Inspiring Next Practices

INNOVATIVE RESEARCH ON AGING AWARDS

2019

matherlifeways®
Institute on Aging

The Innovative Research on Aging Awards recognize excellent applied research that offers important implications for the senior living industry. Created to inspire next practices, the annual awards honor groups and individuals committed to bringing research to real life, thereby improving the senior living industry.

Each year, Mather LifeWays Institute on Aging reviews dozens of submissions on a wide range of topics, including health and well-being of senior living residents, technological advancements for older adults, senior living workforce, and aging in place. The Institute selects award recipients based on:

- the quality of their research
- the actionable research findings and recommendations
- relevance to important problems in the senior living industry
- innovation

We hope these findings and ideas will benefit the senior living industry as a whole, as other organizations adapt the ideas and help transform them into next practices.

TABLE OF CONTENTS

Speaking to Stereotypes
Shifting Bias toward Aging with Framed Messaging

FrameWorks Institute
Daniel Busso, PhD
Andrew Volmert, PhD
Nat Kendall-Taylor, PhD

CATEGORY: Other – Bias and Discrimination against Older Adults

In the United States, ageism is a pervasive societal problem. Older adults are often underrepresented in the media, or depicted as vulnerable, physically and mentally impaired, and dependent. These ageist stereotypes shape behavior toward, and expectations about, older adults, and when internalized, impact older adults' own well-being and self-concept. Research shows that implicit attitudes, which are often developed without conscious awareness or intent, are likely to contribute strongly to discriminatory attitudes and behaviors toward older adults. Consequently, the goal of reducing these implicit biases holds powerful implications for those working with older adults.

The researchers recruited 767 participants selected to approximate US Census distributions for age, sex, education, ethnicity, household income, and race. Participants were randomly assigned to read a number of framed messages about the aging process, or to a control condition. Framed messages emphasized the contributions of older adults to society; aging as a process of accumulating wisdom and energy; and mechanisms through which prejudice against older adults operates. Participants then completed an Aging Implicit Association Test to assess implicit bias.

"Avoid using language that refers to older people as "other" and reinforces paternalistic attitudes toward them."

From Research to Real Life

Imagine the power of changing implicit bias toward aging within a senior living community – both for the staff providing services and for the residents served.

Here are some specific ideas:

1. **Reframe your own statements** – This will provide people with new language for talking about aging. Rather than saying someone is "fighting aging" or even "staying young," you might say "as we get older, we gain momentum...."

2. **Use inclusive language** – Avoid using language that refers to older people as "other" and reinforces paternalistic attitudes towards them.

3. **Reimagine aging** – Help people understand older age as an integral part of the natural process of life, not a discrete or separate subset of the human lifespan.

4. **Accentuate the positive** – Use positive, inclusive language to build more productive, counter-stereotypic descriptions of the aging process.

» KEY TERM

Framed messages: A message delivered within a preplanned context designed to construct information and communications. A message may be framed with emotion, logic, ethics, or may focus on the core motivations of intended recipients.

FINDINGS

The researchers found that participants overwhelmingly displayed an implicit preference for younger people over older adults, confirming existing research showing pervasive age bias in the US. However, participants who read one of the three framed messages showed significantly lower levels of implicit bias against older adults, compared with those in the control condition. In addition, analysis showed that a framed message about the dynamism of older adults reduced implicit bias more so than an unframed aging message (or a message with no context), providing evidence that the result was attributable to the frame itself, not to general aging content.

READ THE ABSTRACT

Busso, D. S., Volmert, A., & Kendall-Taylor, N. (2019). Reframing aging: Effect of a short-term framing intervention on implicit measures of age bias. *Journals of Gerontology, Series B: Psychological Sciences, 74*, 559-564.

Quick Thinking
Pumping the Brakes on Cognitive Decline in Independent & Assisted Living Residents

The University of Iowa
Marianne Smith, RN, PhD
Michael P. Jones, PhD
Megan M. Dotson, BA
Fredric D. Wolinsky, PhD, ScD

CATEGORY: Health and Well-Being of Senior Living Residents

Age-related cognitive decline is a well-documented, serious issue with harmful effects on the quality of life. This is true for older adults in both independent and assisted living settings. For the first time, an intervention using computerized speed of processing training sought to improve cognitive function for residents in these settings.

This relatively large randomized controlled trial included 351 participants age 55 and better (mean age = 81) from the assisted (47%) and independent (53%) living settings in 31 senior living communities. The active intervention group received computerized speed of processing training, while the attention control group played computerized crossword puzzles for 10 hours at baseline and an additional four hours at both 5 and 11 months. Assessments occurred at baseline, six to eight weeks (post-training), and 6 and 12 months.

