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### Influence of built environment and social capital on mental health of residents of assisted living communities in Louisville, KY.

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# Influence of Built Environment Quality and Social Capital on Mental Health of Residents of Assisted Living Communities in Louisville, Kentucky

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## Abstract

**Objectives:** Prior research has shown social capital and built environment quality are associated with overall health status and the incidence of mental illness. This study explores the relationship between social capital, built environment, and quality of life specifically for assisted living residents, currently a gap in the literature. **Method:** A total of 76 assisted living residents were interviewed for the study using researcher-administered questionnaires. In addition, site audits were conducted to quantitatively evaluate the built environment surrounding 12 assisted living communities in the Louisville Metro region. **Results:** There was a moderate, positive correlation between social capital and mental health,  $r = .473$ ,  $p < .001$ . Built environment quality for the neighborhood immediately surrounding the assisted living community was not significantly correlated with quality of life for assisted living residents. Other population characteristics, including demographic characteristics, self-rated health status, and instrumental activities of daily living were not significantly predictive of mental health scores. **Conclusion:** This study demonstrates that social capital is associated with happiness and self-rated quality of life. Specifically, increased social capital is associated with increased mental well-being for older adults residing in assisted living communities, with social capital explaining about 20% of the variation in quality of life scores.

## Keywords

assisted living facilities, mental health, social capital, environment design

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## Introduction

Independent living, or aging in place, is a hallmark of optimal aging. Yet, it is not the reality for many older adults in the United States. In a meta-analysis of 28 quantitative studies of healthy aging, the average rate of successful aging was just 35.8% (Depp & Jeste, 2006), suggesting that only about one in three adults can expect to live independently throughout their life span. For the foreseeable future, many older adults (defined here as those aged 65 years and older) will continue to need to leave their primary residence and relocate to retirement homes, continuing care settings, nursing homes, and assisted living communities. The focus of the current study, assisted living communities, is particularly important as the number of Americans living in assisted living facilities is projected to double in the next 20 years (Ortiz, 2013).

There is no consistent set of services, community structures, or state licensure standards for communities to be characterized as an assisted living facility in the United States. An operational definition is that although assisted living communities do not provide skilled

nursing care or ongoing medical services, residents of these facilities require assistance with activities of daily living (e.g., bathing, dressing). This need for assistance may indicate compromised physical or cognitive health for residents. When considering the health of assisted living residents, it is useful to begin by defining health as “a state of complete mental, physical and social well-being and not merely the absence of disease or infirmity” (World Health Organization, 1948). Although physical, mental, and social well-being are given equal weight in this definition, each may vary in relative importance across an individual’s life span. Given the range of physical deficits assisted living residents may experience, the current study explores mental and social well-being, which we believe to be of particular

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importance to the overall conception of health for residents of assisted living communities.

The prevalence of mental disorders is generally lower for people above the age of 65 than for younger respondents (Fiske, Wetherell, & Gatz, 2009; Regier et al., 1988). Although younger adults are more likely to be diagnosed with mental disorders such as clinical depression, depression in older adults can have severe health consequences, and older adults may experience depressive symptoms differently than younger adults (Fiske et al., 2009). Although falling short of the criteria for a clinical diagnosis, adults above the age of 65 years are more likely to experience worse subclinical mental health than younger adults (Hybels & Blazer, 2003).

Prevalence of mental illness also varies considerably for older adults relative to their place of residence. Hybels and Blazer (2003) found between 3% and 26% of community-dwelling older adults experience significant depressive symptoms. This same study found that the prevalence of depressive symptoms is higher among hospitalized older adults (23%) and adults residing in nursing homes (16%-30%). One can infer from these findings that older adults residing in assisted living communities would likely report rates of depressive symptoms somewhere between those of community-dwelling individuals and nursing home residents. Although fewer than 5% of noninstitutionalized older adults report serious psychological distress, the prevalence is highest for those living with others besides a spouse and those living alone (Henning-Smith, 2016). Self-rated quality of life exhibited a similar pattern: Quality of life was highest for those living with a spouse only, and lowest for those living with others besides a spouse and for those living alone.

Poor mental health decreases life expectancy and quality of life, making it a critical public health issue. Given the growing number of older adults residing in assisted living communities, assisted living residents should be a priority population for promoting mental health. Existing research has identified numerous factors that reduce the risk of poor mental health outcomes, and two promising constructs are social capital and the built environment.

