case of this study, the researchers did not design an instrument based on the qualitative results and retroactively apply to the quantitative phase. Rather, the 2013 survey provided an opportunity to validate and provide rigor to focus group themes and subthemes findings.

## **Results**

### **Participant Demographics**

Participants of the focus group sessions (June, N=2; July, N=8; total N=10) and the 2013 survey (N=42) were at least 50 years of age or older; middle-income, which was defined as having an income of approximately \$1900.00 per month or 200% or above of the poverty line; residents of Battle Creek, Michigan; and not currently on Medicaid.



A total of four main themes emerged from the transcription data and coding of the focus groups' responses. The following section provides insight regarding themes, subthemes, and key concepts (Table 2). Due to the number of subthemes identified, only those with significant comments are included.

*Aging in Place Themes and Subthemes from (2014) Focus Groups*

Themes	Subthemes
Household Establishment and Management	Shopping Seasonal Considerations (Snow removal, lawn care) Heavy Housework Yard Work Safety education and awareness (Completing home care tasks in a safe and appropriate manner)
Environmental Barriers	Physical Barriers in the Home Client Barriers (Fatigue, medical issues, and physical decline associated with age or disease)
Community Mobility	Transportation (Busing, driving, and mobility in public spaces) Accessibility and Availability of Resources (Senior Center, Swimming Pool, Activity Room)
Financial Concerns	Affording home and/or rental property Membership dues to Senior Organizations (Village membership, YMCA)

**Household establishment and management.** A main theme that emerged from all of the participants was the relationship of household establishment and management and AIP successfully. Participants emphasized that shopping, seasonal considerations, heavy housework, yard work, and safety education and awareness were areas that make living in their home difficult.

**Shopping.** Shopping was an activity mentioned several times throughout both focus groups. Participants discussed that shopping was difficult for them, their friends, and their parents. Many participants either helped friends or relatives shop or had helpers themselves. One participant commented, “I help one friend to go to the grocery store. She wants me to help her with her cart, but it’s getting too much for me to handle.” The physical and visual aspects of shopping tended to cause the greatest difficulties for participants and highlighted why an individual may need assistance with this task.

**Seasonal considerations.** This subtheme identifies the challenges many face during the changing seasons in Michigan, particularly during the winter season (November-April). Participants discussed their concerns leaving their home due to snow and the degree of physical effort required for snow removal to keep driveways and sidewalks safe and accessible. Several participants discussed having neighbors or paid services to clear snow from driveways and roads:

*Our driveway, my neighbors and mine, it’s a joint driveway. So those using the snow blower all these years, they’re younger than me, they can do the driveway so... so I just stay in the house and let them do it.*

**Heavy housework.** The subtheme of heavy housework was identified as a great difficulty for older adults who wish to remain in their home. Activities in this subtheme that were identified as being difficult for either the participants, their friends, or parents included general

house cleaning, changing light bulbs and batteries in smoke detectors, vacuuming, washing dishes, washing windows, “washing the tub”, “scrubbing my kitchen”, painting, and moving furniture. This subtheme was supported by the steering committee survey with approximately 29.2% of respondents reporting it as ‘somewhat important’, 26.8% reporting it as ‘very important’, and 12.2% reporting ‘extremely important’ (Figure 2).