» KEY TERM
Speed of processing: A cognitive ability measured as the time it takes an individual to complete a mental task.

From Research to Real Life

The findings of this study have important implications for the care of older adults in senior living communities:

- Sharing these findings—and public health messaging about the potential benefits of speed of processing training—with all residents may encourage them to pursue the benefit.
- Offering speed of processing training to residents in both independent and assisted living, particularly those who are generally older and less healthy, may improve their cognitive function.

FINDINGS

The trial demonstrated statistically and clinically relevant effects on processing speed for those in both assisted and independent living settings. The speed of processing training group showed processing speed improvements of 39 to 63 milliseconds and greater percentages of participants (9.8 to 14.9 percentage point advantages) made meaningful improvements beyond the baseline than the control group. To put that in perspective, the researchers point out that these effects represent a 12.7-foot shorter distance to bring a car traveling at 55 mph to a safe and complete stop.

READ THE ABSTRACT

Smith, M., Jones, M. P., Dotson, M. M., & Wolinsky, F. D. (2018). Speed-of-processing training in assisted and independent living: A randomized controlled trial. *Journal of the American Geriatrics Society, 66*, 1538-1545.

Reprogramming Person-Centered Care

Leveraging Data Analytics to Streamline Cumbersome Q&A

Tennessee Technological University
Gerald C. Gannod, PhD
Nathan Martindale, BS

Miami University
Katherine M. Abbott, PhD, MGS
Alexandra Heppner, BSW

Penn State University
Kimberly Van Haitsma, PhD

CATEGORY: Technological Advancements for Older Adults

This project addressed challenges associated with person-centered care in skilled nursing communities and specifically sought to improve upon the Preferences for Everyday Living Inventory (PELI-NH), which is commonly used in these settings. Seventy-two questions long, the PELI-NH can present workload and survey fatigue challenges for direct care staff and residents alike.

The developers devised an approach designed to help direct care staff by providing a guided approach for identifying resident preferences. They created a system for identifying residents' potential preferences using machine learning technologies similar to those used in the Netflix and Amazon recommendation systems (e.g., "If you enjoyed X, you might also enjoy Y").

The developers involved in this project worked with data from a sample of 255 skilled nursing resident responses to the PELI-NH, focusing on the 16 preference items from the MDS 3.0 Section F (customary routine and activities). Their system uses collaborative filtering, whereby insights and predictions are created using the interests and preferences of a large group of residents to predict the interests and preferences of individual residents. The algorithm identifies sets of "you might also like" patterns called association rules, based on responses to the 16 MDS preferences, and recommends additional preferences with a high likelihood of being important to a specific resident.

From Research to Real Life

The findings from this article highlight the applicability of machine learning, and specifically recommender systems, to the skilled nursing setting. The developers note that because the system uses data from a large group of residents to predict the interests and preferences of individual residents, the algorithm will become more accurate as larger datasets become available. Ultimately, the use of machine learning could:

- assist providers in tailoring their preference assessments
- maximize staff time while minimizing the burden of asking a resident dozens of questions
- provide direction for future research and advancing the delivery of preference-based, person-centered care

The developers point out that, at a time when skilled nursing providers are asked to improve the quality and satisfaction with care at a lower cost, they must embrace technology to help improve the efficiency and effectiveness of care.

FINDINGS

The developers found that the recommender system was extremely accurate at predicting important preferences of residents. The system had an 80.2% recall performance—meaning the ratio of correctly predicted preferences compared with all predicted preferences and non-preferences—and a 79.2% precision rate in correctly predicted rules with respect to the rules predicted to be true.

The use of machine learning for this application provides an innovative example of how modern data science and analytics can impact the use of data that skilled nursing providers already regularly collect. In this context, information that may get buried or lost can have an impact on honoring preferences while relieving some of the paperwork burden faced by direct care workers.

READ THE ABSTRACT

Gannod, G. C., Abbott, K. M., Van Haitsma, K., Martindale, N., & Heppner, A. (2019). A machine learning recommender system to tailor preference assessments to enhance person-centered care among nursing home residents. *The Gerontologist, 59*(1), 167-176.

> "...at a time when skilled nursing providers are asked to improve the quality and satisfaction with care at a lower cost, they must embrace technology to help improve the efficiency and effectiveness of care."

