

Brief Aging Education Affects Continuing Education Preferences and Behaviors of Mental Health Providers

Nicholas E. Schmidt, PhD,^{1,*} Brian Carpenter, PhD,² and Ann M. Steffen, PhD³

¹US Department of Veterans Affairs, Geriatrics and Extended Care, Augusta, Maine, USA.

²Department of Psychological and Brain Sciences, Washington University in St. Louis, St. Louis, Missouri, USA.

³Department of Psychological Sciences, University of Missouri–St. Louis, St. Louis, Missouri, USA.

*Address correspondence to: Nicholas E. Schmidt, PhD. E-mail: nicholas.schmidt1@va.gov

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Abstract

Background and Objectives: This study examined the impact of receiving foundational information about aging on continuing education (CE) interests, preferences, and behaviors of mental health providers.

Research Design and Methods: Participants were practicing licensed professional counselors ($N = 120$) recruited from a random sampling of a state registry. The study employed a 3-group randomized controlled design with participants assigned to 1 of 3 conditions: an aging-specific reading, an opioid use disorder-specific reading, and a CE requirement-specific reading. As outcomes, participants rated their interest in aging-specific CE and selected to receive an aging-specific CE or Motivational Interviewing-specific CE program.

Results: Perceived competence for working with older adults, assessed before the experimental manipulation, predicted choice and degree of interest in the aging-specific CE across conditions. Participants in the Aging-Reading condition rated a higher interest in aging-specific CE and were marginally more likely to select the aging-specific CE option than those in the other 2 conditions. Those in the Aging-Reading condition were also more likely to register for and complete an actual CE program focused on any topic.

Discussion and Implications: Foundational knowledge about aging may increase practitioners' interest and behaviors toward gaining competency for working with older adults, supporting the Positive Education about Aging and Contact Experiences model (Levy, S. R. (2018). Toward reducing ageism: PEACE (positive education about aging and contact experiences) model. *Gerontologist*, 58(2), 226–232. <https://doi.org/10.1093/geront/gnw116>) of reducing ageism.

Keywords: Ageism, Aging, Education and training, Mental health services

As the global population ages, ageism has become one of the most prevalent forms of discrimination and stereotyping (World Health Organization, 2021). A study of language used for discussing older adults has found that antiaging sentiments have also increased over the years, with potential explanations being medicalization of aging and the growing population of older adults (Ng et al., 2015). Positive attitudes toward aging have paradoxically not risen, despite improved health outcomes for older adults, a larger proportion of the population being older, and increasing positive views of other stigmatized groups (Levy, 2017). At the same time, the supply of clinicians across physical and behavioral healthcare with specialty training in geriatrics is woefully insufficient.

The rise in demand for healthcare and ageism of the workforce have affected many professional disciplines and fields of work. Workforce studies of psychologists conducted in 2002 (Qualls et al., 2002) and 2019 (Moye et al., 2019) show the percentage of clinicians identifying as geropsychologists has slipped from 4% to 1.2%. The Institute of Medicine has identified older adults as a vulnerable and underserved population as the workforce is underprepared for meeting the needs of the growing population (Blazer et al., 2012). Deficits in

an aging-informed workforce have long been noted across the fields of nursing (Ferrario et al., 2007), long-term care administration (Butler et al., 2014), and social work (Wang & Chonody, 2013), among others, with little progress in overcoming these deficits. Providing advanced training and certification to specialists as well as providing training to generalist mental healthcare professionals are essential components of strengthening the workforce (Hoge et al., 2015). Efforts to address this workforce gap in mental health have increased in recent years, including the Council of Professional Geropsychology Training Programs recommending foundational competencies (Hinrichsen et al., 2018) and continued efforts to monitor and reflect on the growth of the field in these domains (Hinrichsen & Emery-Tiburcio, 2022).

