



Most assisted living residents enjoy being able to spend time outdoors, but many have concerns regarding the design and furnishing of existing landscaped spaces at their community

Access to nature boosts physical activity among older adults, saves staff time

In a properly designed environment, many residents will go outdoors safely on their own

by Susan Rodiek, PhD, NCARB

On September 13, 2010, my colleagues and I were gratified to receive a professional award from the American Society of Landscape Architects at the society's annual meeting in Washington, DC. That award, and the recognition our team has received from numerous organizations that provide long-term care to older adults, reinforced the value of the time and effort we put into developing an instrument that makes environmental evaluations of assisted living communities more quantifiable and reliable, and enables providers to compare satisfaction-related outcomes associated with physical environments.

We developed the instrument based on seven key principles that evaluate specific environmental qualities in assisted living communities (for more information, see “Principles for outdoor areas that encourage resident participation” on page 21). We then identified up to 10 ratable items that appeared to be the main components of each principle, resulting in a total of 63 individual items, which we used in the evaluation tool. After evaluating 68 randomly selected communities in various parts of the United States, and surveying 1,560 residents and staff, we identified a number of landscape features that were strongly associated with outdoor usage.

This three-year project, funded by two Small Business Innovation Research grants from the National Institute on Aging totaling close to \$850,000, led to the creation of a three DVD set, *Access to Nature for Older Adults*, which is available on our website (www.access-tonature.org). On that site, we are also

offering our evaluation tool and other resources free of charge to active-aging professionals.

It is our hope that active-aging communities and facilities will use our tool to evaluate their own environments and avoid pitfalls that might prevent residents from easily accessing outdoor features. Augmenting recent studies showing that outdoor usage can benefit mood, sleeping patterns, hormone balance and vitamin D absorption, the most recent assessment of our data shows that well-designed outdoor space can also increase residents’ physical activity participation, thereby providing additional health benefits.

Starting points

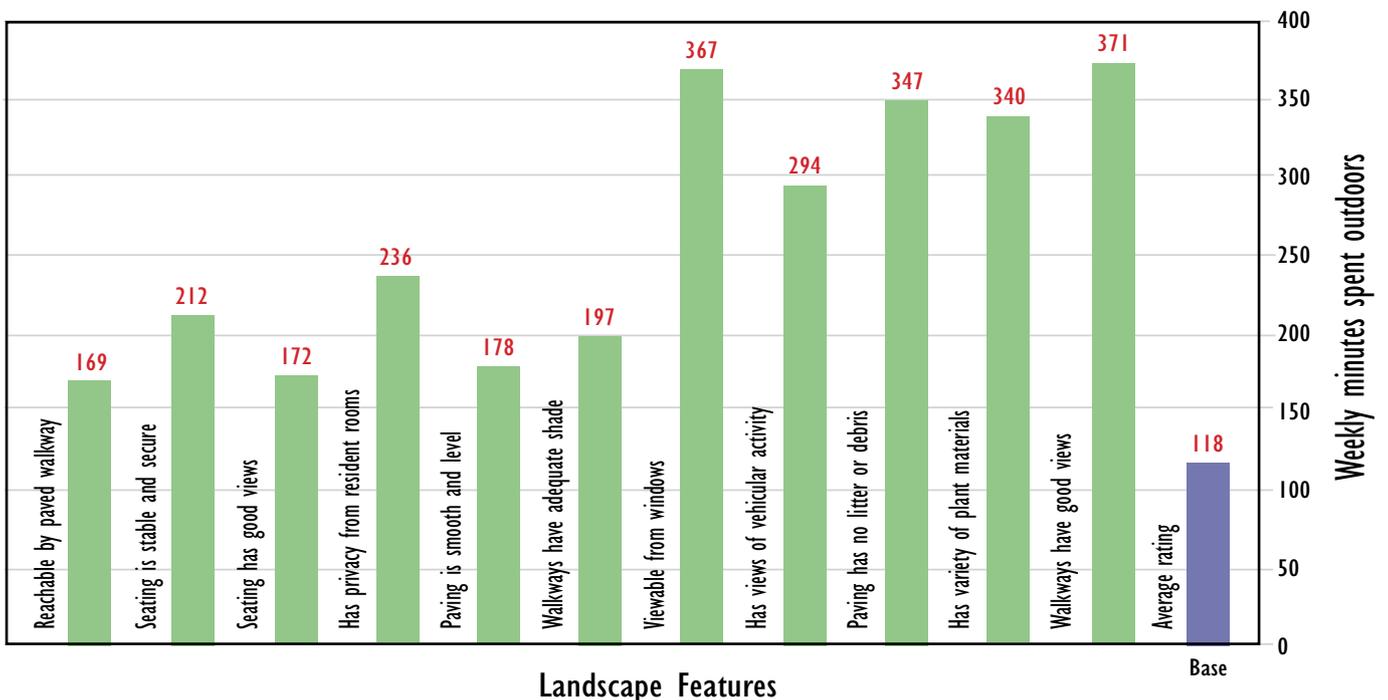
Having access to nature and the outdoors has long been considered therapeutic for older residents in long-term care settings. Research is beginning to confirm that spending time outdoors may improve sleeping patterns, reduce