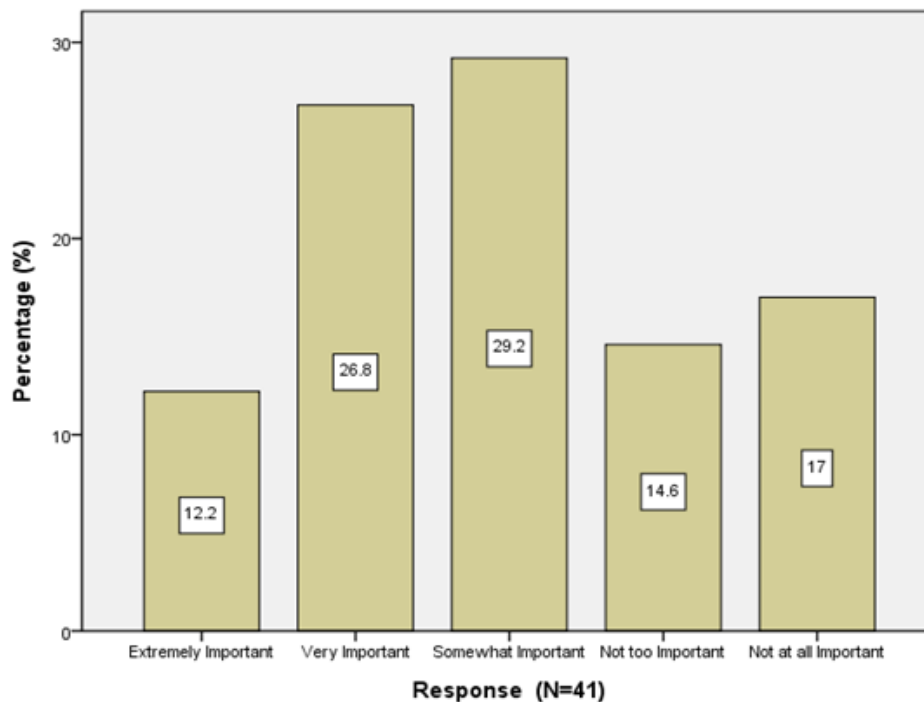


Figure 2. House cleaning services. Results from the (2013) Battle Creek survey illustrating the respondents' views regarding the importance of house cleaning services.

**Yard work.** Many participants raised concerns with safely completing yard work due to the physical nature of the activity. Participants expressed concerns related to lawn care, mulching and disbursing topsoil, carrying birdseed, and painting outdoors. One participant mentioned that “my lawn and yard work” are the most difficult activities performed on a daily basis. This subtheme was supported in the steering committee survey with 29% of respondents reporting it

to be ‘somewhat important,’ 29% as ‘very important,’ and approximately 10% reporting ‘extremely important’ (Figure 3).

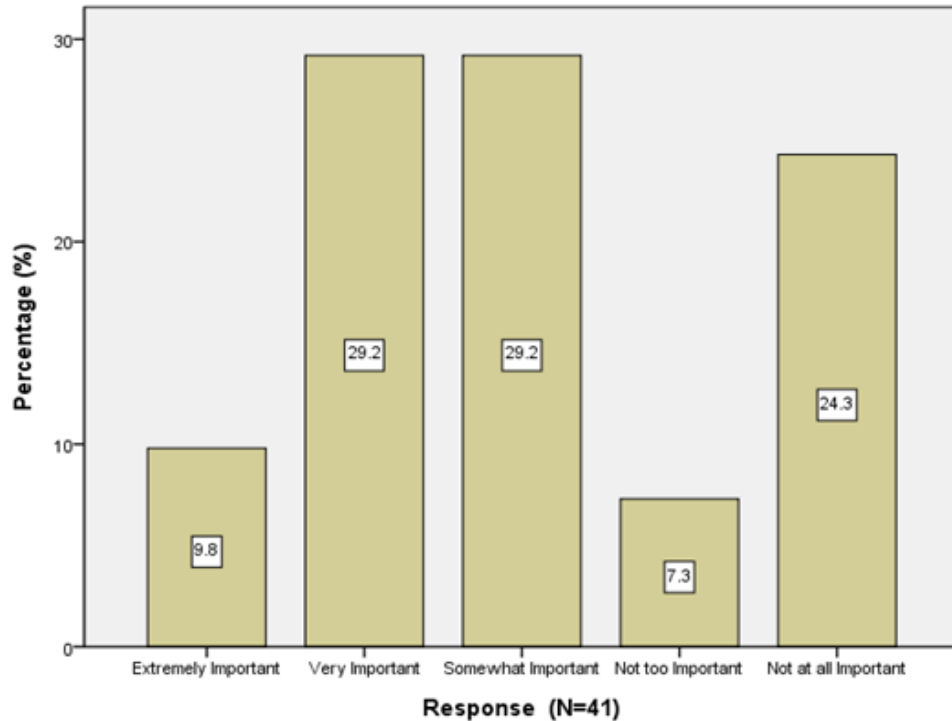


Figure 3. Yard or tree maintenance. Results from the (2013) Battle Creek survey illustrating the importance of yard or tree maintenance.

***Safety education and awareness.*** The last subtheme under household establishment and management relates to the lack of awareness that many participants had in regards to safety in the home. Several participants mentioned performing tasks that may have been dangerous or above their functional level so that they could remain in their home. One participant stated “my kids have a fit if I get up on a chair and change a light bulb. As long as I can get on the chair and off the chair without breaking my neck...they may have a fit but I don’t care.”