Exercising Intelligence
Negating Genetic Risk of Alzheimer's with Physical Activity

University of North Carolina Greensboro
Jennifer L. Etneir, PhD
William B. Karper, EdD
Jeffrey D. Labban, PhD
Aaron T. Piepmeier, PhD
Chia-Hao Shih, PhD
William N. Dudley, PhD
Vincent C. Henrich, PhD
Laurie Wideman, PhD

CATEGORY: Aging in Place

By 2050, the prevalence of Alzheimer's disease in the United States is predicted to reach 13.8 million. This research addresses the use of physical activity to protect cognitive function in older adults with a heightened risk of Alzheimer's disease.

In this observational study, cognitively normal older adults (50 to 65 years old) with a family history of Alzheimer's disease participated in an eight-month physical activity trial. The trial consisted of moderate-intensity aerobic activity (walking) and strength training for 60 minutes a day, three days per week. Participants' cognitive performance was assessed at baseline, pre-test, mid-test, and post-test. Researchers examined the change in cognition relative to each participant's genetic risk for Alzheimer's disease—which the researchers determined with genotyping.

"Delaying onset of the disease by one year can reduce incidence by 11%; delaying onset by five years could reduce prevalence by 29 to 43%."

From Research to Real Life

The maintenance of cognitive function is of ongoing concern to many older adults. Fortunately, there is evidence that physical activity can improve cognitive performance in this population, and there is longitudinal evidence showing that physical activity is protective against clinical cognitive impairment (including Alzheimer's disease). This research is the first to show that when physical activity behavior is increased, older adults with both a family history of Alzheimer's disease and a heightened genetic risk for Alzheimer's disease achieve benefits in terms of their memory performance.

With this powerful evidence in mind, senior living communities should:

• redouble their efforts to provide attractive, consistent, and engaging physical activity opportunities for residents

• educate older adults about the potential cognitive benefits they can enjoy if they regularly engage in physical activity

• use this knowledge as a key motivation for older adults to increase their physical activity behavior, resulting in cognitive and other health benefits

» **KEY TERM**
Genotyping: The process of determining differences in someone's genetic makeup by examining their DNA sequence using biological assays.

FINDINGS

The study's findings showed that participants had improvements in multiple measures of memory—irrespective of their level of genetic risk for Alzheimer's disease. In other words, those with the greatest genetic risk saw the same benefits to cognitive performance as their peers in similar, previous studies, who had no genetic risk. The researchers point out that this signals that the typical progression of cognitive decline may be sufficiently delayed to dramatically reduce an individual's risk of Alzheimer's disease and, at a population level, this could have an impact on world-wide prevalence. Delaying onset of the disease by one year can reduce incidence by 11%; delaying onset by five years could reduce prevalence by 29 to 43%.

READ THE ABSTRACT

Etnier, J. L., Karper, W. B., Labban, J. D., Piepmeier, A. T., Shih, C. H., Dudley, W. N., ... & Wideman, L. (2018). The Physical Activity and Alzheimer's Disease (PAAD) Study: Cognitive outcomes. *Annals of Behavioral Medicine, 52*(2), 175-185.

Harnessing Technology

Hosting a Virtual Care Farm to Address Loneliness

University of Montana
Keith A. Anderson, PhD, MSW

Dunrovin Ranch
SuzAnne M. Miller

CATEGORY: Technological Advancements for Older Adults

Loneliness has emerged as a grand challenge for our social and health care systems and poses an array of problematic issues for older adults. In this article, the author explores the impact of a virtual care farm—a marriage of nature and technology—to build community and combat loneliness in older adults.

The virtual care farm is an interactive online community designed to bring older adults together through the use of nature programming, education, and socialization platforms. The virtual care farm is intended to serve as a "virtual front porch" for watching ranch life and sharing experiences. This exploratory study analyzed descriptive data and unsolicited qualitative data provided by members of Days@Dunrovin, the first virtual care farm in the US. Of the 163 participants, 95% were women and 60% were age 60 and better. The vast majority (75%) accessed and engaged with Days@Dunrovin nearly every day.

> "These findings suggest that virtual care farms, designed to serve as a 'virtual front porch' for watching ranch life and sharing experiences, could be effective in combatting loneliness...."

From Research to Real Life

Senior living providers recognize the importance of introducing programming that has meaning, that connects older adults with varying levels of ability and disability, and that provides opportunities to learn and explore. The virtual care farm has the potential to fulfill these goals. There are three primary recommendations based on this line of research:

1. **Harnessing Technology** – It will become increasingly important for senior living facilities to incorporate technology into programming as older adults become more comfortable with it, and eventually demand it.

2. **Increasing Access to Social Opportunities** – It is projected that we'll see growing numbers of older adults with barriers to socialization, such as physical, cognitive, and emotional challenges.

3. **Adopting Nature-Based Approaches** – The virtual care farm allows older adults to explore the natural world at any time, from any place.