### *Social Capital*

Although researchers use varying definitions, for the purposes of this study, social capital is defined as an individual's perceptions of the aggregate levels of trust, reciprocity, and participation in a community. Social capital extends beyond direct, individual relationships to effect the whole community through indirect connections. For example, reciprocity is not a quid pro quo arrangement between individuals. According to Putnam,

the touchstone of social capital is the principle of generalized reciprocity—I'll do this for you now, without expecting anything immediately in return and perhaps

without even knowing you, confident that down the road you or someone else will return the favor. (Putnam, 2001, p. 134)

Through this arrangement and inherent trust in one's fellow community members, social capital promotes a more efficient society. Rather than trust in specific individuals, it more closely resembles putting good out in the world with the anticipation that good things will happen in return (Siisiainen, 2000). Yang (2007) builds on the work of Putnam and others and argues for measurement of individual social capital as the features of social relationships through which one can access collective resources. This study explores what Yang calls the "generalized features" of individual social capital, that is, relationships with other people in general, rather than specific personal relationships. Yang also advises that measures of individual social capital should define the boundaries of a network as individual social capital varies with structural features of a network. For this study, the boundary was defined as the assisted living community in which the participant resided.

Social capital is inversely correlated with overall mortality (Kawachi, Kennedy, Lochner, & Prothrow-Stith, 1997; Wilkinson, Kawachi, & Kennedy, 1998). The majority of studies investigating the relationship between social capital and mental illness focus on a finite number of common mental disorders and symptoms, frequently only depression and anxiety (De Silva, 2006). Despite this limitation, there is clear evidence linking social capital with mental health (Cao, Li, Zhou, & Zhou, 2015; Giordano & Lindstrom, 2011; Ivey et al., 2015; Kawachi & Berkman, 2001).

The mechanism through which social capital confers health benefits is less well understood. Regardless of the mechanism of action, it is evident social capital is associated with overall health status and the incidence of mental illness. This study explores the relationship between these variables and mental health—specifically, self-rated quality of life for assisted living residents, currently a gap in the literature.

Living in a long-term care community presents challenges for maintaining preexisting relationships and forming new friendships with fellow residents (Bonifas, Simons, Biel, & Kramer, 2014). In this sense, environment can increase the risk of loneliness, which would ultimately reduce overall quality of life. For this reason, the present study considers the role of the built environment in addition to social capital.

### *Built Environment*

Despite its importance, social capital does not predict all aspects of health and quality of life. For example, social capital is not linked to older adults' mobility once after controlling for other neighborhood characteristics (Rosso, Tabb, Grubestic, Taylor, & Michael, 2014).

As defined by Sallis (2009), the built environment “includes all buildings, spaces, and objects that are created or modified by people . . . [and] is shaped by land-use and transportation planning and policies” (p. S87). Ideally, in addition to providing needed support services, assisted living communities should feel homelike and help to preserve residents’ autonomy and self-worth (Wilson, 2007). Researchers have explored how various aspects of facility design can contribute to quality of life for assisted living residents (Cutler, 2007), but as assisted living communities are largely self-contained, existing studies have largely stopped at the front door. It is not clear whether an assisted living facility’s position in a larger community or neighborhood may affect resident health and quality of life.

For this study, the built environment consists of the assisted living facility in which participants reside, and the portions of the surrounding neighborhood to which they have ready access. The ecological theory of adaptation and aging suggests that the need for congruence between an individual and the proximal environment increases across the life span: As we age, a supportive physical and social environment becomes increasingly important (Izal, Montorio, Marquez, & Losada, 2005; Lawton & Nahemow, 1973). Recent research on the impact of the built environment on the health of older adults bears this out. Built environment quality is positively associated with improved mental health and a decrease in symptoms of mental illness (Gidlow, Cochrane, Davey, Smith, & Fairburn, 2010; Hernandez et al., 2015; O’Campo, Salmon, & Burke, 2009; Stafford, Gimeno, & Marmot, 2008).

The built environment may have an indirect impact on mental health by facilitating social capital. Vaughan, LaValley, AlHeresh, and Keysor (2016) reviewed factors pertinent to this study: Neighborliness and social support (here characterized as social capital) and land-use diversity, transportation, safety, and street connectivity (built environment) are associated with community participation for older adults. Glover and Parry (2008) developed a model articulating the influence of a “sphere of sociability” on health outcomes, which they defined as the quasi-public physical spaces where relationships formed. After a stressful life event, Glover and Parry’s subjects reported on the development of new supportive relationships. For the relationships to grow, the subjects needed to come together in a space that was conducive to social interactions and given time for their friendships to deepen. It should be noted that although the current study design was guided by the Glover and Parry (2008) model, it was not sufficiently powered to do a pathways analysis. Further research will be necessary to fully explore the structure of the model.