**Environmental barriers.** Many participants identified environmental barriers as a significant concern regarding their ability to age in place. Subthemes within this category are physical barriers in the home and client barriers.

***Physical barriers in the home.*** The subtheme of physical barriers in the home included issues with accessibility and layout of the home. One participant discussed that she “may need a ramp eventually” due to the multiple steps to enter her home. Another participant mentioned that she is “not sure if I can get in and out of a tub, so I just shower.” One participant noted that the size of her home would not be able to accommodate a wheelchair when her husband requires the use of one: “he could never get a wheelchair around the house, it’s too small.” Another concern was the ability to reach overhead items such as smoke alarms and light bulbs.

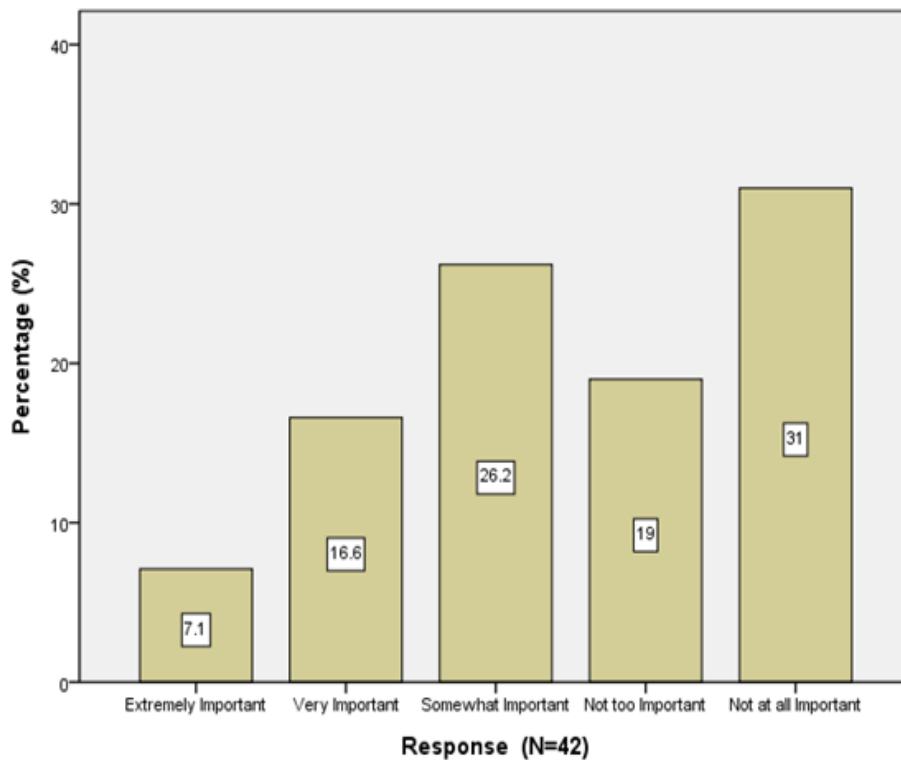
***Client barriers.*** This subtheme included the physical decline, fatigue, and several diagnoses related to aging. These factors related to client health were discussed many times throughout the focus groups. Several participants expressed difficulty completing tasks due to both the physical and time aspects. One participant noted that her parents, who are in their late eighties, find “everything they do is getting hard.” Another participant discussed both the temporal and physicality aspects of performing activities: “when I do the dishes and mop the floor, I’m ready to take a nap... it takes two to three days for something that took one day before.”

**Community Mobility.** Under community mobility the researchers identified several subthemes including transportation and the accessibility/availability of resources for seniors.

***Transportation.*** When asked about transportation, focus group participants reported that seniors don’t often use the bus because it’s not easy to get on a city bus. However, several of the focus group participants reported that they were aware of a service that would pick up a

passenger, but a time and date for pick-up needed to be scheduled a week in advance. “Far as I know there’s only one bus...it’s not really convenient to know a week ahead, that would be a definite need.”

Some participants indicated that they assisted friends or neighbors with transportation needs. One participant remarked that she is often called upon to assist a neighbor who is visually impaired to access community resources. However, this subtheme was not strongly supported in the survey with only 26% of respondents finding it ‘somewhat important,’ 16% finding it ‘very important,’ and approximately 7% finding it ‘extremely important’ (Figure 4).



