Mather institute

THE AGE WELL STUDY:

Comparing Wellness Outcomes in Life Plan Communities vs. the Community at Large

YEAR 5 REPORT

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INTRODUCTORY LETTER

Dear Colleague,

We are pleased to share the latest Age Well Study, which aims to understand the impact of living in a Life Plan Community on residents' health and wellness. The five-year study was designed by Mather Institute in collaboration with Northwestern University, and included a total of more than 8,200 residents living in 122 Life Plan Communities across the country.

Resident participants were surveyed annually and, in Years 1 (2018) and 5 (2022), we compared their responses to a demographically similar sample of older adults living in the community at large, pulled from data in the Health and Retirement Study (HRS). Findings include the following:

- Similar to Year 1 results, in Year 5, residents reported better physical, emotional, intellectual, social, and vocational wellness than their community-dwelling counterparts.
- Between 2018 and 2022, changes in social and intellectual wellness tended to be more favorable for residents, while changes in emotional and spiritual wellness tended to be more favorable for those in the community at large. Changes in physical and vocational wellness were similar for both groups.

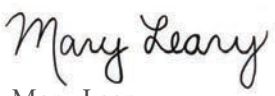
The fact that social engagement *increased* for residents during the pandemic is not surprising, since data across the five years consistently emphasize the social benefits of Life Plan Communities.

These findings shed light on the long-term impact of living in a Life Plan Community. Resident-participants continued to report better health and wellness over time across the majority of wellness dimensions versus their community-at-large counterparts. It's possible that people with a strong interest in health and wellness self-select when considering a move to a Life Plan Community, since wellness is a key attribute of offerings in these communities.

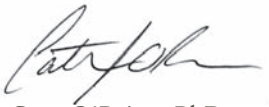
It should be noted that in Year 5, more than 50% of community-at-large responses were received prior to the start of the pandemic (surveyed between April 2018–June 2019 and March 2020–March 2021) vs. 100% of residents responding two years into the pandemic. We plan to update our comparison in 2024, when additional data is available for older adults in the community-at-large, to reflect the impact of the pandemic.

We'd like to thank the Life Plan Communities that participated in this important research, and especially the residents who participated in all five of the annual surveys. Our valued research partners also deserve thanks: National Investment Center, LeadingAge, ASHA, Ziegler, Life Care Services, and Novare.

Regards,



Mary Leary
CEO and President, Mather



Cate O'Brien, PhD
Senior Vice President and Director,
Mather Institute

AN OVERVIEW OF THE LONGITUDINAL STUDY

YEAR-BY-YEAR OVERVIEW

5
YEARS OF SURVEYING RESIDENTS IN LIFE PLAN COMMUNITIES ANNUALLY

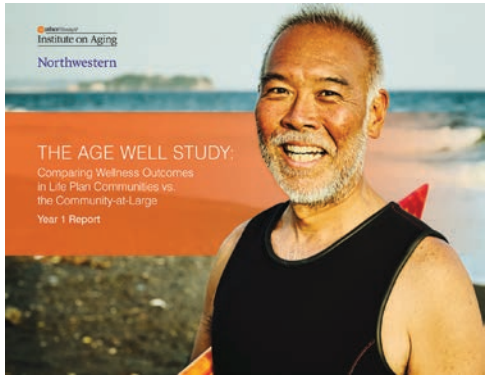
8,228
RESIDENTS PARTICIPATED ACROSS THE FIVE YEARS

122
TOTAL COMMUNITIES FROM AROUND THE US PARTICIPATED IN THE STUDY

RESIDENTS WERE COMPARED TO A DEMOGRAPHICALLY SIMILAR GROUP OF OLDER ADULTS RESIDING IN THE COMMUNITY AT LARGE IN YEARS 1 AND 5.

In 2018, Mather Institute began a five-year study of health and wellness among residents of Life Plan Communities. The first of its kind, the Age Well Study aimed to understand the impact of residing in a Life Plan Community on individual health and wellness.

This report includes findings from the fifth and final year of this national longitudinal research project as well as highlights from the previous four years. (Note that a full report on each year can be found at TheAgeWellStudy.com.)



OVERALL WELLNESS (YEAR 1)

Findings from the inaugural year of the Age Well Study showed that Life Plan Community residents' health and wellness compared favorably to that of a demographically similar sample of community-dwelling older adults in five of six **dimensions of wellness**. Specifically, Year 1 findings revealed the following:

- Life Plan Community residents tended to have greater emotional, social, physical, intellectual, and vocational wellness than their community-dwelling counterparts.
- Residents reported significantly more healthy behaviors than community dwellers.
- More than two-thirds (69%) of residents reported that moving to a Life Plan Community "somewhat or greatly improved" their social wellness.
- Older adults residing in the community at large reported greater spiritual wellness compared to Life Plan Community residents.

PHYSICAL HEALTH & HEALTHY BEHAVIORS (YEAR 2)

The second year the study examined factors that contribute to residents' **physical health and healthy behaviors**. Highlights included the following:

- Residents who were more "open to experience" and extroverted reported higher levels of healthy behaviors and more positive health outcomes (versus other residents).
- Residents who formed strong bonds within their community tended to engage in more healthy behaviors and have better overall health.
- Six out of ten residents indicated that they were sufficiently physically active. Among those who were not sufficiently active, the most commonly mentioned barrier to physical activity was health.

HAPPINESS & LIFE SATISFACTION (YEAR 3)

Year 3 of the study investigated factors that may be associated with residents' **happiness and life satisfaction**. The study explored relationships between resident happiness and a wide range of factors, including personal characteristics and personality traits, psychological resources, social and communal factors, and physical health. Findings included:

- Life Plan Community residents' average happiness and life satisfaction scores were near the top of the range.
- The personality traits of extroversion and agreeableness were both associated with greater happiness and life satisfaction.
- 92% of respondents were highly satisfied with the place where they live.
- Most surveys (97%) were completed before the COVID-19 pandemic.

RESILIENCE & COPING STRATEGIES (YEAR 4)

With Life Plan Community surveys being completed in the first full year of the pandemic, the Year 4 study strove to provide a deeper understanding of how specific individual and organizational factors, changes in the quality of social relationships, and coping strategies are related to residents' **response to the pandemic**. Findings included:

- Life Plan Community residents, on average, exhibited low levels of stress and high levels of resilience during the pandemic.
- Those who were open to new experiences and exhibited higher levels of extroversion and agreeableness were less stressed and more resilient during the pandemic.
- Residents who maintained quality relationships with children exhibited greater resilience during the pandemic.
- Residents who lived in smaller communities were less likely to be stressed compared to residents of bigger communities.

CHANGES IN HEALTH & WELLNESS (YEAR 5)

The final year of the Age Well Study examined **changes in health and wellness** among residents and community-dwelling older adults since Year 1. Findings included:

- Overall, residents continued to report better physical, emotional, social, intellectual, and vocational wellness, but lower spiritual wellness, compared to older adults from the community at large.
- Both groups tended to report similar changes over time on measures of physical and vocational wellness.
- Changes over time tended to be more favorable for community-at-large older adults on measures of emotional and spiritual wellness.
- Changes in social and intellectual wellness were generally more favorable for residents, including increases in social contact and engagement in intellectual activities.

Due to differences in survey timing, Mather Institute plans to revisit these analyses in 2024 when additional data is available for the community-at-large group in order to adjust for the impact of the pandemic.

TABLE 1. Comparison of Groups

Note: Teal shading indicates a significantly better score than the other group for that year.

	RESIDENTS		COMMUNITY AT LARGE	
Physical Wellness	**Year 1**	**Year 5**	**Year 1**	**Year 5**
Self-reported health	■	■		
Moderate physical activity	■	■		
Vigorous physical activity	■			
Emotional Wellness	**Year 1**	**Year 5**	**Year 1**	**Year 5**
Satisfaction with life	■	■		
Depressive symptoms				■
Optimism	■	■		
Pessimism	■	■		
Perceived control				
Perceptions of aging	■	■		
Social Wellness	**Year 1**	**Year 5**	**Year 1**	**Year 5**
Loneliness	■	■		
Social contact	■	■		
Intellectual Wellness	**Year 1**	**Year 5**	**Year 1**	**Year 5**
Self-rated memory	■	■		
Intellectual activities	■	■		
Spiritual & Vocational Wellness	**Year 1**	**Year 5**	**Year 1**	**Year 5**
Religiosity				■
Purpose in Life	■	■		
Retirement Satisfaction	■			

TABLE 1A. Key Changes over Time

An up arrow indicates a significant increase from Year 1 to Year 5, a down arrow indicates a significant decrease from Year 1 to Year 5, and ns indicates no significant change between years.