Licensed professional counselors (LPCs) are an important part of the behavioral health workforce and largely missing from research devoted to aging-related professional training. In a 2020 survey of LPCs, slightly less than half (47.37%) reported that they had worked clinically with older adults in the past year (Schmidt et al., 2024). Despite being excluded from providing mental health services to Medicare beneficiaries at the time of that study, those LPCs rated Medicare

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reimbursement limitations as least important across a list of influences on their interest in aging-related continuing education (CE; Schmidt, 2021). In response to strong arguments for including counseling professionals as mental health providers for Medicare beneficiaries (Fullen et al., 2020, 2022), the U.S. Congress passed the Mental Health Access Improvement Act (S.828/H.R.432), which has now been signed into law. Effective January 1, 2024, LPCs and marriage family therapists (MFTs) can now bill Medicare independently for services furnished for the diagnosis and treatment of mental illnesses (<https://www.cms.gov/medicare/payment/fee-schedules/physician-fee-schedule/marriage-and-family-therapists-mental-health-counselors>). In light of this growth in scope of practice, strategies to advance LPCs' interests and competencies for working with older adults are critically needed.

Aging knowledge, negative attitudes about aging, and ageist behaviors appear to be key variables related to the deficit in the behavioral health workforce. Levy (2018) proposed the Positive Education about Aging and Contact Experiences (PEACE) model as a theoretical approach to reducing ageism (see Figure 1). According to this model, attitudes about aging and older adults are improved through accurate education about aging and extended positive contact with older adults. Key to the PEACE theory is the finding that greater knowledge of aging is associated with more positive attitudes toward older adults (Apriceno & Levy, 2023). Education about aging is not required in most undergraduate or graduate professional programs; most developmental courses, including those labeled as "lifespans," focus primarily on childhood, adolescence, and young adulthood. Education on adult lifespan development is also missing entirely from most K-12 health education (Levy & Gu, 2023). These concerns were raised by Hoge et al. (2015) in the call for strengthening the behavioral health workforce

for serving older adults. The current study focused on the educational component of the PEACE model as applied to LPCs.

Current Study Rationale and Aims

CE is a key avenue for influencing knowledge and competency in postgraduate training. This study investigated a mechanism for increasing aging-related training intentions of LPCs, with a behavioral outcome measure of participants' interests and completion of a CE webinar specific to working with older adults. We hypothesized that, compared to participants who read an opioid use disorder (OUD)-Reading or a CE-Reading, professional counselors who read an aging-related fact sheet would be more likely to select an aging-specific CE option, report a higher degree of interest in aging-specific CE, and actually complete aging-specific CE training.

Method

Participants

This project used a random sampling of Missouri LPCs. A mailing list was obtained from the Missouri registry of LPCs in April 2020 and a random sampling of 1,000 clinicians was selected. Participants were recruited via direct mail sent to their name and mailing address as found on the downloadable listing of the Missouri state registry of LPCs (<https://pr.mo.gov/listings-cou.asp>); this state registry does not provide e-mail addresses. Participants were currently licensed LPCs in Missouri who reported spending at least some time in direct service provision (i.e., counseling/psychotherapy, assessment, case management) or supervision of direct service provision, as indicated by their responses to specific items on the survey tool.