*Figure 4.* Public transportation services. Results from the (2013) Battle Creek survey illustrating respondent interest related to public transportation services (e.g., public bus, cabs).

***Accessibility of Resources.*** A recurring subtheme under the theme accessibility of resources was the perceived lack of senior-oriented activities and spaces in the Burnham Brook Community Center. This facility is considered by many older adults in Battle Creek to be one of the only facilities in the area that offer activities to seniors. Several focus group participants mentioned changes that have occurred at Burnham Brook Community Center over the years. One participant reported, “A lot of us are upset...this used to be a place for seniors and now it’s a community center...we lost some of the senior aspects of the place.” Many participants reported that activities and opportunities that were once available at Burnham Brook are not offered anymore. Furthermore, participants reported that they are continually told to move out of common spaces where they play cards to make space for other programs that use the community center. This statement emphasizes the concern regarding a senior only community center:

*They have taken away our pool...don’t take away our cards and billiards! They really need a place for seniors that are just for seniors, and not for the community.*

The pool that was in the Burnham Brook community center was identified as a major contributor to health and wellness. One participant reported that they used the pool for exercise and “lost 50 pounds.” The removal of the pool was mentioned in the focus groups a total of six times and was identified as an important component of a community center solely designed for seniors. This subtheme was not well supported by the survey with the majority reporting that recreational opportunities, community, centers, and swimming were ‘somewhat important,’ ‘not important,’ or ‘not at all important.’

**Financial Concerns.** This major theme was identified by researchers as having two major subthemes including affordable housing and managing Heart of the Village membership dues.

***Affordable residence.*** This subtheme was presented by participants who were renting their homes and found it difficult to find affordable housing that was suitable for middle-income seniors living on a budget. One participant expressed that it was difficult to find housing that was inexpensive in a nice area that was not subsidized by the government and reported spending \$1,200 a month with utilities. One participant explained that housing concerns were very pressing for middle-income seniors because they do not meet the criteria for government assistance. One participant commented: “[We have] worked so hard to save the money, and it’s shrinking because of the economy...then I think why am I saving money, I have too much money so I can’t get help because we have too much money.”

***Village membership dues.*** This subtheme was a concept introduced by the researchers. Participants reported that they were “not sure” how much they would be willing to spend on an annual membership fee to be a Village member. Most participants expressed “\$150 doesn’t sound so bad” but an annual fee of “\$500 [or more] would be too high.” One participant mentioned having different levels of membership based on the amount of services needed. The concern about budgeting was evident when a participant stated:

*As far as money, everyone is trying to cut back on the money. Everybody has a certain amount of nest egg and it’s getting squeezed by the government...so don’t spend anything unless you have to.*

### **Additional Results**

One idea that may be useful to AIP is the concept of creating a phone-call “buddy system” service in order to support personal safety and decrease social isolation. During one focus group, one participant suggested that middle-income seniors needed someone to call each day to ensure that they are “okay.” This concept was generated by one participant and did not fit



into a major theme or subtheme category. The phone-call “buddy system” could easily and inexpensively be implemented to reduce isolation and contribute to a senior’s ability to AIP. This suggestion was also identified in the 2013 survey in which 31% identified it as ‘somewhat important,’ 24% as ‘not too important,’ and 29% as ‘not all important.’

One item that was in the survey, not discussed in the focus groups, was the desire for volunteer activities, which was reported as ‘somewhat important’ by 47.7% and ‘very important’ by 17.5%. Additionally, home health care and skilled nursing were identified in the survey as being ‘extremely important’ by 25%, ‘very important’ by 27.5%, and ‘somewhat important’ by 27.5% of respondents.

### **Discussion**

The purpose of this study was to identify prospective needs of middle-income seniors residing in Battle Creek, Michigan to successfully age in place. The data collection resulted in the identification of four major themes: Household Establishment and Management, Environmental Barriers, Community Mobility, and Financial Concerns. The participants perceived many potential needs in order to successfully age in place.

The theory behind the PEO model was evident in the data gathered from the focus groups and among the themes derived from the data. The transaction among the person, environment, and occupation (Law, et al., 1996) affects the ability of the Battle Creek middle-income seniors to AIP. This was apparent because throughout the data there was reference to occupations that needed to be performed, changes within the person due to advancing age and the effects on activities and health, and both the home and community environment were discussed as creating potential needs for AIP.