pain, decrease urinary incontinence and verbal agitation, speed up recovery from disability, and even increase longevity.¹⁻⁴ However, despite the potential health benefits, outdoor areas in long-term care facilities are often reported as underutilized by older residents.⁵⁻⁷

Our study compared objectively rated qualities of facility outdoor space with the outdoor usage levels of residents, to see if residents spent more time outdoors in places with better rated environments. We focused on assisted living communities, where most residents were still able to access the outdoors independently. We rated environmental features using our evaluation tool, and compared resident and staff survey results with the environmental ratings. Details of our methods have been previously published.⁷⁻⁹

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Figure 1. Landscape features that increased outdoor usage. This portion of the bar graph shows features that increased time spent outdoors up to approximately 3.5 times the baseline at facilities where this feature was rated as average.



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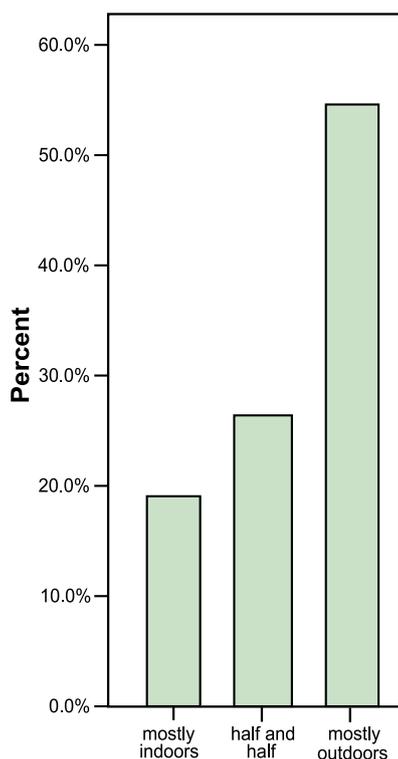
What we found

The amount of time residents spent outdoors was *substantially influenced* by several landscape features evaluated by the core design concepts. For example, features long considered important by researchers and design practitioners, such as safe paving, good seating and strong indoor-outdoor connections, were measurably related to the outdoor usage of older residents, when all other factors are controlled for (see Figure 1 on page 19).

Figure 2. Link between physical activity and accessible, walkable outdoor environments.

IF the weather is nice, where would you PREFER to do your walking?

- 54.6% of the sample prefers outdoor walking.
- Only 19.0% prefers indoor walking.



We also documented a strong correlation between outdoor usage, levels of walking and physical activity, environmental satisfaction, and the self-reported health of residents (see Figure 2 on this page). Specifically, we found a link between physical activity and weekly minutes of outdoor usage:

- Those who are less active spend about 131 minutes a week outside.
- Those who are moderately active spend about 245 minutes a week outside.
- Those who are very active spend about 370 minutes a week outside.