FINDINGS

Analysis of the qualitative data revealed three primary themes:

- connecting with nature
- connecting with others
- rejuvenation and healing

Participants reported visiting the website for the virtual care farm to check in on their adopted animals, to share stories with other members, and to seek out the healing powers of nature to cope with their own health challenges. These findings suggest that virtual care farms could be effective in combatting loneliness and harnessing technology to build communities and to contribute to the health and well-being of older adults.

READ THE ABSTRACT

Anderson, K. A. (2019). The virtual care farm: A preliminary evaluation of an innovative approach to addressing loneliness and building community through nature and technology. *Activities, Adaptation & Aging*. Published ahead of press at https://doi.org/10.1080/01924788.2019.1581024

Moving Motivation
Pinpointing What Prompts Older Adults to Exercise

University of Southern Indiana
Crystal N. Steltenpohl, PhD

DePaul University
Joseph Mikels, PhD
Michael Shuster, PhD
Eric Peist, BA
Amber Pham, BA

CATEGORY: Other – Aging and Exercise

This research aimed to help with understanding older adults' motivation for exercise. The researchers conducted focus groups with a diverse sample of younger adults (age 18 to 26) and older adults (59 and better), where they asked about participants' exercise motivations (or lack thereof); motivators and barriers to exercise; and preferences about when, where, and with whom they exercise. The focus groups were divided by age (younger, older) and exercise activity (low, high) to better facilitate participants' comfort with sharing their exercise habits and motivations (or lack thereof). The researchers then analyzed the data (via transcripts of the meetings) using directed content analysis and iterative categorization.

" …younger adults saw exercise as 'me time,' while older adults saw exercise as 'we time.' "

From Research to Real Life

> **» KEY TERM**
> **Holistic health:** An approach to health that considers the whole person and their environment rather than focusing on illness.

Senior living providers and aging services groups that want to promote the holistic health of their clients may be interested in these findings because they could:

- motivate more older adults to engage in physical activity at their locations
- improve outcomes for physical health through exercise
- decrease loneliness through social activity

According to the research, older adults focus more on the positive impacts of social interaction and tend to like any opportunity to interact with others, especially those around their age. Offering a number of social activities that involve some kind of movement, and advertising them as ways to get to know other people and maintain relationships both inside and outside of the community, could improve adherence to exercise plans.

FINDINGS

Overall, the study shows that younger adults focus more on practical goals, while older adults focus more on time spent with others and were more likely to see peripheral others (like acquaintances) as positive influences rather than negative influences. Essentially, younger adults saw exercise as "me time," while older adults saw exercise as "we time." Both older and younger adults were motivated by meaningful others (friends, family, etc.), but older adults focused on opportunities for social interaction with meaningful others, while younger adults focused on meaningful others' ability to provide support for their exercise goals. Additionally, older adults tended to see peripheral others (acquaintances, strangers, etc.) as potential sources of social interaction, while younger adults tended to see peripheral others as potential sources of judgment.

Given the importance of exercise in preventative care, this research could be beneficial for senior living communities as they design and advertise interventions to help older adults stay active or improve their exercise habits.

READ THE ABSTRACT

Steltenpohl, C. N., Shuster, M., Peist, E., Pham, A., & Mikels, J. A. (2018). Me time, or we time? Age differences in motivation for exercise. *The Gerontologist*. https://doi.org/10.1093/geront/gny038

Redefining Wellness

Improving Wellness Models Used with Older Adults

Virginia Tech
Matthew Fullen, PhD, MDiv, LPCC

CATEGORY: Health and Well-Being of Senior Living Residents

There is growing interest in wellness in older adults; unfortunately, little research exists on the topic. When wellness terminology is used to study older adults, it rarely uses a multidimensional, holistic definition, instead equating wellness with physical health. Also, most wellness models that have been applied to older adults were developed with younger groups in mind, so that the unique needs and strengths of older adults are overlooked. There is a need for the senior living industry to use wellness interventions that are multidimensional and culturally competent in regard to the population they serve.

This investigation combined a systematic literature review and correlational analysis to determine the current state of research on aging and wellness. The author analyzed 273 peer-reviewed articles published between 2005 and 2017 to see whether each used a definition of wellness that was multidimensional (i.e., four or more dimensions), and examined which wellness frameworks were used (e.g., Dunn's model; Hettler's 6-dimensions, etc.).

> "There is a need for the senior living industry to use wellness interventions that are multidimensional and culturally competent in regard to the population they serve."