In comparison to previous research, our findings regarding environmental barriers are similar to those found by Stark (2001, as cited by Stark, 2004). Stark (2001) identified twenty-seven categories of barriers within the home that created difficulties in carrying out daily activities, and an average of four environmental barriers in older adult households. Stairs and items out of reach, were both identified as potential needs in the physical barriers in the home subtheme during data analysis of this study. This is an important area to address when implementing programs to assist older adults with AIP because research has found that providing environmental intervention improved performance in areas of self-care and household tasks in older adults (Stark, 2004, as cited by Tanner, Tilse, & de Jonge, 2008).

In addition, safety awareness; home management, including caring for the home environment, ability to grocery shop; and the lack of senior only programs were identified as areas of need for older adults for AIP (Siebert, 2003). All of these areas were identified as potential areas of need during the focus groups and were labeled as subthemes by the researchers. The subthemes identified in the current study are supported by Wiles et al. (2012) who reported housing options, transportation, recreational opportunities, and amenities that promote physical activity and social interaction all need to be considered to support AIP.

There is also evidence to support the phone call “buddy” system. Rotheram-Borus et al. (2012) reported that phones are an easy, inexpensive, and reliable way to provide peer support. The notion of implementing a buddy system to reduce social isolation can also serve as a means of assuaging caregiver burnout. According to Wild, Boise, Lundell, & Foucek (2008) there are a wide variety of technological means that can support in-home monitoring of older adults. These can include cell-phones, voicemail and internet access. Wild et al. (2008) discovered that older adults acknowledge the importance of in-home monitoring while living

alone as means of providing personal safety. Additionally, in-home monitoring can support an individual's potential undetected cognitive decline and maintaining their independence in the home (Wild et al, 2008).

### **Clinical Importance to Occupational Therapy**

This study is important to the occupational therapy profession because the results provided insight into the potential needs of middle-income older adults. This research promotes an understanding of what occupations and activities become difficult as age related changes occur and how the environment supports or hinders meaningful engagement in occupations. The results can be used to develop preventative community interventions to meet some of the needs of the burgeoning elderly population and to reduce healthcare costs associated with age related decline and unintended injury. It is essential that healthcare workers, specifically occupational therapists, implement community initiatives to ensure that functional ability, social participation, and the quality of life of older adults does not diminish unnecessarily. Furthermore, this study supports the use of the PEO model to identify the needs of older adults.

Occupational therapists are trained to evaluate and consider all aspects of an individual and are capable of providing home-care services to those living at home. The use of community-based occupational therapy support can facilitate AIP by improving client independence, increasing the sense of competence in caregivers, delay admission to nursing homes, and lower the costs of additional healthcare or social services (e.g., Meals on Wheels) (Graff et al. 2008).

One systematic review emphasized the importance of community-based aged care as a service that improved quality of life, functional status, and a means of significantly reducing healthcare costs (Ryburn, Wells, & Foreman, 2009). In this article, the authors identify three primary home-care components provided by occupational therapy services, which include

providing (a) adequate support to re-learn or learn alternative methods to undertake a particular task (e.g., cooking), (b) trial of different adaptive devices or equipment (i.e. labor saving equipment such as robotic vacuum cleaners), and (c) provision of environmental modifications (e.g. grab bars, ramps and increasing width of doorways for wheelchair access) (Ryburn, Wells, & Foreman 2009).

These three components relate to themes discovered by the researchers of this study, specifically environmental barriers, household establishment, and community mobility; and highlight areas in which occupational therapists can contribute regarding home- and community-based care services. By providing these services to individuals aging in place, occupational therapists can support an individual's participation in activities of daily living (e.g., grooming, bathing, dressing), decrease their incidence of falls, reduce caregiver burden and increase social participation with family, friends and engagement in their community (Ryburn, Wells, & Foreman, 2009).

### **Suggestions for Future Research**

To increase transferability, future research should focus on a broader effort to determine the supports required and challenges faced by middle-income seniors attempting to age in place. Some suggestions include: obtaining a larger sample size, including participants from a variety of geographical areas, and implementing more stringent inclusion and exclusion criteria. Another possibility for future research is to have participants 70+ years of age, because many of the participants who are fifty and older are still highly independent and are not able to speculate as to what they would need in the future. Participants who are seventy and older may be less independent or have a better awareness of potential needs to successfully age in place.