In addition, residents who reported themselves as very healthy walked about an hour more per week than those who reported themselves as any other category (somewhat healthy, somewhat poor health, very poor health).

Taken together, our findings show that the quality of the outdoor environment is strongly linked to important health-related measures and behaviors. For example, a feature with modest impact (“the outdoors can be reached entirely by paved walkways”) still increases the amount of time spent outdoors substantially—by an *additional 51 minutes* per week. The environmental feature with the highest impact (“the outdoor area has good views of birds and wild-life”) is associated with a *nearly tenfold increase in outdoor usage*—from 118 minutes per week to 1,032 minutes per week (see Figure 3 on page 22). This is the equivalent of going from about 27 minutes per day to nearly two and a half hours per day, which would be a radical change.

Although this is a statistical projection that holds all other variables constant, and therefore does not necessarily reflect what would happen in the real world, the results nonetheless suggest that the qualities of the landscape are

likely to have a significant and powerful impact on outdoor usage in active-aging communities, especially in assisted living and continuing care retirement communities.

Implications for active-aging professionals

When I first started doing research on getting older people outdoors, many of my colleagues said we simply needed to set up activity programs and the staff would take residents outdoors. They were adamant that residents wouldn’t go out unless the staff take them out. I heartily disagreed then, and still do. Yes, of course staff can take residents outside. But in this era of higher costs and tighter budgets, who can afford to pay staff to take all the residents out as often as they need to for good health? In terms of sustainability, that’s not a viable option.

In many cases, the expensive interventions of having staff take people outside or creating events that bring residents outdoors are necessary mainly because the physical environment is not designed in a way that makes it easy, appealing, practical, and safe for residents to go out on their own.

Also, management may spend money on an expensive feature such as a gazebo, which may be pretty, but in fact may not be easy to access in a walker or a wheelchair, or may not have comfortable seating. Moreover, many residents report feeling like they’re in a fish bowl when sitting in a gazebo, especially if surrounded by windows of resident units. Or staff may use the area to smoke cigarettes. While there’s nothing wrong with building a gazebo, in many instances it doesn’t serve the purpose of encouraging outdoor usage by residents.

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A landscaped entry garden near the main lobby is a research-based design element that promotes social interaction, encourages increased outdoor usage, and provides a sense of connection with the world beyond the community walls

Principles for outdoor areas that encourage resident participation

The evaluation instrument used in the study was based on the following key principles, which evaluate specific environmental qualities in assisted living communities:

1. Contact with the world beyond the community.

An outdoor area should provide contact with the larger world residents have left behind by creating opportunities to watch and/or interact with people, elements, and/or activities beyond the community. This may include mail deliveries, nearby roads, etc.

2. Indoor/outdoor connection.

The outdoor area should be extremely easy to see and reach because the doorway is very visible and convenient from the main indoor places where residents spend time. Comfortable transition zones are located both inside and outside

the doorways, making it easy to linger near the doorway.

3. Freedom, choice, and variety.

The outdoor space should foster a sense of freedom in residents. The physical environment supports their autonomy and independence by providing a variety of locations, activities, focal points, views, seating, etc., that allow residents to choose among alternatives.

4. Comfortable and accessible.

Residents should have little difficulty navigating and using an outdoor area in comfort because it is designed and maintained with potential diminished physical, functional, sensory, and cognitive abilities in mind.

5. Enjoyment of nature.

An outdoor area should allow residents to view, enjoy, and relate to a variety

and abundance of nature elements, especially those often preferred by older adults, such as flowers, greenery, trees, water, and wildlife.