	RESIDENTS	COMMUNITY AT LARGE
Physical Wellness	**Change**	**Change**
Self-reported health	↓	↓
Moderate physical activity	ns	ns
Vigorous physical activity	↓	ns
Emotional Wellness	**Change**	**Change**
Satisfaction with life	↓	↓
Depressive symptoms	↑	ns
Optimism	↓	ns
Pessimism	ns	↓
Perceived control	↓	↓
Perceptions of aging	↓	ns
Social Wellness	**Change**	**Change**
Loneliness	↑	ns
Social contact	↑	ns
Intellectual Wellness	**Change**	**Change**
Self-rated memory	↓	ns
Intellectual activities	↑	↓
Spiritual & Vocational Wellness	**Change**	**Change**
Religiosity	ns	↑
Purpose in Life	↓	↓
Retirement Satisfaction	ns	ns

PROPOSED STRATEGIES FOR SENIOR LIVING

Senior living providers that want to use the Age Well Study findings to improve offerings for residents should keep in mind that effectively addressing any aspect of resident wellness requires a personalized approach. A few examples include:

- It's important for Life Plan Communities to provide a variety of wellness offerings that may appeal to residents with different personalities. For example, boisterous group exercise classes may be well-suited for extroverts, whereas introverts may prefer one-on-one fitness coaching or exercise in their private residences.
- Previous research suggests that some psychological resources, such as optimism and resilience, can be learned and strengthened. Offer lectures and other programs that provide education about how to engage in healthy coping strategies in addition to opportunities to practice these strategies.
- Strengthen bonds among residents through programs such as "welcome buddy" pairing for new residents, programs that place different residents together at meals, and engaging more residents in programs and activities.
- Offer a wellness coaching program that enables residents to identify opportunities for enhancing wellness that are tailored to their individual needs, interests, and preferences.
- Encourage residents to invite others who may not live in the community to on-site social events. This supports enhanced relationships with family members and friends.

Strategies for applying the findings and insights from Year 5 of the Age Well Study can be found on page 31 of this report.

STUDY OVERVIEW & METHODOLOGY

The purpose of the Age Well Study is to help providers and residents better understand the impact of living in a Life Plan Community on residents' health and wellness.

THE FIVE-YEAR AGE WELL STUDY INCLUDES THREE MAIN COMPONENTS:

1) self-administered organizational surveys completed by one staff member from each participating Life Plan Community for the first four years
2) self-administered surveys completed annually by residents of Life Plan Communities for five years
3) secondary data analysis with a comparison sample of older adults residing in the community at large in Years 1 and 5

Together, these components provide multiple sources of data to assess objective questions related to wellness and enable a closer examination of residents' experiences. The final year of the study compares changes in wellness among residents of Life Plan Communities to a comparable sample of older adults residing in the community at large.

STUDY ELIGIBILITY & RECRUITMENT

Respondents were recruited from Life Plan Communities during Years 1 and 2 of the Age Well Study with the goal of tracking responses from the same residents across time. No additional respondents were enrolled during Years 3 through 5. The reports for Years 1 and 2 provide a detailed overview of the study eligibility and recruitment procedures. Those efforts are also summarized here.

Life Plan Communities. Communities with at least 100 residents residing in independent living were eligible to enroll. A staff member at each of the 122 participating communities completed an online organizational survey when the community enrolled, and the organizational survey was administered in subsequent years through Year 4. The survey addressed community details such as number of residents, location, for-profit vs. nonprofit status, amenities, and services. Since communities may not have returned the organizational survey every year, analysis was conducted using the most recent data collected for each community.

Residents. Any individuals who resided in independent living at participating Life Plan Communities were eligible to enroll in the Age Well Study in Years 1 or 2. All respondents with valid mailing or email addresses who participated in Years 3 or 4 were invited to participate in the Year 5 survey (n = 4,700). Participants were given an option of receiving an online or paper survey, which was mailed to them. A total of 2,943 Year 5 resident surveys were returned. These were screened for quality, and 80 surveys were excluded from the data set (27 were duplicate surveys and 53 were missing more than 30% of the responses). The final Year 5 dataset included 2,863 respondents (a 61% response rate). Analyses comparing changes between residents and community-at-large older adults from Year 1 to Year 5 included responses from 1,729 residents who participated in both Years 1 and 5.

Community-at-Large Older Adults. In Year 1, a comparative dataset of older adults from the community at large was developed using publicly available data from the Health and Retirement Study (HRS), a longitudinal survey of Americans over the age of 50 that is conducted by the University of Michigan. During Year 1, the community-at-large comparison group was created by proportionally sampling 1,000 respondents from the 2014 or 2016 HRS waves to be demographically comparable to the Age Well Study participants based on age, income, and race/ethnicity (see the Year 1 report for details). For Year 5, this original community-at-large dataset was updated to include survey responses from a second timepoint collected four years later (i.e., the 2018 HRS wave, collected between April 2018 and June 2019, or the 2020 HRS wave, collected in March 2020 to March 2021). Age Well Study Year 1 (2018) was matched with data from the 2014 and 2016 HRS waves, and Age Well Study Year 5 (2022) was matched with data from the 2018 and 2020 HRS waves.[1] The Year 5 community-at-large sample includes 427 HRS participants from the original 1,000-person sample who had available data at both time points (236 participants from HRS waves 2014/2018 and 191 from HRS waves 2016/2020).

SURVEY DEVELOPMENT

The organizational and resident surveys were developed by Mather Institute with input from Northwestern University and an advisory group. For the sake of being able to compare Age Well Study resident data to respondents from the community at large, many of the psychosocial and health measures on the resident survey were drawn from the HRS survey. Prior to implementation, the survey was reviewed with several residents of Life Plan Communities to identify areas of ambiguity and improve clarity. For a list of specific measures surveyed, see Appendix A.

[1]This analysis uses Early Release data from the Health and Retirement Study, 2016 and 2020 Early Core datasets, sponsored by the National Institute on Aging (grant number NIA U01AG009740). These data have not been cleaned and may contain errors that will be corrected in the Final Public Release version of the dataset.

STATISTICAL ANALYSIS

The statistical models examined differences in wellness between groups (Life Plan Community residents vs. older adults from the community at large), changes in wellness over time (Year 1 vs. Year 5), and whether the changes in wellness were different for residents compared to the community-at-large respondents. A statistical technique called multilevel modeling was used, because it is an appropriate approach for longitudinal data analysis with multiple responses per person. Analyses controlled for age, gender, income, education, and marital status.[2]

Averages or percentages are presented throughout the report. The averages are estimated marginal mean scores, which are mean scores that are statistically adjusted for the other variables included in the analyses, such as age and gender. Percentages are rounded to the nearest whole number, and thus total percentages may not always add up to 100%. The analyses discussed in this paper are statistically significant unless otherwise stated. Statistical significance was set at a *p*-value of less than .05, indicating that there is less than a 5% likelihood that the effect is due to chance.

[2]*In observational studies, "controlling for" a variable during analysis is the attempt to eliminate any effect of other extraneous variables that may affect the outcome. For example, education, among other factors, was controlled for when assessing the relationship between residing in a Life Plan Community and health outcomes, because higher education has been shown to be related to better health.*

YEAR 5 FINDINGS: BACKGROUND & SIGNIFICANCE

The final year of the Age Well Study (Year 5) examines changes in the health and wellness of residents compared to older adults within the community at large.

Some aspects of wellness may decline as people get older, whereas others may stay largely stable or even increase. For example, life satisfaction tends to increase from middle age to older adulthood; however, experiences in later life such as declines in health and social losses contribute to decreases in life satisfaction (Hansen & Blekesaune, 2022). In addition, as people age, levels of physical activity and physical functioning tend to decrease (Metti et al., 2018). However, lifestyle behaviors such as physical activity can help maintain one's health and wellness.

Life Plan Communities provide a wide variety of programs, services, and amenities, including opportunities to participate in educational programs, fitness classes, and social events. Residing in such service-rich environments may be beneficial for one's well-being, including social connectedness (Erickson et al., 2000), quality of life (Roberts & Adams, 2018), and self-reported health (Gaines et al., 2011). Moreover, the opportunities found in Life Plan Communities may be additive; that is, residents may also continue to be engaged in groups and activities available in the broader community.

It is important to acknowledge the very unique context of the Age Well Study. Years 4 and 5 of the study were carried out during the COVID-19 pandemic, and findings should be interpreted within this greater context. Life Plan Communities have prioritized resident wellness while adapting to a host of challenges throughout the pandemic, such as implementing safety and social distancing procedures, managing staffing shortages, navigating regulations, and transitioning programs online, to name a few.

DESCRIPTION OF STUDY PARTICIPANTS

ORGANIZATIONAL CHARACTERISTICS

Table 2 describes organizational characteristics of participating Life Plan Communities. The communities primarily served residents with an average age of more than 80 (97%). About half of the communities had fewer than 300 residents (51%), and three out of five communities were single sites (60%). Most communities were not-for-profit (79%), most had no religious affiliation (70%), and most had an entrance fee (90%). While the largest number of communities were located in the South (38%), they were evenly distributed among the Northeast (22%), Midwest (20%), and West (20%). (See Appendix B for a map of geographic regions.)