### **Limitations**

Limitations of this research include that it was largely conducted with participants residing in an urban setting and findings may not be transferable to individuals in rural communities. In regards to the participants, there may be a limitation of credibility within the community due to the July session consisting mainly of participants from the same exercise class. Lack of focus group participants during the June session may also limit the depth and breadth of the research findings. Furthermore, the first 20-minutes of the July focus group audio recording was deleted during data transfer to the computer.

One limitation of the 2013 survey is no criteria were indicated for survey participants related to age or socioeconomic status. The researchers were not involved in the design, distribution, or final collation of survey data. Therefore, the raw data was not accessible to the researchers. Percentages were obtained and compiled by the Battle Creek Village Steering Committee and given to the researchers. Lastly, in order to limit researcher bias, the researchers triangulated focus group themes and results with the 2013 Battle Creek survey to verify and support resultant themes and subthemes from participants.

### **Conclusion**

The results of the focus groups conducted by the researchers have been supported by the literature and many of the findings of the 2013 Battle Creek survey. Certain themes from the survey were well supported by focus group findings including heavy housework and yard work. However, transportation, accessibility of resources, and the use of a phone-call “buddy system” were discussed as a need during focus groups and were not reflected as a need in the 2013 survey results. The research participants’ recommendations regarding appropriate village membership

dues, social isolation, and transportation services may prove useful for the researchers and Battle Creek steering committee in facilitating a prospective village program.

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**Appendix A**  
**Guided Focus Group Questions**

1. If you were to give advice to an aging friend about living in Battle Creek as a retiree, what advice would you give them?
2. When you hear the words ‘aging in place’, what does this mean to you?
3. In what ways are you currently involved in your community?
4. What are the needs within your community (i.e., access to healthcare services, bank, shopping, social networking opportunities)?
5. What characteristics should an ideal caregiver have?
6. What would an ideal ‘supportive organization’ of older adults look like? What services would it provide?
7. Are there any characteristics about your home that make daily activities difficult?
8. What is the hardest thing that you do every day?
9. What services/skills do you have that you are willing to share with other members within a prospective Heart of the Village community?
10. How much would you be willing to pay for services provided by the Heart of the Village?
11. Is there anything else you wish to discuss that we have not covered today?

## **Appendix B**

### **Glossary of Terms**

**Active Aging:** the desire and ability of older adults to integrate physical activity into daily routines, such as walking for transportation, exercise, or pleasure (Michael, Green, Farquhar, 2005).

**Aging in Place:** The ability to live in one's own home and community safely, independently, and comfortably, regardless of age, income, or ability level (cdc.gov).

**American Association for Retired Persons (AARP):** provides services to persons age 50 and older. Services include supplemental health insurance through Medicare, discounts on prescription drugs and consumer goods, entertainment and travel packages, long-term care insurance and automobile, home and life insurance.

**Community Resources:** Any agency, company, facility, or service supporting a person's needs. Examples include the post office, hospital, grocery store, shopping mall, church, and public transportation.

**Environmental Gerontology:** the study of how the environment affects quality of life for the elderly.

**Focus Groups:** a form of qualitative research typically conducted with a small group of people on a specific topic (Kielhofner, 2006).

**Liveable Communities:** communities that provide "...affordable and appropriate housing, supportive community features and services, and adequate mobility options, which together facilitate personal independence and the engagement of residents in civic and social life." (AARP, 2005).

**Needs Assessment:** refers to a process of determining what a group of individuals, an organization, a community, or population requires in order to achieve some basic standard or to improve its current situation (Kielhofner, 2006). It reflects an impartial systematic effort to collect objective data or information bringing to light or enhancing the need for services or programs (Soriano, 2012).

**Occupational Performance:** Act of doing and accomplishing a selected action (performance skill), activity, or occupation (OTPF 2014; Fisher & Griswold, 2014; Fisher 2009; Kielhofner, 2008) that results from the dynamic transaction among the client, context and the activity.

**Socioeconomic Status (SES):** a measure of an individual's or family's social and economic position based on income, education and occupation.

**Villages:** are membership driven, grassroots organizations created to meet the needs of older adults in order to remain in their communities and successfully age in place. Once established, volunteers and paid-staff coordinate access to affordable services in the community, which can include: transportation, health and wellness programs, home repairs social and educational

activities and trips. Membership to a village offers individuals access to vetted-discounted providers (Village to Village Network).