We hypothesized the following:

**Hypothesis 1:** Increased built environment quality and increased social capital would be positively

associated with mental well-being for older adult residents of assisted living communities.

## Method

This study assessed the role of social capital on promoting and maintaining positive mental health, specifically for assisted living residents in Louisville, Kentucky. Following institutional review board (IRB) review and approval, data were collected through individual interviews with assisted living residents between July 2012 and August 2013. The individual interviews consisted of a general participant survey, a measure of social capital, and a measure of mental well-being. In addition, built environment quality was assessed using site audits conducted by the researchers. All data were subsequently analyzed using IBM SPSS Statistics v21.0.

### *Participant Recruitment and Eligibility*

Six assisted living communities authorized individual interviews with their residents. Study participants were recruited using convenience sampling. Eligible participants were English-speaking adults above the age of 65 years who were residents of an assisted living community. In Kentucky, assisted living communities are certified annually by the Kentucky Department for Aging and Independent Living. The requirements for this certification are defined by statute (KRS 194A.700 to KRS 194A.729). Personal care communities are licensed by the Office of the Inspector General and must comply with certain administrative regulations (902 KAR 20:036). The difference in these designations pertains to the availability of nursing staff and the type of assistance with medication management that is available. In general, both assisted living and personal care communities provide assistance with activities of daily living, coordinate social activities, and offer meals and housekeeping services. For the purposes of this study, the term “assisted living” was used as an umbrella term for both types of facility.

To ensure that participants were able to answer the interview questions reliably and provide consent independently, participants with severe cognitive impairment were excluded from the study. Cognitive impairment was determined based on the Mini Mental State Examination—Brief Version (MMSE-BV; Folstein, Folstein, White, & Messer, 2010). Individuals with MMSE-BV scores less than 10 were excluded from the study. This cut point for eligible scores on the MMSE-BV was selected to maximize the test’s specificity and minimize the number of people without cognitive impairment who were incorrectly screened out. Previous studies determined that the cut point between 9 and 10 points on the MMSE-BV had a specificity of 0.99 and a sensitivity of 0.41 for dementia, which corresponded to 91.44% accurate classification of patients with dementia (Folstein et al., 2010). Similarly, the cut point between 9

and 10 points had a specificity of 0.99 and sensitivity of 0.60 for Alzheimer's disease, which corresponded to 95.86% accurate classification of patients with Alzheimer's disease (Folstein et al., 2010).

We did recruit participants who did not meet eligibility criteria but once ineligibility was determined, no additional data were collected from these individuals. The English-speaking criteria was informally ascertained by the interviewer prior to the consent process and no individuals were subsequently excluded from the study based on communication difficulty. A total of 92 individuals were screened for the study. Sixteen individuals were excluded due to ineligibility (14 scored below the MMSE-BV cutoff score of 10 and two were younger than age 65). The remaining 76 individuals were ultimately interviewed and included in the study.

### *Social Capital*

Many studies of social capital explore only a single attribute (e.g., levels of trust, or levels of participation in civic organizations). This frequently stems from efforts to capitalize on existing data sets, and there is a clear need for more direct and comprehensive measurements of social capital (Harpham, 2011; Kim, Subramanian, & Kawachi, 2011). For the present study, social capital was measured using the Collective Efficacy Scale (CES; Wen, Cagney, & Christakis, 2005). Collective efficacy is used to control negative behaviors or act toward the common good, and it can be characterized as either a component of social capital (Lochner, Kawachi, & Kennedy, 1999) or as an independent construct, which overlaps and interacts with social capital (Waverijn, Groenewegen, & de Klerk, 2017). Although the instrument name refers to collective efficacy, the CES was chosen for this study because it captured multiple facets of social capital, including social cohesion and social control and had high reliability (.80; Wen et al., 2005). Social cohesion and social control are formed through norms of trust, reciprocity, and civic engagement.

Originally developed by Browning and Cagney (2002) and modified by Wen et al. (2005), the CES includes five items to assess social cohesion and two items to evaluate informal social control resulting in potential scores ranging from 5 to 35. In designing surveys to assess social capital, the reference area should be explicitly defined in a way that is meaningful to respondents (Harpham, 2011). For this reason, the CES questions were modified to explicitly define the "community" as the respondent's assisted living facility.