TABLE 2. Organizational Characteristics

Number of organization respondents	122
Profit status	
Not-for-profit	79%
For-profit	21%
Fee structure	
Entrance fee	90%
No entrance fee	10%
Religious affiliation	
No religious affiliation	70%
Religious affiliation	30%
Number of communities[3]	
Single-site	60%
Multisite	40%

Community size	
1–300 residents in independent living	51%
301+ residents in independent living	49%
Levels of care	
Independent living	100%
Assisted living	93%
Skilled nursing[4]	98%
Memory support	85%
Home care	51%
Hospice	28%
Adult day program	7%
Community location	
Suburban	65%
Urban	20%
Rural	15%

Region	
South	38%
Northeast	22%
Midwest	20%
West	20%
Average age of residents	
Younger than 80	3%
80 to 84	56%
85 or better	41%
Age of community	
Less than 10 years	3%
10 to 19 years	26%
20 to 29 years	17%
30 to 39 years	21%
40 to 49 years	11%
50 years and greater	22%

[3] *Communities whose parent organization has other communities*

[4] *Three communities provide skilled nursing immediately adjacent to their communities.*

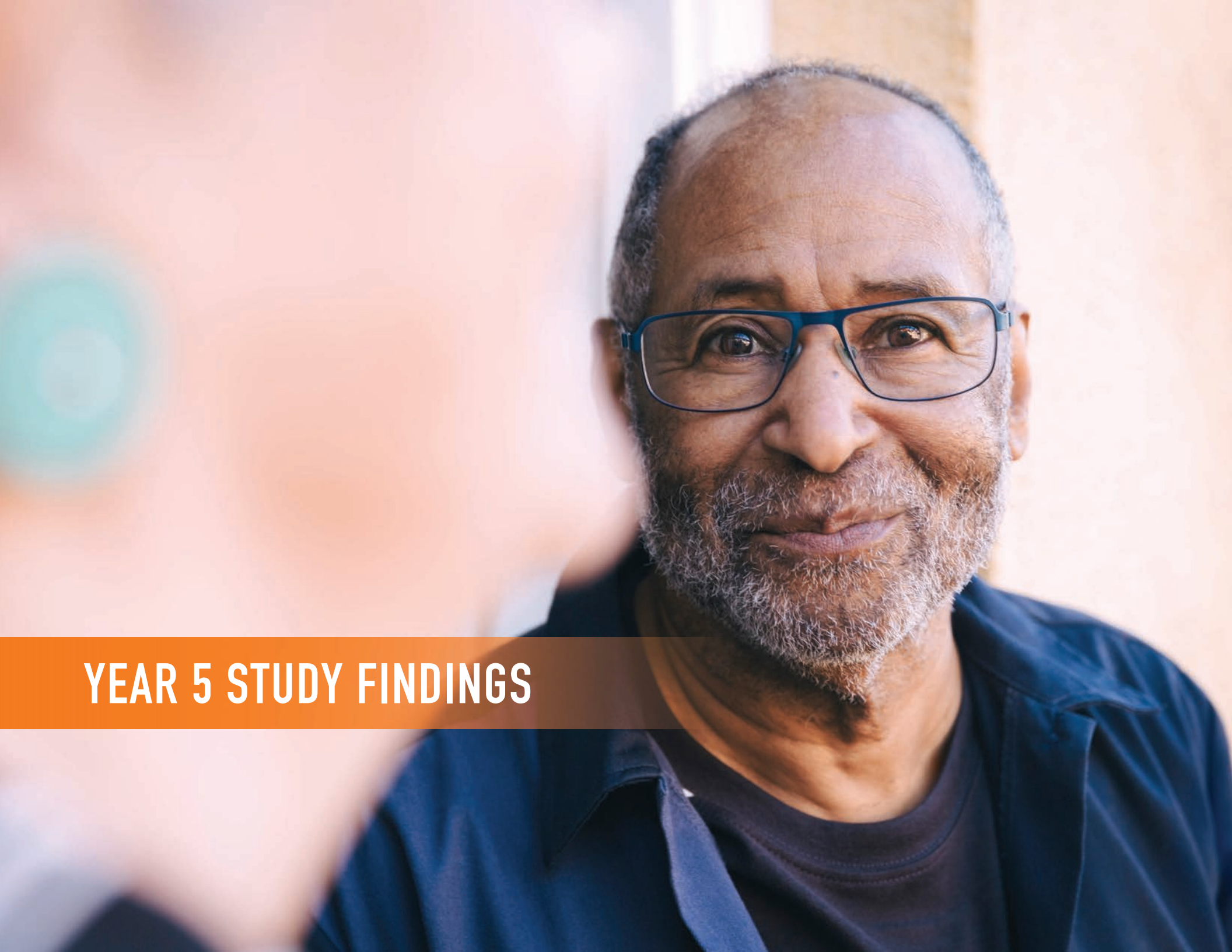
TABLE 3. Respondent Characteristics

Number of respondents	Life Plan Community 1,729	Community at Large 427
Age		
Younger than 80	35%	37%
80 to 84	31%	32%
85 or better	34%	30%
Gender		
Female	69%	50%
Male	31%	50%
Ethnicity		
Hispanic/Latino	1%	1%
Not Hispanic/Latino	99%	99%
Not reported	<1%	<1%
Race		
White/Caucasian	97%	96%
Black/African American	0%	3%
Other[5]	3%	1%
Not reported	<1%	<1%
Education		
No degree	1%	7%
GED	0%	4%
High school	10%	39%
Associate's degree	7%	5%
Bachelor's degree	32%	23%
Master's degree	32%	17%
Doctorate degree	16%	6%
Other	<1%	<1%
Religious Preference		
Protestant	57%	67%
Catholic	14%	22%
Jewish	6%	4%
None/No preference	8%	1%
Other	14%	6%
Not reported	<1%	<1%
Household Income (gross)		
Less than $20,000	1%	4%
$20,000 to less than $40,000	5%	9%
$40,000 to less than $60,000	9%	19%
$60,000 to less than $80,000	12%	12%
$80,000 to less than $100,000	13%	17%
$100,000 to less than $120,000	12%	10%
$120,000 to less than $140,000	9%	7%
$140,000 to less than $160,000	8%	5%
$160,000 or more	19%	19%
Not reported	12%	0%

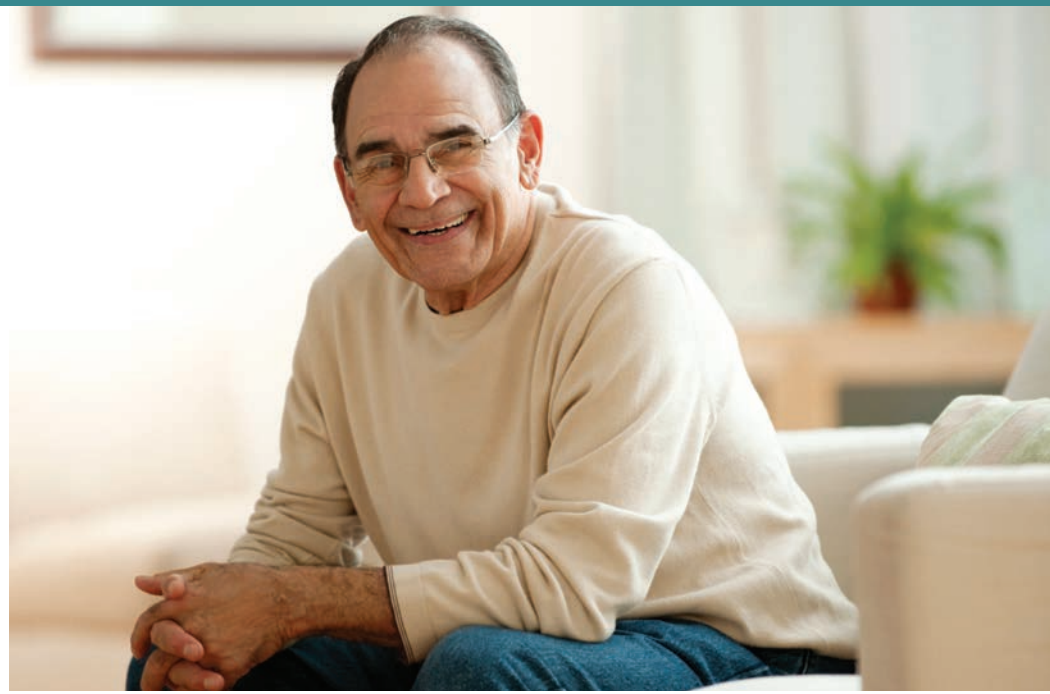
RESPONDENT CHARACTERISTICS

Table 3 describes demographic characteristics of the 1,729 Life Plan Community residents who participated in Years 1 and 5 of the Age Well Study, as well as the 427 older adults within the community-at-large comparison group who participated in Years 1 and 5. Age, ethnicity, race, and household income were similar in the two groups. However, there were significant differences in gender, education, and religious affiliation. A greater proportion of the community-at-large sample identified as Protestant or Catholic versus that of Life Plan Community residents, and more Age Well Study respondents selected none or no preference for religion (including agnostic and atheist). Additionally, the Life Plan Community sample included more women, and the participants were also more highly educated.