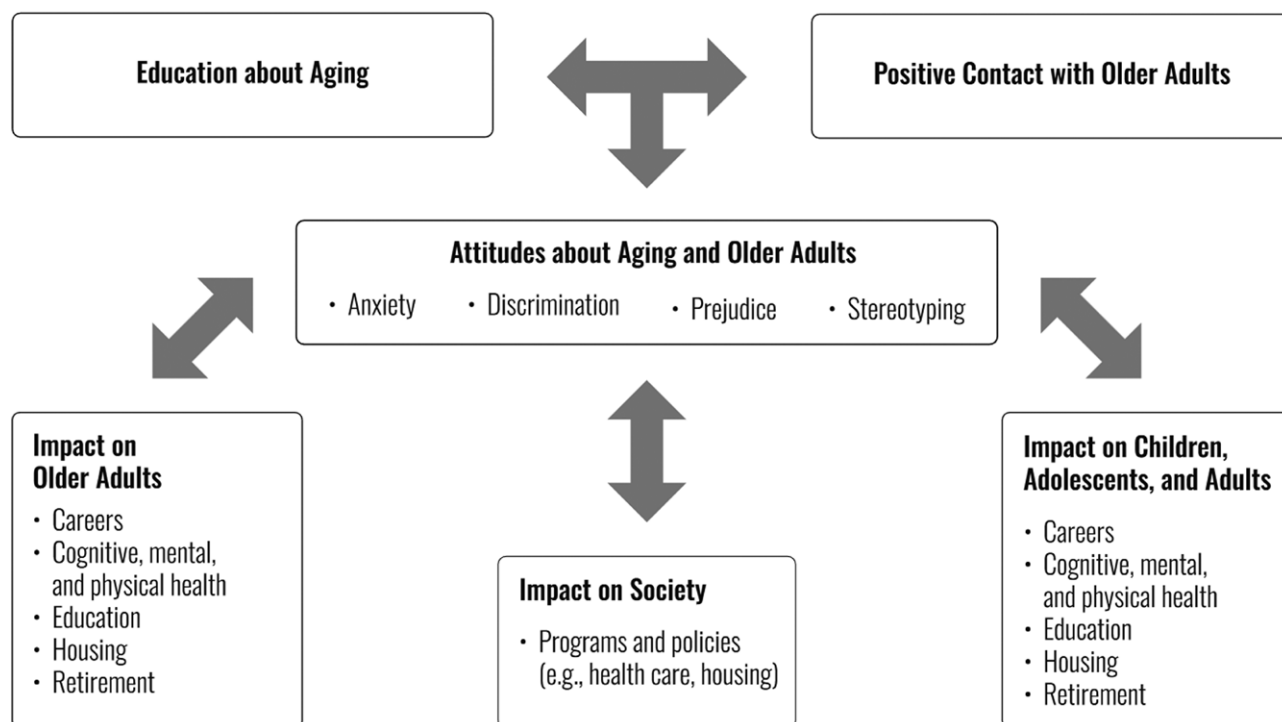


Figure 1. Positive Education about Aging and Contact Experiences (PEACE) model (Levy, 2018).

Procedures

In the first mailing sent in June 2020, potential participants were provided with some information about the project (i.e., “research project about CE interests of Missouri LPCs”) and a link to the online Qualtrics survey. Recipients were mailed a postcard reminder including the survey link 3 weeks later, and then again after another 3 weeks, for a total of 3 contacts. Participants completed informed consent online before entering the survey and were asked to respond using a computer, rather than a phone or tablet. Respondents who did not meet inclusion criteria (i.e., were retired, unemployed, or not engaged in direct service provision or supervision) were screened out for data analyses ($n = 1$). All data were collected using the one-time Qualtrics survey. Participants were provided, as an incentive, a coupon code for complimentary online CE training (2-hr Continuing Education Units) worth \$39.

At the start of the online survey, all participants responded to several questions related to their work roles and status in 2019 (i.e., before the onset of the coronavirus disease 2019 [COVID-19] pandemic). Next, they noted their preferred complimentary CE option, selecting from either an aging-specific (“Working with Older Adults”) or MI-specific (“Motivational Interviewing for Beginners”) recorded webinar and rated their level of interest in each option. Participants responded to additional questions about their work status as it related to older adults, including past training and percentage of time devoted to work with older adults. All participants then completed the Facts on Aging (FoA) quiz, Pikes Peak Competency Tool, and Expectations Regarding Aging (ERA) questionnaire.