### *Mental Health*

The mental health instrument used for the present study was the Quality of Life Inventory (QOLI), a validated measure of well-being and life satisfaction (Frisch, 1994; Frisch, Cornell, Villanueva, & Retzlaff, 1992)

with high reliability (McAlinden & Oei, 2006). On the QOLI, participants rate 16 items on the importance of and their satisfaction with each item. The result is a weighted assessment of the individual's overall satisfaction relative to the aspects of their life that are perceived to matter most. Although not all the items are likely to pertain to all respondents, the self-weighting process limits the effect of irrelevant variables, and the QOLI instrument has been used successfully with previous studies of older adults (Bourland et al., 2000; Roseman et al., 2011).

By convention, QOLI raw scores are recoded as *T* scores. Recoding the QOLI scores permits comparisons with the general population. *T* scores between 58 and 77 are classified as "high" quality of life and correspond to the 81st to 99th percentile of all respondents and scores between 0 and 37 are classified as "very low" quality of life and correspond to the first to 10th percentile (Frisch, 1994).

### *Additional Survey Measures*

Prior to completing the CES and QOLI with each participant, a general participant survey was used to collect additional demographic and health measures. To assess overall health, participants were asked "In general, would you say that your health is excellent, very good, good, fair or poor?" This single item, self-rating of health status is a reliable indicator for objective health status (Wu et al., 2013) and is predictive of overall mortality (Idler & Angel, 1990; Schoenfeld, Malmrose, Blazer, Gold, & Seeman, 1994). This measure was included in the primary analysis because self-rated health has also been linked to mental health outcomes (Ambresin, Chondros, Dowrick, Herrman, & Gunn, 2014; Han, 2002).

The participant survey also incorporated the Instrumental Activities of Daily Living (IADL) Scale (Lawton & Brody, 1969) interview questions adapted from Graf (2008). The IADL provides insight into the relative independence and physical health of the participants (Song, Meade, Akobundu, & Sahyoun, 2014).

### *Built Environment Quality*

Built environment quality was not measured directly through the individual interviews. Built environment quality was assessed by the researchers for all street segments within a one eighth-mile radius of the assisted living community using the Revised Senior Walking Environmental Assessment Tool (SWEAT-R) instrument (Cunningham, Michael, Faraquhar, & Lapidus, 2005; Michael et al., 2009). This unit of analysis was selected to provide a comprehensive picture of the built environment in the immediate vicinity of the assisted living community within a distance that would be accessible to most older adults, including

**Table 1.** Assisted Living Community Characteristics.

	Assisted living community					
	A	B	C	D	E	F
Number of participants	14	9	9	22	20	2
Facility details <sup>a</sup>						
Independent living	Yes	Yes	Yes	Yes	Yes	Yes
Rehabilitation	Yes	No	No	Yes	Yes	Yes
Skilled nursing care	Yes	No	Yes	Yes	Yes	Yes
Memory care	Yes	Yes	No	Yes	Yes	No
Subsidized cost	No	No	No	Yes	Yes	No
Built environment quality						
Total score	31	21	31	29	32	18
Classification	High	Medium	High	Medium	High	Medium

<sup>a</sup>Care levels offered in addition to assisted living services. Assisted living communities A through F were the six sites where interviews were permitted and conducted.

those with some degree of mobility impairment. The SWEAT-R instrument was designed to measure four domains of walkability for older adults: functionality, safety, esthetics, and destinations (Cunningham et al., 2005). Communities were scored on five equally weighted, representative indicators for each of these four domains to generate summary scores potentially ranging from 0 to 40. Specifically, the included measures for functionality were the availability of benches, sidewalk continuity, sidewalk condition, slope, and presence of buffer zones between sidewalks and the street. The safety measures were the number of streetlights, number of lanes of traffic, crosswalk markings, crosswalk signage, and the presence of ramps and curb cuts. Esthetic measures included street trees, yard maintenance, building condition, presence of litter, and quality public spaces. Destinations included gathering places, retail shops, health care facilities, transit stops, and overall diversity of land use. Our research team measured built environment quality at 12 assisted living communities; however, only six granted permission for individual interviews with their residents. As such, the analyses reported below are limited to the built environment quality surrounding these six fully participating communities.

