

## **Gray for a Day: Exploring the Impact of a Sensory Aging Experience**

### **Abstract**

Gray for a Day is an interactive educational curriculum that centers on use of an empathic model to improve knowledge, skills, and attitudes related to sensory and functional aging, empathy toward older adults, and one's own health behaviors. The program has been disseminated by Extension educators with varied audiences and evaluated with 2,440 respondents. Participants reported positive changes in knowledge, skills, attitudes, and intended behaviors. Cooperative Extension and community-based partners are uniquely positioned to use the curriculum to provide sensory experiences that can improve understanding of and empathy toward older adults.

**Keywords:** [aging](#), [curriculum](#), [evaluation](#), [Extension](#), [older adults](#)

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A common belief is that "being old is being sick" (Chen, 2001, p. 1). Negative perceptions toward the process of aging and older adults themselves affect how people treat others and how they think about their own aging processes. Therefore, the implications of how negative ageism is manifested among all individuals are profound and can influence healthful and active aging, physical and cognitive health, age at retirement, life satisfaction, engagement in physical activity, and mortality (Abrams, Eller, & Bryant, 2006; Jung, Parker, Hermann, Phelps, & Shin, 2018; Kornadt & Rothermund, 2011; Levy, 2018; Sarkisian, Prohaska, Wong, Hirsch, & Mangion, 2005; Swift, Abrams, Lamont, & Drury, 2017). A strategy for reducing negative ageism is to challenge common misconceptions through factual education (Rodgers & Gilmour, 2011). Such initiatives can lead to transformative attitude changes (Aslan, Kartal, Cinar, & Kostu, 2017; Rodgers & Gilmour, 2011), embolden empathy (Levy, 2018), provide learners with realistic expectations of aging (Lucchetti, Lucchetti, de Oliveira, Moreira-Almeida, & Ezequiel, 2017; Rodgers & Gilmour, 2011), and encourage health-promoting behaviors that improve overall quality of life (Aslan et al., 2017). Chen (2001) suggested that Extension educators should work together to develop programs from different disciplinary areas, specifically offering programs to different age groups to bring awareness to young people and empower older people.

There are, however, contradictory findings regarding the use of education alone to transform attitudes. Although developing knowledge may allow for favorable shifts in attitudes, a more interactive, experiential approach must be taken in order to produce more sustained outcomes (Lucchetti et al., 2017; Rodgers &

Gilmour, 2011). A meaningful way to accomplish this in the context of the aging experience is through simulations of aging-related physiological and pathological impairments coupled with experiential learning games (Lucchetti et al., 2017). Evidence has shown these experiences to be meaningful for participants, effective at improving participants' empathy skills, and a notable factor in reducing negative ageism and promoting age-positive attitudes and behaviors (Chen, Kiersma, Yehle, & Plake, 2015; Levy, 2018), particularly when enhanced with myth-busting learning techniques and discussion that promotes reflection (Brinker, Roberts, & Radnidge, 2014; Lucchetti et al., 2017).

Although published examples of active learning experiences exist in the context of age-related sensory and functional decline, most interventions focus on college-aged participants (e.g., Douglass, Henry, & Kostiwa, 2008), few engage individuals at most stages of the life span (Lucchetti et al., 2017), and there lacks complete curricula and adoption guidelines for the masses. Therefore, we determined that a curriculum, developed and packaged for consistent use with a variety of audiences, would be beneficial for helping Extension professionals across disciplines navigate negative ageism and promote age-positive health behaviors; thus, Gray for a Day was developed.

## Gray for a Day Curriculum

Gray for a Day (Yelland & Piper, 2019) is an evidence-informed curriculum intended to educate participants on the experience and effects of age-related sensory and functional challenges that some adults might face through engaging content on age-related sensory and functional decline; simulations that reflect daily routines, simple tasks, and leisure or social activities, such as sorting medications, having conversations, or playing card games while one's senses are dramatically impaired; and discussion to facilitate reflection of the experience. The specific objectives of Gray for a Day are for participants to

1. understand how the senses and functional abilities can decline with age,
2. simulate age-related sensory and functional decline,
3. understand the influence of sensory and functional decline on daily life,
4. be encouraged to develop the skills necessary to effectively interact with and support someone who may be experiencing age-related sensory and functional challenges, and
5. understand how taking steps to improve or maintain one's health in the present will contribute to sensory and functional well-being in the future.