[5] *Age Well Study data includes responses for additional racial categories (namely, American Indian, East Asian, and South/Southeast Asian), but these responses were collapsed with the "Other" category to match HRS reporting).*



YEAR 5 STUDY FINDINGS



Examining how residents' responses change over time, how community-dwelling older adults' responses change over time, and how responses from each of these two groups compare to each other at different time points, provides insights into how or whether people Aged Well.

The Age Well Study surveyed residents living in Life Plan Communities each year across a five-year time period. The findings below include comparisons to a demographically similar sample of older adults from the community at large in Years 1 and 5. Examining how residents' responses change over time, how community-dwelling older adults' responses change over time, and how responses from each of these two groups compare to each other at different time points, provides insights into how or whether people Aged Well. However, as stated earlier, it is important to consider that the COVID-19 pandemic, which began after Year 3, had an impact on the health and wellness of both groups.

As described in the survey method section, resident data that is compared with community-dwelling older adults is from 2018 (Year 1) and 2022 (Year 5), and community-at-large data is from 2014/2016 (Year 1) and 2018/2020 (Year 5). **It's important to note that 55% of Year 5 responses from community-dwelling older adults occurred prior to the start of the pandemic, versus 100% of Life Plan Community residents responding two years into the pandemic**, as this might have some bearing on self-reported wellness.

PHYSICAL WELLNESS

In Year 5, Life Plan Community residents exhibited better self-reported health and higher levels of moderate physical activity compared to older adults from the community at large; the two groups did not differ in frequency of vigorous physical activity (see Figures 1a–1c). As anticipated for individuals in this age group, residents and community-at-large older adults exhibited a decrease in self-reported health, and residents reported a decrease in levels of vigorous physical activity from Year 1 to Year 5, while scores for those in the community at large remained about the same. Figure 1a illustrates that residents maintained higher levels of self-reported health at both time points despite a decrease over time. A table providing an overview of averages on physical wellness measures can be found in Appendix C.

FIGURE 1a. Self-Reported Health

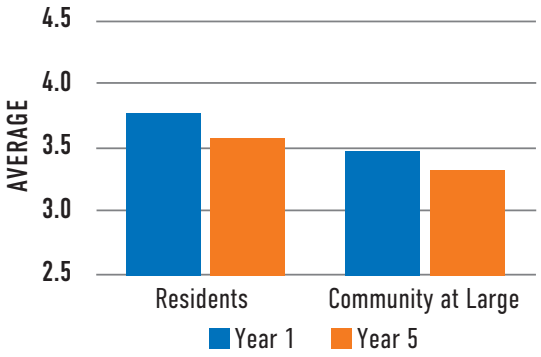


FIGURE 1b. Moderate Physical Activity

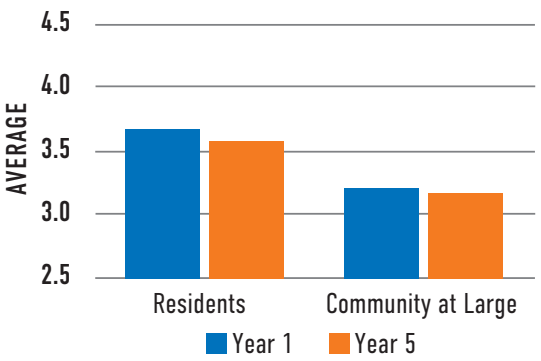
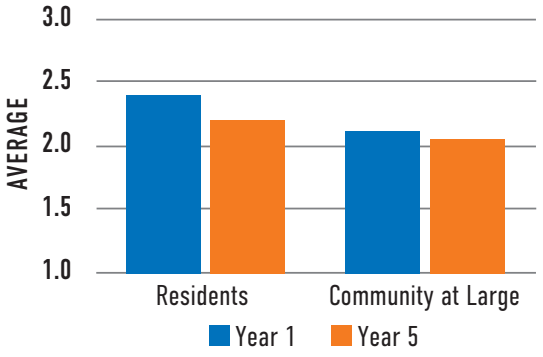


FIGURE 1c. Vigorous Physical Activity



EMOTIONAL WELLNESS

In Year 5, Life Plan Community residents maintained higher levels of life satisfaction, optimism, and perceptions of aging, and lower levels of pessimism relative to the community-at-large respondents, but reported more depressive symptoms (see Figures 2a–2f). Examining changes over time, emotional wellness tended to be more stable for older adults from the community at large. Specifically, residents exhibited decreases in optimism and positive perceptions of aging, while there was no significant change for older adults from the community at large. In addition, depressive symptoms increased for residents, but stayed steady for the community-at-large group. Both groups displayed declines in perceived control over time, while life satisfaction decreased similarly in both groups from Year 1 to Year 5 (see Figure 2a). A table providing an overview of averages on emotional wellness measures can be found in Appendix C.

FIGURE 2a. Life Satisfaction

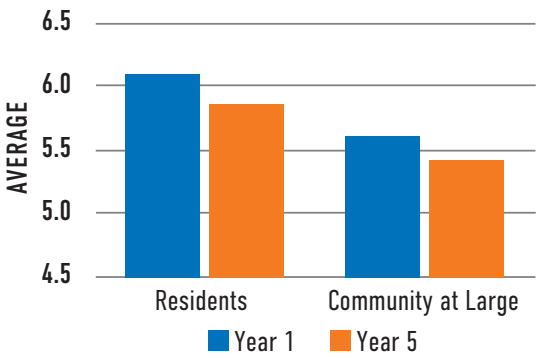


FIGURE 2b. Depressive Symptoms

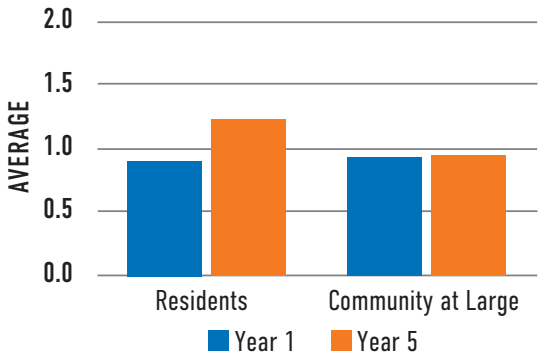


FIGURE 2c. Optimism

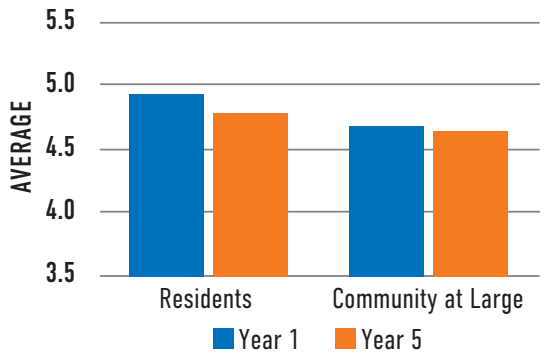


FIGURE 2d. Pessimism

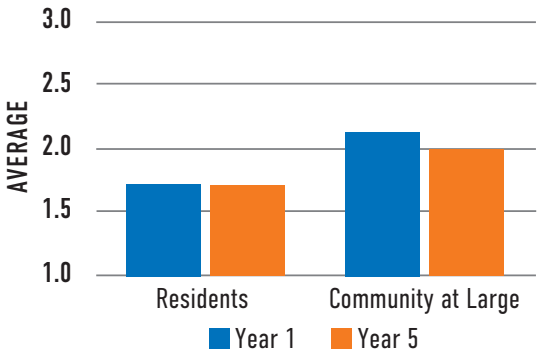


FIGURE 2e. Perceived Control

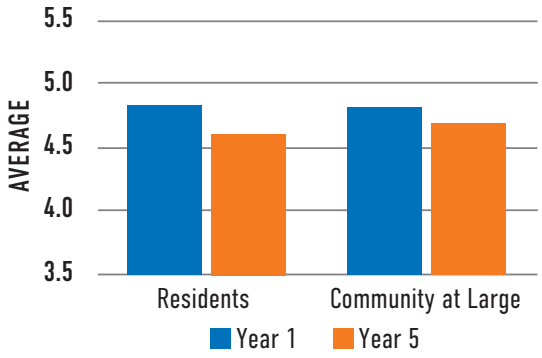
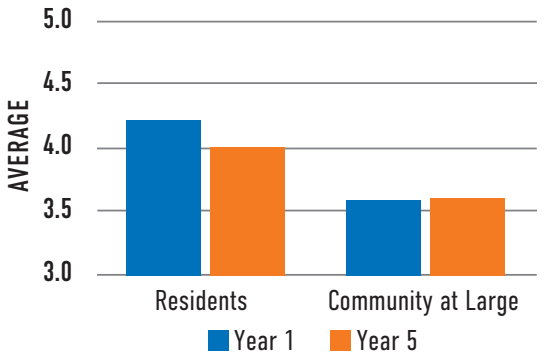