From Research to Real Life

When promoting holistic wellness among older adults, senior living industry providers should:

- use multidimensional models of wellness which are more relevant to people in creating wellness goals as they age

- avoid definitions of holistic wellness that have been developed with other age groups in mind. Since wellness culture has been most heavily promulgated among college-age and working-age populations, it is possible that popular holistic wellness definitions are not culturally competent to the needs of older adults

- avoid assuming that wellness is essentially the same for people across the life span

- employ models that are grounded in gerontology research

This study proposes an eight-dimensional model for aging well that can be easily implemented within the industry, and it explains how certain wellness definitions may need to be re-cast when working with older adults (e.g., using relational wellness instead of social wellness due to research on what people need as they age).

FINDINGS

While research shows that interest in wellness and older adulthood has increased since 2005, only a fraction of the articles (14.63%) used a multidimensional, holistic framework when defining wellness. Instead, most wellness research continues to emphasize physical well-being without integrating other dimensions. The analysis also revealed that when multidimensional wellness definitions are used, they typically rely on wellness frameworks that were not based on a standard for older adults, leading to potential bias in how wellness is operationalized. Due to the lack of wellness models that were designed with older adults in mind, the author synthesized key findings from gerontology research to guide a proposed eight-dimensional model for aging well.

READ THE ABSTRACT

Fullen, M. C. (2019). Defining wellness in older adulthood: Toward a comprehensive framework. *Journal of Counseling and Development, 97*(1), 62-74.

Spreading Gossip

Demonstrating How Gossip Builds Connections among Older Adults Vulnerable to Isolation

University of California, San Francisco
Stacy Torres, PhD

CATEGORY: Aging in Place

The author of this study drew on five years of ethnographic fieldwork among older adults in New York City. The study presents empirical insights into the development of supplementary neighborhood-based networks of support for older people living alone and vulnerable to isolation. One opportunity for socializing among study participants involved engaging in neighborhood gossip venues, such as coffee shops and other retail establishments. The insights provided can help those in the senior living industry and aging-related fields understand older adults' preferences for vibrant, open, intergenerational spaces to build community and informal social support, which promote their independence as they age in place.

The author conducted 25 interviews and collected data on a fluid group of roughly 47 women and men age 60 and better, the majority of whom were women. The group included Puerto Rican, Jewish, and ethnic white (Italian, Greek, and Irish descent) people who were low-to-middle income.

> "Despite its negative reputation, gossip helped this broad group connect and access less conventional social support close to home...."

From Research to Real Life

There is a great need for scholars, policy makers, and the general public to understand how to support older adults aging in place. The author offers practical suggestions to members of the senior living industry:

• Given the more varied family structures among members of today's older generation, the patterns found in this study may become even more pronounced for subsequent generations of older adults, as more of them may be aging in place alone. Future empirical research should consider how gossip and other forms of talk may alleviate the isolation of older adults living in the community.

• Ample opportunity exists to investigate the significance of neighborhood places for older adults in a range of settings, the ways that places constrain or extend opportunities to avoid social isolation, and policy interventions to preserve public venues where older people can converse with others.

FINDINGS

This study finds that older adults who lived alone, without close kin, engaged in daily gossip about other older people they encountered as regulars in local eateries. Despite its negative reputation, gossip helped this broad group connect and access less conventional social support close to home. The majority of participants resisted formal organizations, such as churches or senior centers, and thus their interactions in public venues served as an important source of social involvement. In line with previous research, gossip betrayed emotional intimacy and caretaking that connected people who could have fallen off the social radar.

READ THE ABSTRACT
Torres, S. (2018). Aging alone, gossiping together: Older adults' talk as social glue. *The Journals of Gerontology: Series B*, gby154, https://doi.org/10.1093/geronb/gby154

SUBMIT FOR THE 2020 INNOVATIVE RESEARCH ON AGING AWARDS

Nominations will open in March, with a submission deadline in late May 2020.

For details, visit matherlifewaysinstituteonaging.com.

Staffed by researchers, Mather LifeWays Institute on Aging is an award-winning resource for research and information about wellness, aging, trends in senior living, and successful industry innovations. In order to support senior living communities and others that serve older adults, the Institute shares its cutting-edge research in areas including effective approaches to brain health, ways to enhance resilience, and successful employee wellness programs. Mather LifeWays Institute on Aging is part of Mather LifeWays, a nearly 80-year-old not-for-profit organization dedicated to enhancing the lives of older adults by creating Ways to Age Well.^{SM}

To receive monthly research summaries from the Institute, sign up for the free e-newsletter *InvestigAge* at InvestigAge.com.

1603 Orrington Avenue, Suite 1800 | Evanston, IL 60201
(888) 722.6468 | institute@matherlifeways.com

0719AC

matherlifeways®
Institute on Aging