## Results

### Community Characteristics

The six assisted living communities where individual interviews were conducted had many similarities. Each location offered various types of housing to meet the needs of older adults along a continuum of care. All six communities offered independent living residences in addition to the assisted living apartments on the campus where the study participants resided. Five communities provided skilled nursing services for residents needing additional care and four of the six communities offered memory care housing for residents with advanced dementia or Alzheimer's

disease. In general, older adults included in the study would have the option of making the assisted living community their permanent home, regardless of their future health care needs, although they may have to move to a new apartment or new building within a complex to access the different levels of care.

The socioeconomic characteristics of the surrounding neighborhood was an area where the communities differed. Three of the six communities were located within a single, low-income zip code. The median household income was about US\$15,150 for this zip code and 73% of adults above the age of 25 years had graduated from high school or completed their general equivalency diploma (GED). The majority (65%) of residents in this zip code were non-White. The other three assisted living communities were located in zip codes where residents were more affluent, more educated, and predominantly non-Hispanic White (U.S. Census Bureau, 2015). Two of the assisted living communities located in the lower income zip code offered subsidies through the U.S. Department of Housing and Urban Development to help defray costs for lower income residents. Residents at the remaining four sites paid market rates for their rooms, typically in excess of US\$5,000 per month.

These socioeconomic differences were not reflected in the built environment quality surrounding the assisted living communities in the study. Site audits were completed for 12 assisted living communities in the region and demonstrated a range of low-, medium-, and high-quality environments. However, the six sites that allowed their residents to be interviewed were all scored very similarly using the SWEAT-R tool and clustered in the medium and high range (Table 1).

### Participant Characteristics

The age of respondents ranged from 65 to 97 years with a mean of 82.7 years ( $SD = 8.6$  years; Table 2). The majority of participants were female (80%) and non-Hispanic White (75%). Due to the limited number of

**Table 2.** Demographic, Social Capital, and Mental Health Characteristics of Study Participants.

	Frequency	Percent
Age		
65-74 years	15	20.3
75-84 years	21	28.4
85-94 years	33	44.6
95 years and older	5	6.8
Gender		
Female	61	80.3
Male	15	19.7
Race/ethnicity		
White, non-Hispanic	57	75.0
Non-White and/or Hispanic	19	25.0
Educational attainment		
High school graduate	63	82.9
Did not complete high school	13	17.1
Years of residence		
Less than 1.0	16	21.3
1.0-5.0	37	49.3
More than 5.0	22	29.3
General health status		
Fair or poor	21	27.6
Good or better	55	72.4
Instrumental activities of daily living		
0-3	21	28.0
4-5	28	37.3
6-8	26	34.7
Cognitive impairment (MMSE-BV)		
10-13	35	46.1
14-16	40	52.6
Social capital scores (CES)		
7-21	16	21.9
22-29	41	56.2
30-35	16	21.9
Mental well-being <i>T</i> scores (QOLI)		
0-36 (very low)	4	5.9
37-42 (low)	4	5.9%
43-57 (average)	32	47.1
58-77 (high)	28	41.2

Note. MMSE-BV = Mini Mental State Examination–Brief Version; CES = Collective Efficacy Scale; QOLI = Quality of Life Inventory.

participants of Hispanic ethnicity and the small number of individuals who identified as a race other than White, race and ethnicity were combined into a single, dichotomous variable. One in four respondents were included in this aggregate non-White and/or Hispanic category. The majority of participants indicated they were widowed (67%) or divorced (22%). Most respondents had completed high school (83%), including 29% who were college graduates.

When asked to describe their overall health status, 72% reported they were in good or better health, including 8% who described their health status as “excellent.” The remaining 28% described their overall health status as fair or poor. Study participants represented the full range of possible IADL scores from 0 to 8 with a mean

score of 4.3 ( $SD = 2.2$ ). Participants most commonly reported needing assistance with shopping, transportation, managing medications, and preparing meals.

As previously noted, cognitive impairment was assessed using the MMSE-BV and individuals scoring less than 10 were excluded from the study. Of those whose scores fell within the eligible range, the mean score was 13.5 ( $SD = 1.9$ ) out of 16.

For social capital, potential scores on the CES ranged from 7 to 35, but the observed range from respondents was between 16 and 34 points. The mean CES score for the study population was 25.9 ( $SD = 4.8$ ). For mental health, when using QOLI *T* scores, the anticipated mean for the total population is equal to 50. For the study population, QOLI *T* scores ranged from 25 to 74, and the mean was 54.7 ( $SD = 10.9$ ). Although somewhat higher than the overall population, the mean *T* score for the study population falls in the range for the “average” quality of life classification.