The curriculum, detailed in Yelland and Piper (2019), is facilitated by a trained educator and begins with an introductory lecture on the basics of sensory and functional decline, moves to an interactive sensory experience with engaging real-life activities, and concludes with purposeful dialogue intended to summarize feelings, analyze stereotypes and expectations, and challenge participants to adopt more healthful lifestyle practices to protect from and delay future sensory and functional decline. The curriculum is intended for use with diverse audiences and is adaptable to groups of all sizes, ages, and professions. Program materials are scripted and detailed and can be accessed for no cost at <https://www.aging.k-state.edu/programs/grayforaday/grayforaday.html>. Following development of the curriculum, pilot testing

commenced with a variety of audiences.

## Methods

Participants in the Gray for a Day pilot implementation were recruited via word of mouth, program fliers, news releases and newsletter promotions, social media engagement, and targeted interactions with specific groups (e.g., 4-H youths, students in middle and high school and college classrooms, staff of long-term care facilities). The curriculum was presented to a variety of groups in multiple states across a calendar year and was delivered in a single session ranging from 50 to 120 min (depending on setting and time allotment). The variation in program time changed only the number of activities participants could engage in, not the introductory lecture or discussion portions of the program. There was no cost to participate in the program; all materials were purchased with grants or other operating funds.

We developed two postprogram evaluation instruments, approved by our institutional review board, to assess the degree to which objectives of the Gray for a Day program were met. A 10-item age-appropriate instrument was used with 4-H and middle school audiences, and an 11-item instrument was used with adults. Both instruments measured the degree to which program objectives were met via Likert-type scales and open-ended questions. The survey instruments included similar questions; however, youths were asked only about "helping" older adults whereas adults were asked about their perceived ability to interact with and support older adults. Additionally, the postprogram surveys included the question "What is the most important thing you learned today about aging?" for youths and the item "Please list the three most important things you learned today" for adults. As well, the surveys included items for collecting demographic information (i.e., age, gender, racial identity, and ethnic identity). Completing the postprogram evaluation was voluntary for all participants. Quantitative results were analyzed through simple descriptive statistics. We analyzed qualitative results by (a) reading through all open-ended responses, (b) coding responses, and (c) connecting codes to create themes.

## Results

Of the 2,440 respondents who completed the postprogram evaluation following participation in the Gray for a Day pilot implementation, 628 completed the youth survey and 1,812 completed the adult survey. Combined, majorities of participants were female (67.9%), White (79.7%), and non-Hispanic/non-Latino (72.7%), and participants ranged in age from 7 to 86 ( $M = 19.8$ ,  $SD = 10.3$ ).

### Youth Evaluation Results

Postprogram evaluations completed by youth participants revealed that the program objectives were strongly met; results specifically showed self-reported increased knowledge of age-related sensory and functional decline, impact of such decline on daily life, and the connection between one's current health and future sensory and functional well-being. Results also indicated a desire among participants to improve their interactions with older adults who may be experiencing sensory and functional decline and an intention to improve their own health behaviors. A Likert-type scale of *agree* or *disagree* was used for simplicity and youth respondent ease. In Table 1, evaluation items are listed as they were on the evaluation forms and complete quantitative frequencies for the youth Gray for a Day evaluation are presented.

**Table 1.**

## Gray for a Day Evaluation Results: Youths

Evaluation item	Agree (f)	Disagree (f)	Not sure (f)
I learned how the five senses (hearing, vision, taste, smell, and touch) can change as you grow older.	587	3	15
I learned how changes in the five senses can impact my daily life.	563	5	34
I thought about how I could help older people who might not be able to see or hear as well as they used to.	512	12	73
I learned that I need to always take care of my body so that I might not have these challenges as I grow older.	553	7	41
After knowing what could happen to me when I grow older, I plan to take better care of my body.	541	7	50

*Note.*  $n = 628$ .