FIGURE 2f. Perceptions of Aging



SOCIAL WELLNESS

In Year 5, Life Plan Community residents exhibited greater social wellness on all measures relative to the community-at-large respondents (see Figures 3a–3f). Loneliness increased a small amount for Life Plan Community residents, but the change in loneliness over time was not significantly different between groups. In contrast, social contact increased for Life Plan Community residents (see Figure 3c). An investigation of the different modes of communication revealed more nuanced findings. Frequency of meet-ups decreased for both groups, and the decrease was greater for respondents from the community at large. Frequency of phone calls increased for residents and decreased for older adults in the community at large. Social media use increased for both groups, and this increase was greater for residents. Only residents exhibited an increase in writing or emailing friends. A table providing an overview of averages on social wellness measures can be found in Appendix C.

FIGURE 3a. Loneliness

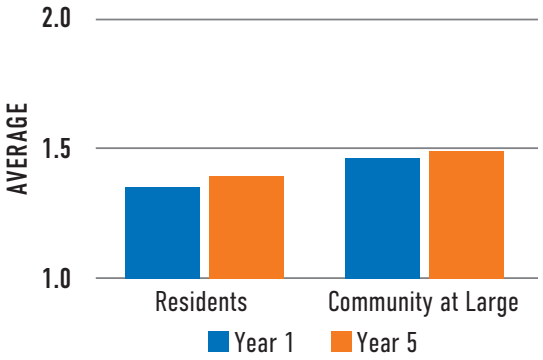


FIGURE 3b. Social Contact

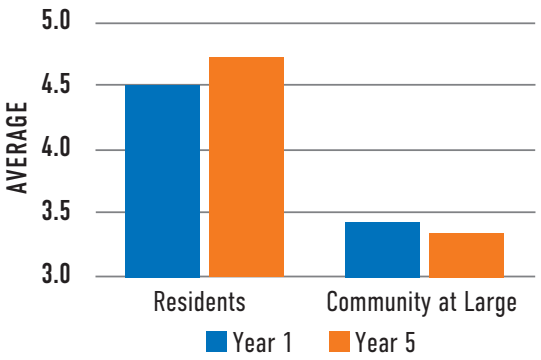


FIGURE 3c. Contact – Meet Ups

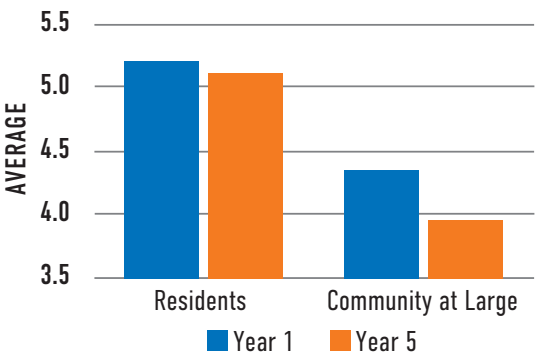


FIGURE 3d. Contact – Phone

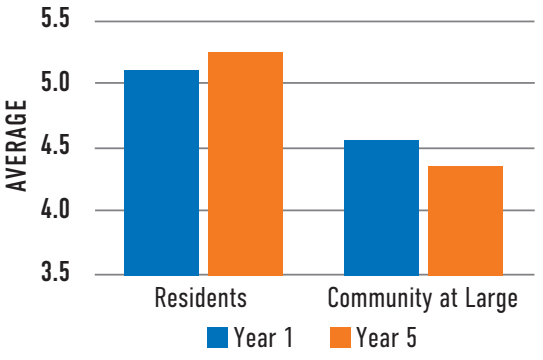


FIGURE 3e. Contact – Social Media

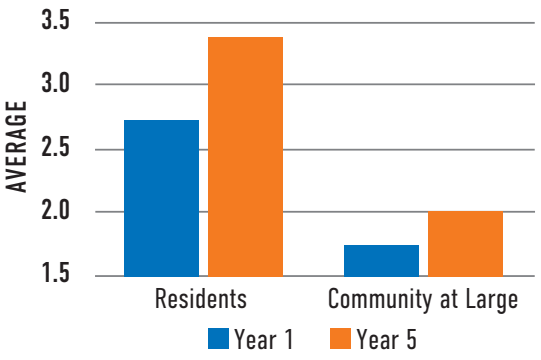
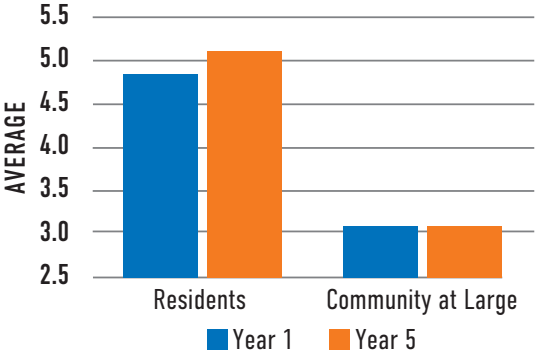


FIGURE 3f. Contact – Write or Mail



INTELLECTUAL WELLNESS

In relation to intellectual wellness, residents reported better self-rated memory and higher participation in intellectual activities compared to older adults in the community at large in Year 5 (see Figures 4a–4g). Examining changes over time, self-rated memory decreased among Life Plan Community residents. In contrast, engagement in intellectual activities decreased over time among older adults in the community at large, whereas **intellectual activities increased among Life Plan Community residents** (see Figure 4b). The changes in individual intellectual activities differed between groups. Community-at-large respondents displayed more decreases in activities, particularly in writing and playing cards or games, whereas residents showed more increases in activities, such as writing and attending education or training. Reading decreased for both groups. A table providing an overview of averages on intellectual wellness measures can be found in Appendix C.