Pearson’s product moment correlation was calculated to assess the relationship between CES and QOLI scores alone. There was a moderate, positive correlation between social capital and mental well-being,  $r = .473$ ,  $p < .001$ . That is, social capital explains approximately 22% of the variation in mental well-being for assisted living residents in this study.

A linear regression analysis was calculated to predict QOLI *T* scores based on our hypothesis that increased built environment quality and increased social capital would be positively associated with mental well-being for older adult residents of assisted living communities. In addition to our independent variables (SWEAT-R score and CES total score), we included the following potentially confounding variables in this model: self-rated health status, IADL total score, years of residency at the assisted living community, and selected demographic variables (dichotomous race/ethnicity, sex, age, marital status, and educational attainment). A significant regression equation was found ( $F(10, 52) = 2.253$ ,  $p = .028$ ,  $R^2 = .302$ ,  $R^2_{\text{adjusted}} = .168$ ). The analysis showed that CES total scores significantly predicted QOLI *T* scores ( $\beta = 0.476$ ,  $t(52) = 3.894$ ,  $p < .0001$ ) but all other variables were nonsignificant in this model.

## Discussion

The current study extends our understanding of mental well-being for older adults. Prior to this study, the literature suggested that social capital had a protective effect against adverse health outcomes, and increased social capital was associated with decreased rates of mental illness and depression. Beyond reducing the risk of mental illness, this study demonstrates that social capital is associated with the positive dimension of mental well-being or quality of life. Specifically, increased social capital is associated with increased mental health and happiness for older adults residing in assisted living communities, with social capital explaining about 20%

of the variation in quality of life. In this regard, social capital appears to be an important predictor of mental health for older adults.

There are several limitations in this study as a result of the research design. First, the narrow geographic scope of the project may limit the generalizability of the findings to communities beyond Louisville. Louisville is a large, urban city with pockets of deep poverty and deep wealth. In addition, the study participants were identified through volunteer sampling. Because participants were not randomly selected, they may not be representative of the general population of assisted living residents in Louisville. In addition, study results were based on self-reported data obtained during in-person interviews. Generally speaking, the instrumentation had been validated previously and found to be reliable with older adults. However, not all measures had been used with an assisted living population in the past, and the psychometric properties for older adults living independently or those in nursing homes may not be the same for assisted living residents.

An unforeseen limitation was the difficulty in securing permission from the facility staff at each assisted living community, highlighting the need to improve research opportunities for this population. The sites where we were able to obtain permission to interview residents had limited diversity in built environment quality, and this may have lowered our ability to detect any potential effect of built environment quality. Although built environment quality did not emerge as a meaningful predictor of mental well-being for assisted living residents, further research is warranted to determine whether the built environment may produce other benefits for this population.

The amenities provided and village-like atmosphere of many assisted living communities are intended to meet the needs of residents on site. These positive attributes of the community may deter residents from exploring the surrounding neighborhood. Car culture is a complicating factor in walkability, both in terms of the value that people place on the availability of destinations and their tendency to drive rather than walk (Menec, Brown, Newall, & Nowicki, 2016). It is possible that residents of a car-centric community such as Louisville may be culturally disinclined to take advantage of otherwise accessible destinations. Future research efforts should explore the ways in which assisted living and other residential communities for older adults can integrate with the surrounding neighborhood.

Despite these limitations, this study demonstrates that social capital is predictive of mental health for older adults residing in assisted living communities. QOLI scores for study participants corresponded to only “average” mental well-being, and an implication of our study is that there is opportunity for further improvement in mental well-being for assisted living residents—possibly through increased social capital. Previous research has demonstrated the mental health benefits of social

engagement and participation for assisted living residents (Jang, Park, Dominguez, & Molinari, 2014). It is expected that increased participation in activities and events would also increase perceptions of trust and reciprocity in assisted living communities. Further research is needed to evaluate the impact of the activities and programmatic offerings at assisted living communities on resident social capital. Although little is known about cultivating social capital for older adults transitioning from community-dwelling to residence in an assisted living facility or other congregate housing, the potential benefits of increased social capital are sufficiently promising to warrant further study.

### Authors' Note

This study was reviewed and approved by the University of Louisville Institutional Review Board (Study# 12.0297).

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