Qualitatively, youth participants collectively demonstrated increased knowledge, changed attitudes, and the intention to improve or change current health behaviors.

*Increased knowledge.* Many youths reported previously having a limited understanding of age-related sensory and functional decline and having gained knowledge from the Gray for a Day experience. One participant said, "I had no idea the level of changes that occurred as people aged. This experience really opened my eyes." Others specifically identified the discrepancies that exist between age at onset and severity of sensory and functional declines. As an example, one participant said, "These declines are normal, but it can happen differently for everyone. Some will experience severe losses early on, and others won't even notice something changed." Still others reported learning about compensatory behaviors and practices older adults can adopt, the value of assistance and support for older adults, and the importance of using empathy to understand and support those with age-related sensory and functional decline.

*Changed attitudes.* Youths reported better understanding of and attitudes toward what older adults are experiencing and demonstrated a desire to be more considerate of the older adults around them. One participant said, "It is important to try to understand what the older person is going through instead of assuming." Another stated that the experience had led to "improved understanding of" and a "changed perspective towards" older adults. Others reported wanting to be kinder to those experiencing sensory and functional decline, especially their grandparents. For example, one participant said, "I learned that I need to be kind and understand if and why my grandparents are moving slow."

*Future intentions.* Youth participants reported learning that taking care of themselves throughout their life spans could help prevent severe sensory and functional decline in the future. One said, "I'm going to take care of myself now," and another said, "It helped me know to take care of my body so that I can prevent hearing loss, sight loss, and other things from happening." Others reported needing to change their current behaviors to reduce or slow sensory decline and learning ways to adjust to their changed capabilities. One participant said, "Aging can bring many changes to your everyday life, but it can be slowed or prevented by

what I do now."

## Adult Evaluation Results

Findings from the adult evaluations were consistent with those from the youth evaluations and showed that program objectives were strongly met. Self-reported results indicated increased understanding of age-related sensory and functional decline, impact of age-related sensory and functional decline on one's daily life, ways to better interact with and support older adults, and steps to take to enhance one's own sensory and functional well-being now and into the future. A Likert-type scale of *strongly agree* to *strongly disagree* was used for simplicity and adult respondent ease. In Table 2, evaluation items are listed as they were on the evaluation forms and complete quantitative frequencies for the adult Gray for a Day evaluation are presented.

**Table 2.**  
Gray for a Day Evaluation Results: Adults

Evaluation item	Strongly	Neither		Strongly
	agree	Agree	disagree	disagree
	(f)	(f)	(f)	(f)
This program increased my awareness of age-related sensory and functional decline.	1,082	689	38	4
This program increased my understanding of how age-related sensory and functional decline can impact one's daily life.	1,130	655	28	3
This program encouraged me to think about how I can better interact with older adults who may be experiencing sensory and functional decline.	940	743	113	2
This program encouraged me to think about how I can better support older adults who may be experiencing sensory and functional decline.	960	735	104	2
My participation in this program helped me to understand that taking steps to be healthy now can contribute to my sensory and functional well-being in the future.	980	698	116	3
I plan to improve my lifestyle in order to improve my sensory and functional well-being in the future.	894	715	186	7

*Note.*  $n = 1,812$ .

Qualitatively, adult participants demonstrated increased knowledge and empathy and appreciation for their existing health statuses combined with their ability to practice preventative care. Additionally, older adult

participants themselves, in particular, highlighted the importance of the simulation experience.

*Increased knowledge and empathy.* Consistent with youth participants, adults reported increased knowledge about age-related sensory and functional decline and empathy toward individuals experiencing such declines. For example, participants stated that they did not know that "all 5 senses were affected by biological aging" or that "humans lost their sense of touch, smell, and taste in addition to sight and hearing." Some reported learning how much one's environment plays a role in aging and how the choices individuals make can affect the degrees to which they experience decline. Having developed increased empathy because of attending the program was also a consistent theme, evidenced by statements such as "You never know what someone is going through until you experience it yourself" and statements highlighting the importance of "understanding," "respecting," and exhibiting "patience" with others. Some related the experience directly to their own families, indicating, for example, feeling "more empathic" toward their grandparents and understanding "the need to respect older members" of their families.