FIGURE 4a. Self-Rated Memory

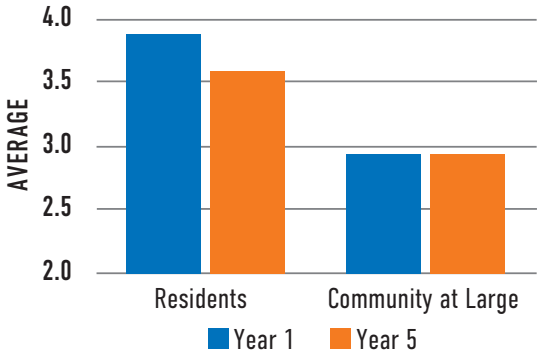


FIGURE 4b. Intellectual Activities

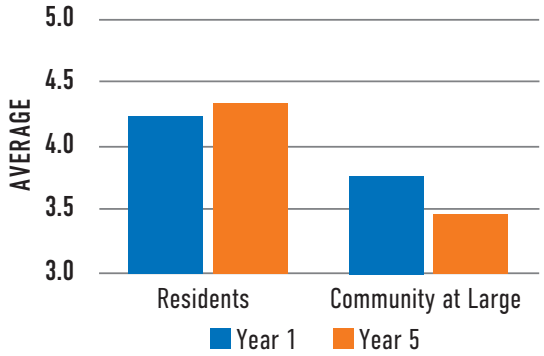


FIGURE 4c. Activities – Cards or Games

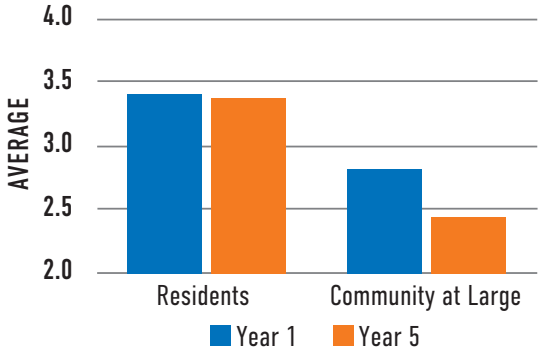


FIGURE 4d. Activities – Education

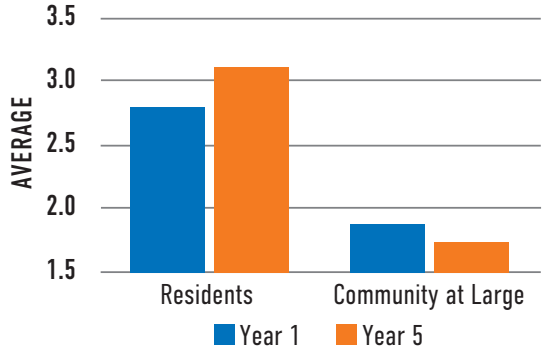


FIGURE 4e. Activities – Read

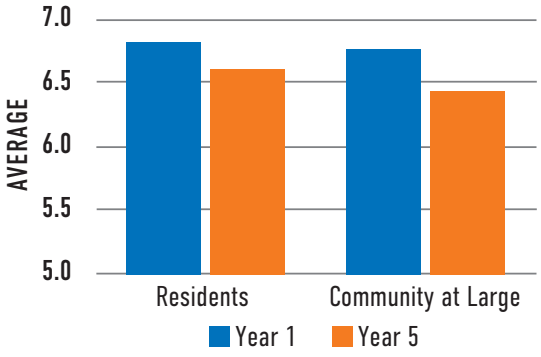


FIGURE 4f. Activities – Word Games

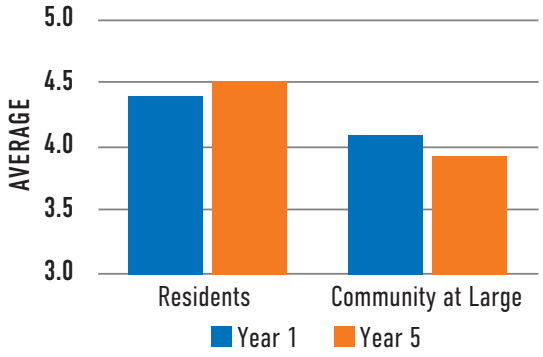


FIGURE 4g. Activities – Write

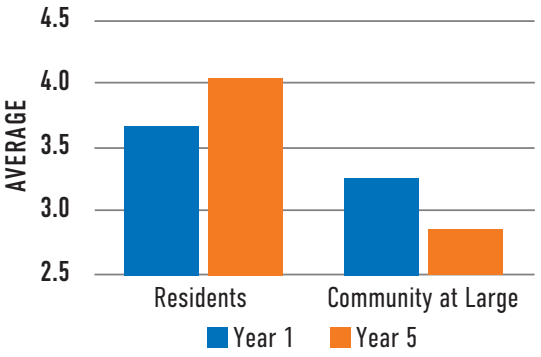


FIGURE 5a. Religiosity

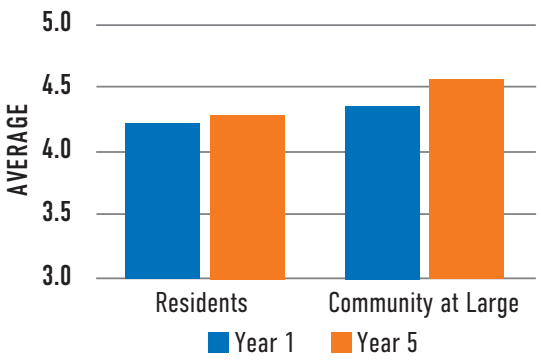


FIGURE 5b. Purpose in Life

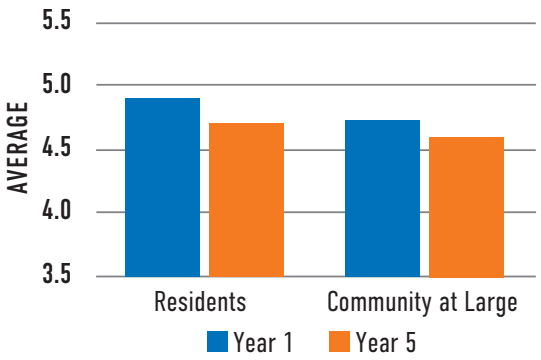
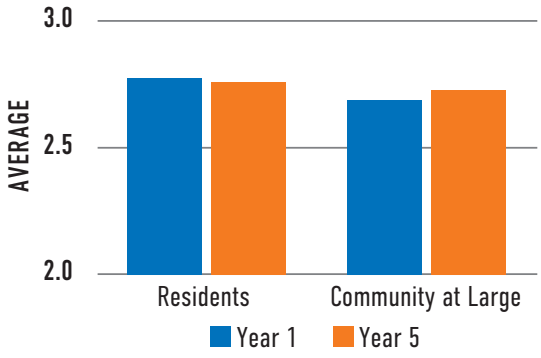


FIGURE 5c. Retirement Satisfaction



SPIRITUAL AND VOCATIONAL WELLNESS

For spiritual wellness, religiosity increased among older adults from the community at large, and remained greater compared to Life Plan Community residents in Year 5. For residents, there was no significant change in this measure (see Figure 5a).

In relation to vocational wellness, residents continued to report greater purpose in life in Year 5 compared to older adults in the community at large (see Figure 5b). In addition, retirement satisfaction was higher among residents in Year 1, but there was no difference between groups in Year 5. Changes from Year 1 to 5 in vocational wellness were similar for Life Plan Community residents and older adults from the community at large. Purpose in life decreased for both groups, while retirement satisfaction was steady across time. A table providing an overview of averages on spiritual and vocational wellness measures can be found in Appendix C.

DISCUSSION

Analyses comparing Life Plan Community residents and older adults in the community at large in Year 5 generally found the same pattern as Year 1. **Residents tended to exhibit greater physical, emotional, social, intellectual, and vocational wellness. Spiritual wellness was higher among respondents from the community at large in Year 5.**

To understand whether residents or older adults in the community at large were better able to maintain their wellness over time, analyses compared changes in wellness among the two groups over the five-year period. **Changes in social and intellectual outcomes were generally more favorable for residents than for older adults in the community at large**, particularly for social contact and engagement in intellectual activities. **In contrast, changes in the emotional and spiritual domains were more favorable for the community-at-large respondents.** For physical and vocational wellness, the two groups reported similar changes over time.

Changes in social and intellectual outcomes were generally more favorable for residents than for older adults in the community at large.

In contrast, changes in the emotional and spiritual domains were more favorable for the community-at-large respondents.

This difference in spiritual wellness may be partly due to pre-existing differences between the two groups; a greater proportion of Life Plan Community residents reported no religious affiliation. In addition, the measure of spiritual wellness used in this study focused on religious beliefs, such as belief in a God and finding strength in one's religion, and it did not assess broader aspects of spirituality, such as a connection to something greater than oneself or a relationship with nature. Residents may have diverse spiritual preferences, and it's important for communities to provide a variety of options for residents to fulfill their spiritual needs.

The increases in social contact and engagement in intellectual activities among residents are likely related to programs and services offered by the Life Plan Communities. For example, communities adapted during the pandemic by identifying new ways to offer programs while social distancing (e.g., fitness classes conducted via in-house television channels, Zoom gatherings), which may have contributed to the increased participation in training and education programs. In addition, residents have been eager to participate in more in-person events once vaccinations were available and social distancing guidelines changed.

Life Plan Community residents had greater physical wellness in general than community-at-large older adults, with both groups showing similar declines over time in self-reported health.

Life Plan Community residents had greater physical wellness in general than community-at-large older adults, with both groups showing similar declines over time in self-reported health. Some age-related declines in physical health, such as muscle loss, can be reduced through physical activity. Given the accessibility of fitness centers, exercise programs, and other resources within Life Plan Communities, it's surprising that both groups reported similar changes in physical wellness. It is unclear to what extent resident respondents used the available fitness resources. There may be an opportunity for communities to encourage greater participation in physical activity programs, and some residents may benefit from more personalized options such as fitness and wellness coaching.

Although we cannot distinguish its impact on individuals, it is likely that the COVID-19 pandemic also played a role in these wellness changes. For instance, access to some fitness resources may have been restricted, especially at the beginning of the pandemic. A systematic review of research found that physical activity levels decreased, and sedentariness increased among older adults during the pandemic (Oliveira et al., 2022). In addition, the declines in emotional wellness among residents may be related to the prolonged nature of the pandemic, with residents being surveyed in 2022 versus community-at-large respondents being surveyed in 2018 or 2020. It's interesting to note that social media use increased among residents, which is likely related to the need for more remote/virtual forms of communication due to social distancing during the pandemic. Finally, it is unlikely that the pandemic would have had a positive impact on Life Plan Community resident responses, so it is notable that even in that deleterious context, residents reported greater wellness than community-at-large respondents on a number of measures.

PROPOSED STRATEGIES FOR COMMUNITIES

- **Encourage residents to participate in available wellness offerings.**
  Although wellness scores are relatively high overall, the declines over time reinforce the importance of proactively striving to maintain (or improve) one's health and well-being throughout one's life. Track participation in wellness programs and other resources and focus on motivating more residents to participate. For example, Mather's Person-Centric Wellness Coaching Program supports residents in defining and achieving their personal wellness goals.