6. Places to be active.

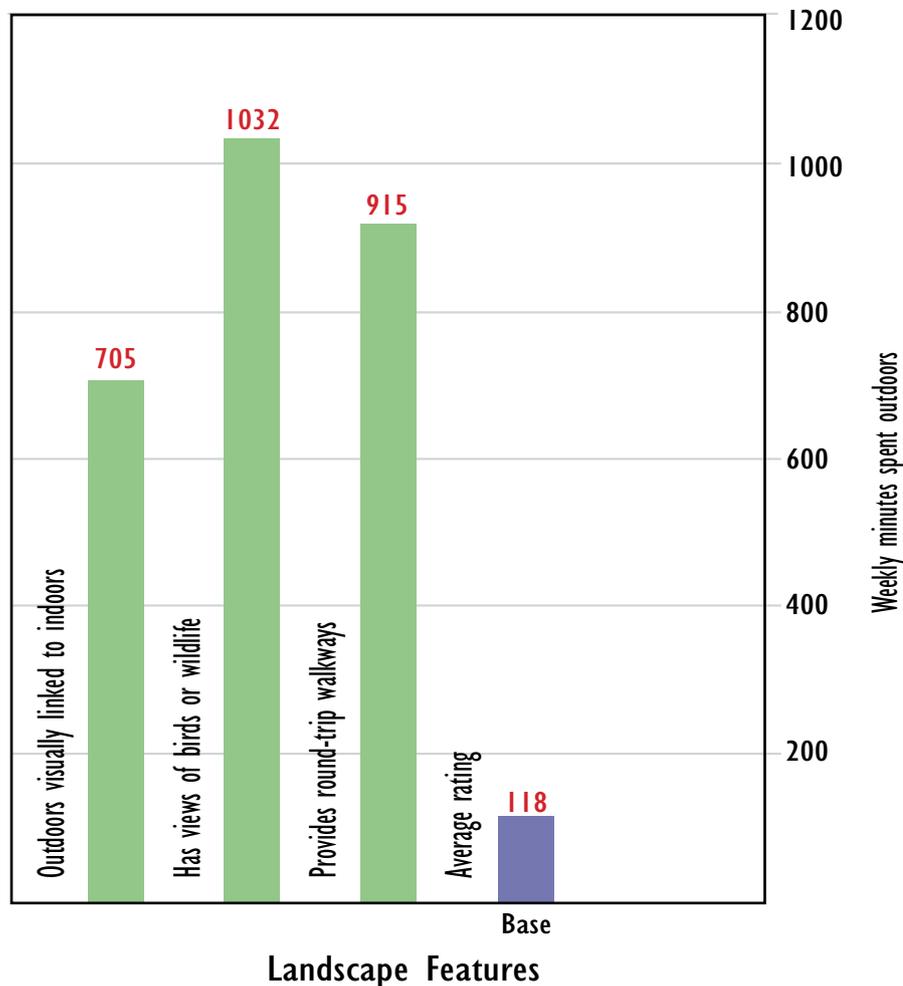
An outdoor space should provide well-landscaped, safe, and comfortable walkways, with adequate seating. It also may provide places for outdoor parties, games, stretching/exercise stations, swimming, etc.

7. Safe and secure.

The outdoor area should allow residents to feel safe and secure while outdoors, especially in terms of risk of falling, because it is designed and maintained to minimize elements that may be hazardous or dangerous.

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Figure 3. Landscape features that increased outdoor usage. The baseline of 118 shows outdoor usage when all features were rated at 5 out of 10 possible points. The bars show increased outdoor usage where specific features were rated at 8 instead of 5, with everything else held constant.



People also spend a lot of money on elaborate view landscaping at the entry from the road, which is far from where the residents can use it. That's more like window dressing, aimed at making a good impression. In most cases, it doesn't help the residents. I know of one community that had beautiful lawns that took a lot of water and mowing and had beautiful trees that residents could not even get close to; instead, they had to spend time on hard paving in the hot sun and just look at the area. They couldn't put their hands

on the bark of the sycamore tree. They couldn't sit on a bench with a friend in the shade of the trees. Their family members couldn't go with them on a walk, on a wandering path through the trees. And all this meant there was little in the environment to motivate people to go outside and stay outside for any length of time.

The bottom line is that if the environment is designed correctly, with lots to do and with good visual surveillance from common and staff areas inside,

then people who are interested and capable of going outdoors can have much greater levels of physical activity and much richer lives. ☺

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Images courtesy of Susan Rodiek

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