*Increased appreciation of existing health status and need for preventative action.* Adult participants consistently reported a renewed understanding of "preventative care" and a need to improve their existing lifestyles to decrease the risk for severe age-related sensory and functional decline in the future. One participant said, "Preventative measures should be instilled early to avoid severe damage," and others reported needing to change their lifestyle choices to prevent future losses. Others said they had been taking their sensory and functional well-being "for granted," with some suggesting that this was because "the struggles of the elderly aren't always obvious" or they were "unaware of what older adults are going through." One participant said, "You don't appreciate what you have until you lose it."

*Perceived value by older adult participants.* A unique theme that came from older adults participants themselves was the importance and value of the aging simulation for individuals and groups of all ages. One 69-year-old said, "I'm not the only one experiencing these things! This is a very worthwhile presentation that everyone should experience at some time." Others explained a desire to be more patient with their significant others, family members, or peers, with statements such as "This activity helped me realize what my father-in-law is experiencing" and "I need to be more patient with my husband."

## **Discussion and Conclusion**

Extension educators can play a role in disseminating knowledge about the process of aging, improving attitudes toward older adults and one's own aging process, and helping establish lifelong healthful behaviors among their participants across the life span (Chen, 2001; Glass & Knott, 1984). Our pilot testing of Gray for a Day, an evidence-informed educational curriculum designed to introduce the experience and effects of age-related sensory and functional challenges, supports this suggestion. Gray for a Day proved to be effective in increasing participants' understanding of age-related sensory and functional decline, encouraging participants to better interact with and support older adults experiencing decline, and motivating participants to make changes in the present to prevent future decline. The program supports previous research indicating that educational content, experiential activities, group discussions, and reflection enhance knowledge and attitudes and motivate participants across the life span to change behaviors (Yu & Chen, 2012). Gray for a Day builds on previous findings by expanding to a more diverse sample of participants (Chen, 2001; Levy & Macdonald, 2016), going beyond simple content lecturing to include experiential simulations and opportunities for discussion and reflection (Douglass et al., 2008;

Eskildsen & Flacker, 2009; Lucchetti et al., 2017; Rodgers & Gilmour, 2011), and emphasizing realistic expectations for aging and understanding of the many factors that can contribute to one's aging experience (Mosher-Ashley & Ball, 1999).

Gray for a Day is a cost-effective curriculum that can be used by Extension professionals to inform others of age-related sensory and functional decline, foster empathy toward older adults who may be experiencing such decline, guide discussion on negative ageism and aging, and promote ways to improve overall health and wellness among individuals of all ages and groups of all sizes. It can be effectively used with youths as a precursor to senior-focused service projects; in health or family and consumer sciences classrooms; with students who plan to work with older adults or individuals with disabilities in the future; with staff who currently work with older adults or individuals with disabilities; within communities to promote a realistic understanding of aging, healthful aging choices, and improved quality of life; and beyond. Extension professionals across program areas can use the program in any context they choose and can use it to enhance existing or future programming and initiatives.

Although the implementation of a single activity showed an increase in knowledge, attitudes, and intended behaviors, our future research will address the impact of this intervention more specifically on empathic measurement, aging anxiety, and beliefs about aging. We will continue to validate these results and measure the validity and reliability of the survey instrument with implementation of Gray for a Day across the country to further understand the impact of this intervention. Because this was a single intervention with a postprogram survey, evaluation of the intervention does not reflect long-term changes in knowledge, attitudes, and executed behaviors. Because similar interventions have shown lasting impact on participants (e.g., Galanos & Cohen, 1993), additional evaluation and analysis is being conducted to confirm lasting impact. Furthermore, the changes that were found are self-reported changes rather than objective outcome measures. In future implementations and evaluations of the program, formative assessment will be used to monitor respondents' learning as a result of participation in Gray for a Day (Jung et al., 2018). Finally, the number of participants not completing the evaluation is unknown at this time; therefore, with future implementations, we will consider tactics for gathering this information in order to be able to report response rate.

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