- **Enhance offerings related to emotional wellness.**
  Consider offering additional programs and resources related to navigating challenges, managing negative thoughts, boosting hope and optimism, increasing feelings of joy and contentment, and cultivating a greater sense of purpose.

- **Address ageism and promote positive views of aging.**
  The declines in positive perceptions of aging among residents may be connected to the increases in ageism during the pandemic. Educate employees on subtle forms of "everyday ageism" (e.g., "You look great for your age"), and increase awareness of the associations between negative views of aging and declines in health and wellness over time.

- **Support residents' ability to participate in their preferred religious or spiritual activities.**
  It's likely that residents in your community may have diverse views of spirituality and its role in life. Review opportunities for residents to meet their spiritual needs within or outside of your community.

- **Personalize wellness offerings.**

A TOOL FOR SUPPORTING RESIDENT WELLNESS

To plan how you might add or adapt offerings to support residents, consider Mather Institute's Person-Centric Wellness Model, a research-based model developed in 2021 that focuses on individual characteristics and external factors that influence each person's individual wellness. **The Age Well Study findings reaffirm existing research indicating that greater resilience and lower stress (outcomes of wellness) are associated with three wellness drivers included in the model: Autonomy, Achievement, and Affiliation.** While each person's wellness is unique to their experiences and influences, the model highlights the critical role of these three drivers in achieving wellness. Together, the presence of these factors supports individuals in achieving their potential and enjoying full, meaningful lives. For more on the Person-Centric Wellness Model, visit matherinstitute.com/person-centric.

CAVEATS

... the resident and community-at-large samples are from different time points, which complicates interpretation of the findings, particularly given the changing nature of the pandemic. We plan to revisit these comparisons in the future when the next wave of data is available for the community-at-large respondents.

It is important to note that responses may not be representative of all residents of Life Plan Communities because participants self-selected into the Age Well Study. For instance, it is likely that both initial and continued participation in the study appealed more to those already interested in wellness-related activities. Additionally, representativeness may have been reduced by the decline in participation over time, as participants who remained in the study for five years may be healthier than participants who ended their participation sooner.

Finally, and perhaps most importantly, as described in the method section, the resident and community-at-large samples are from different time points, which complicates interpretation of the findings, particularly given the changing nature of the pandemic. We plan to revisit these comparisons in the future when the next wave of data is available for the community-at-large respondents. This will allow us to include older adults from the community at large who also lived through the pandemic, and to capture the effect of that experience on various aspects of wellness.

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APPENDIX A – STUDY MEASURES

The following wellness indicators were administered in Years 1 and 5. These measures were also included in the Health and Retirement Study.

PHYSICAL WELLNESS

SELF-REPORTED HEALTH: Participants rated their own health status using a single-item measure (1 = Poor, 2 = Fair, 3 = Good, 4 = Very good, 5 = Excellent).

PHYSICAL ACTIVITY: Participants were asked two questions assessing how often they engage in vigorous or moderately energetic activities (1 = Hardly ever or never, 2 = One to three times a month, 3 = Once a week, 4 = More than once a week, 5 = Every day).

EMOTIONAL WELLNESS

LIFE SATISFACTION: An overall evaluation of one's life (Diener et al., 1985). Participants rated the extent to which they agreed with five items (1 = Strongly disagree, 7 = Strongly agree). Scores on the five items were averaged together to form a composite score of life satisfaction, which could range from 1 to 7.

DEPRESSIVE SYMPTOMS: A measure of depressive symptoms experienced by older adults (Lewinsohn et al., 1997). Participants completed an eight-item version of the Center for Epidemiological Studies-Depression scale (CES-D; Radloff, 1977). Participants indicated (Yes/No) if they experienced each depressive symptom "much of the time" during the past week. The number of depressive symptoms experienced were added together, and composite scores could range from 0 to 8.

OPTIMISM/PESSIMISM: Measures the extent to which people expect positive or negative outcomes in the future (Scheier et al., 1994). Participants rated their level of agreement with six items (1 = Strongly disagree, 6 = Strongly agree). Composite scores were calculated by averaging the three optimism items and the three pessimism items, and composite scores could range from 1 to 6.

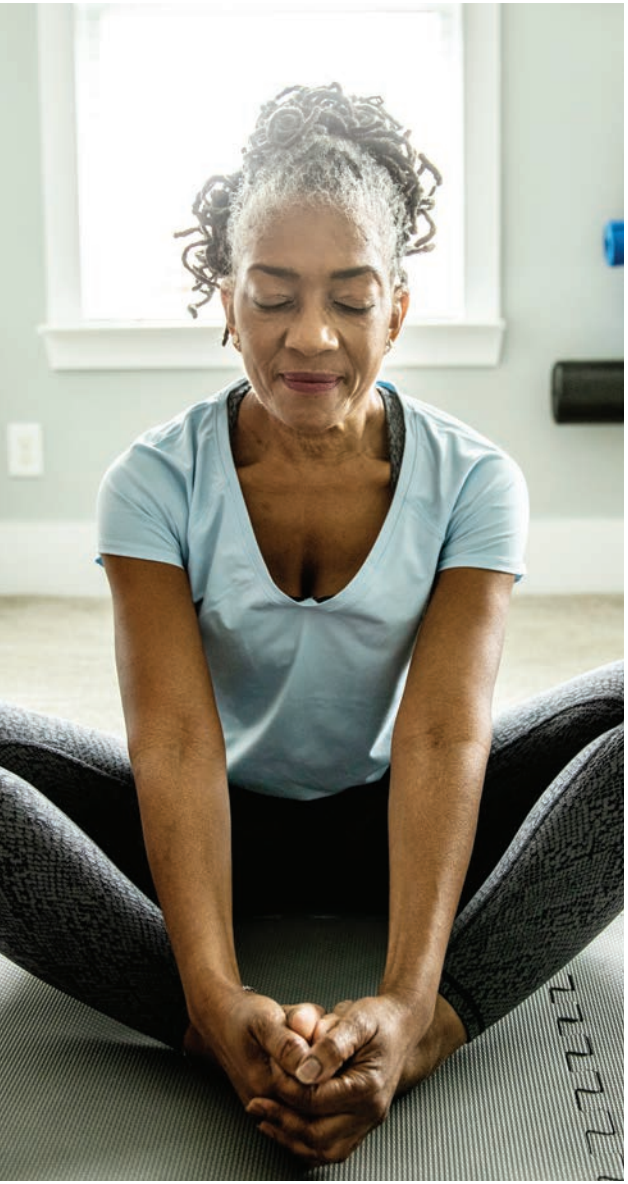
PERCEIVED CONTROL: Measures participants' sense of control or agency over their own lives and activities (Lachman & Weaver, 1998; Pearlin & Schooler, 1978). Participants rated the extent to which they agreed or disagreed with five statements regarding their confidence in controlling their own lives (1 = Strongly disagree, 6 = Strongly agree). Responses to the five items were averaged together for a composite score that could range from 1 to 6.

PERCEPTIONS OF AGING: Measures attitudes toward aging (Kotter-Grühn et al., 2009; Lawton, 1975; Liang & Bollen, 1983). Participants rated the extent to which they agreed or disagreed with eight statements (1 = Strongly disagree, 6 = Strongly agree). Items were averaged together for a composite score that could range from 1 to 6.

SOCIAL WELLNESS

LONELINESS: Measures feelings of isolation and lack of social contact/connections (Hughes et al., 2004). Administered as 10-item scale that asks participants how often they feel lonely or isolated from others (1 = Hardly ever or never, 2 = Some of the time, 3 = Often). Item responses were averaged together for a composite score that could range from 1 to 3.

SOCIAL CONTACT: Measures how often individuals experience contact with others in their social networks through various means of communication. Participants rated how frequently they experience contact with their friends using four modes of communication: in-person meetings, phone calls, written/email messages, and social media (1 = Less than once a year or never, 2 = Once or twice a year, 3 = Every few months, 4 = Once or twice a month, 5 = Once or twice a week, 6 = Three or more times a week). Scores on the four items were averaged together for a composite score that could range from 1 to 6.



INTELLECTUAL WELLNESS

SELF-REPORTED MEMORY: Participants rated the quality of their own memory (1 = Poor, 5 = Excellent).

INTELLECTUAL ACTIVITIES: As part of a list of daily activities, participants were asked five questions regarding how often they take part in various intellectual activities: attend educational/training course; read books/magazines/newspapers; do word games such as crosswords/Scrabble; play cards or games such as chess; write letters, stories, or journal entries. Participants reported how frequently they engage in each activity (1 = Never/not relevant, 7 = Daily), and responses to the five items were averaged together into a composite score that could range from 1 to 7.

SELF-REPORTED MEMORY: Participants rated the quality of their own memory (1 = Poor, 5 = Excellent).

SPIRITUAL WELLNESS

RELIGIOSITY: Measures religious beliefs and values separate from religious affiliation (Levin, 2003). Participants rated the extent to which they agree/disagree with four statements regarding their religious beliefs (1 = Strongly disagree, 6 = Strongly agree). Responses to the items were averaged together for a composite score that could range from 1 to 6.

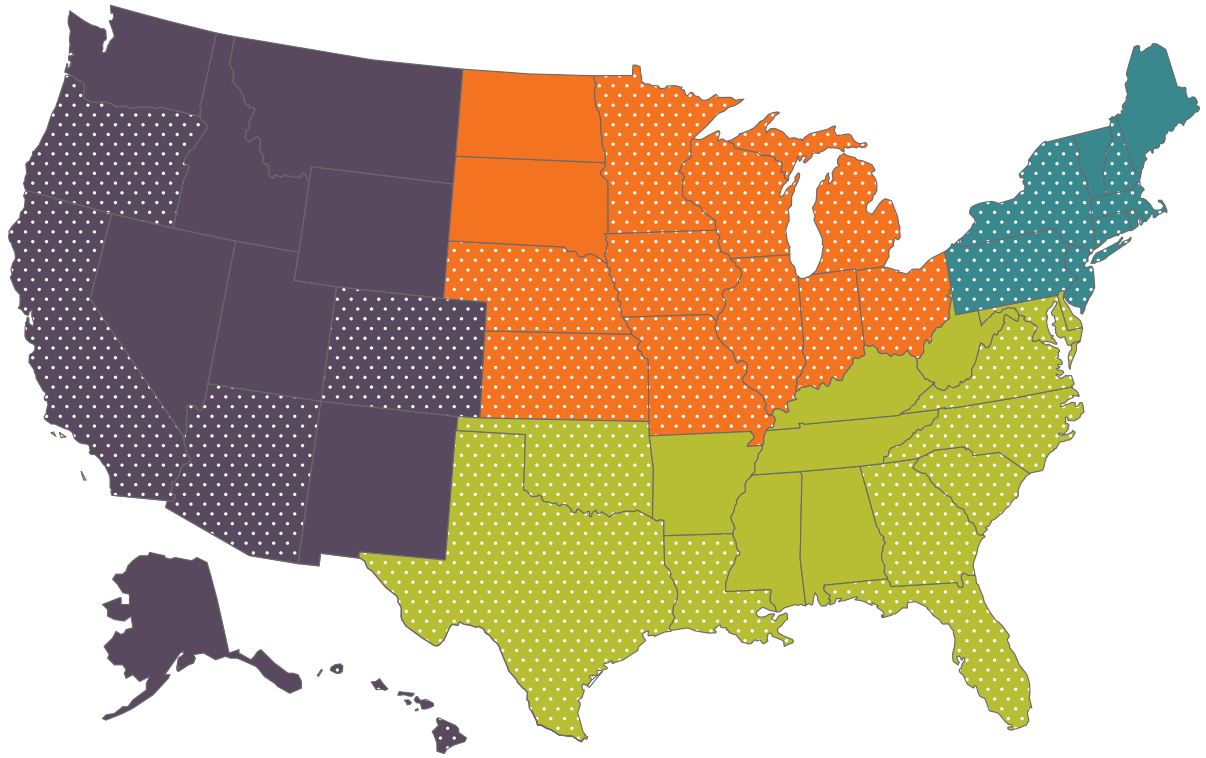
VOCATIONAL WELLNESS

RETIREMENT SATISFACTION: Participants rated how satisfied they are with their retirement using a single-item measure (1 = Not at all satisfying, 2 = Moderately satisfying, 3 = Very satisfying, or Not applicable). Participants who selected "Not applicable" were excluded from analyses of retirement satisfaction.

PURPOSE IN LIFE: Measures an individual's feelings of worth and accomplishment in life (Ryff, 1989). Participants rated their agreement with seven statements regarding their feelings of purpose and sense of direction in life (1 = Strongly disagree, 6 = Strongly agree). Responses to each item were averaged together for a composite score that could range from 1 to 6.

APPENDIX B – MAP OF GEOGRAPHIC REGIONS

Organizations and residents were categorized based on the US geographic region in which they are located. Regions are based on HRS definitions. The figure below displays the states included in Northeast, Midwest, South, and West regions. Life Plan Communities that are participating in the Age Well Study are located in the states marked with dots.



Dots indicate states where participating Life Plan Communities are located.

APPENDIX C – TABLES ON WELLNESS MEASURES

The tables below offer a more comprehensive look at each wellness measure, comparing changes over time for both groups.

For each, note that the teal shading indicates a significantly better score than the other group for that year. An up arrow indicates a significant increase from Year 1 to Year 5, a down arrow indicates a significant decrease from Year 1 to Year 5, and ns indicates no significant change between years. Since changes over time may be positive (e.g., self-reported increase in health) or negative (e.g., increase in loneliness), arrow colors highlight positive (teal) or negative (orange) changes. The tests of statistical significance take into account both the size of the difference as well as the variability in scores.

TABLE 4. Averages on Physical Wellness Measures

		RESIDENTS			COMMUNITY AT LARGE		
Measures	Scale Range	Year 1	Year 5	Change	Year 1	Year 5	Change
Self-reported health	1–5	3.77	3.58	↓	3.47	3.32	↓
Moderate physical activity	1–5	3.67	3.60	ns	3.21	3.21	ns
Vigorous physical activity	1–5	2.38	2.20	↓	2.11	2.05	ns

TABLE 5. Averages on Emotional Wellness Measures

		RESIDENTS			COMMUNITY AT LARGE		
Measures	Scale Range	Year 1	Year 5	Change	Year 1	Year 5	Change
Satisfaction with life	1–7	6.09	5.86	↓	5.60	5.42	↓
Depressive symptoms	0–8	0.90	1.24	↑	0.93	0.94	ns
Optimism	1–6	4.94	4.78	↓	4.69	4.65	ns
Pessimism	1–6	1.72	1.71	ns	2.13	1.99	↓
Perceived control	1–6	4.82	4.60	↓	4.81	4.69	↓
Perceptions of aging	1–6	4.23	4.02	↓	3.60	3.61	ns

TABLE 6. Averages on Social Wellness Measures

		RESIDENTS			COMMUNITY AT LARGE		
Measures	Scale Range	Year 1	Year 5	Change	Year 1	Year 5	Change
Loneliness	1–3	1.35	1.39	↑	1.46	1.49	ns
Social contact	1–6	4.49	4.71	↑	3.45	3.37	ns
- Meet-ups	1–6	5.19	5.09	↓	4.35	3.97	↓
- Phone	1–6	5.11	5.24	↑	4.56	4.37	↓
- Social media	1–6	2.73	3.36	↑	1.76	2.02	↑
- Write or email	1–6	4.85	5.12	↑	3.10	3.10	ns

TABLE 7. Averages on Intellectual Wellness Measures

		RESIDENTS			COMMUNITY AT LARGE		
Measures	**Scale Range**	**Year 1**	**Year 5**	**Change**	**Year 1**	**Year 5**	**Change**
Self-rated memory	1–5	3.86	3.58	↓	2.95	2.95	ns
Intellectual activities	1–7	4.22	4.33	↑	3.77	3.48	↓
- Play cards or games	1–7	3.38	3.35	ns	2.86	2.43	↓
- Attend education or training	1–7	2.80	3.11	↑	1.87	1.73	ns
- Read	1–7	6.80	6.59	↓	6.74	6.42	↓
- Do word games	1–7	4.39	4.50	ns	4.08	3.93	ns
- Write	1–7	3.67	4.04	↑	3.25	2.86	↓

TABLE 8. Averages on Spiritual and Vocational Wellness Measures

		RESIDENTS			COMMUNITY AT LARGE		
Measures	**Scale Range**	**Year 1**	**Year 5**	**Change**	**Year 1**	**Year 5**	**Change**
Spiritual Wellness Religiosity	1–6	4.21	4.27	ns	4.35	4.54	↑
Vocational Wellness Purpose in life	1–6	4.88	4.70	↓	4.72	4.60	↓
Retirement satisfaction	1–3	2.76	2.75	ns	2.68	2.72	ns

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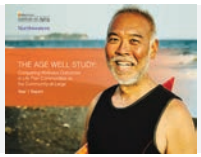

Year 1: Comparing Wellness Outcomes in Life Plan Communities vs. the Community-at-Large

Year 2: Investigating Factors Associated with Healthy Behaviors & Health Outcomes in Residents of Life Plan Communities

Year 3: Investigating Factors Associated with Happiness & Life Satisfaction in Residents of Life Plan Communities

Year 4: Stress & Resilience among Residents of Life Plan Communities during the Pandemic

Mather Institute is a respected resource for research and information about wellness, aging, trends in senior living, and successful aging service innovations. Whether conducting new research or interpreting the latest studies for professionals who serve older adults, the Institute is dedicated to supporting ways for older adults to Age Well.

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