Experimental conditions

One third of the participants were randomized into the Aging-Reading experimental group and directed to read the electronic version of the American Psychological Association’s (APA) document “Older Adults’ Health and Age-Related Changes: Reality Versus Myth” (<https://www.apa.org/pi/aging/resources/guides/myth-reality.pdf>) following their completion of those earlier survey items. This pdf is freely available through the APA Aging Portfolio website in English and in Spanish and was embedded within the Qualtrics survey. This document was included due to its comprehensive coverage of general aging and statistics and the direct response to common misconceptions in aging. Another third of the participants were randomized into the OUD-Reading group and had a similarly styled and length e-reading on treatment approaches for drug addiction embedded within their online survey; this was intended to serve as an MI-relevant educational topic (<https://d14rmgtrwzf5a.cloudfront.net/sites/default/files/drugfacts-treatmentapproaches.pdf>). The final third of the participants in the CE-Reading group were provided a digital copy of a reading on CE requirements for counseling for licensure renewal in their state (<https://pr.mo.gov/boards/counselors/continuingeducationreminder.pdf>), a topic unrelated to the CE choices, but similar in length to the other readings. For analyses, Aging-Reading was coded as “1,” OUD-Reading was coded as “2,” and CE-Reading was coded as “3.”

Dependent variables

Following the reading manipulation, all participants were reassessed for their preferences and interest ratings for each

CE and asked to select one of two webinars as compensation for participating: *Working with Older Adults* or *Motivational Interviewing for Beginners*, both offered through Missouri Institute of Mental Health (MIMH) and equal to each other in length and monetary value. Participants also responded to prompts regarding their reasoning for choice of CE option to address potential confounds in the study, such as barriers to Medicare reimbursement. Immediately following their submission of the survey, participants received a Qualtrics message with a complementary coupon code tied to their experimental condition. Deidentified data were later received from the Professional Training department of the MIMH regarding which coupon codes were used for which courses; this allowed for analysis of follow-up completion of courses by experimental condition.

Materials

Demographics

Participants responded to survey items assessing relevant demographics and professional characteristics. Participants reported their age, gender identity, highest degree earned, year they earned that degree, employment status, employment setting, percentage of their time dedicated to direct service provision and supervision of direct service provision, percentage of work with older adults, and previous training for working with older adults (graduate or postgraduate).

Knowledge

Aging knowledge was assessed using Palmore’s First Facts on Aging quiz (Palmore, 1977). This measure has become the gold standard for measuring knowledge and misconceptions about aging. The measure includes 25 true/false items about general aging topics. Test scores tend to increase with education and gerontology-specific education and have been shown to be a much better indicator of aging knowledge than attitudes (Palmore, 1998). Since its creation, the only standard modification has been the inclusion of a “don’t know” option in addition to the true/false responses (Palmore, 1998). This change provides more clarity by differentiating incorrect responses from misconceptions and ignorance. Examples of items on this measure include “Physical strength tends to decline in old age” and “The majority of old people have incomes below the poverty line.” Total scores were calculated as number of correct responses, with “don’t know” counting as incorrect. In the current study, internal consistency for the scale was on the lower limits of acceptability ($\alpha = 0.60$) but expected due to three response options; scores were normally distributed (skew = -0.02).

Perceived competence

The Pikes Peak Geropsychology Knowledge and Skill Assessment Tool is a tool developed to evaluate progress in developing competencies in work with older adults (Karel et al., 2010) and can be either self-administered or used by a supervisor to assess trainees. In the current study, the self-assessment in Part I of the tool was used to assess self-perceived knowledge about adult development, aging, and the older adult population. Participants rated their competency across domains of models of aging, demographics, aspects of normal aging, and diversity in the aging experience on a scale that included, in order, Novice (1), Intermediate (2), Advanced (3), Proficient (4), and Expert (5), with anchors

described on the tool. For example, ratings of “Novice” suggests entry-level skills requiring intensive supervision, whereas an “Expert” serves as a resource consultant to others and is recognized as having expertise. All 21 items were rated, and these ratings were summed with higher scores indicating more expertise. Part I of this tool has previously demonstrated high internal consistency ($\alpha > 0.91$). In this study, the items had extremely high internal consistency ($\alpha = 0.98$) and scores were moderately negatively skewed (skew = -0.86).

Ageism

The 38-item ERA questionnaire (Sarkisian et al., 2002) has been reviewed in the ageism literature and found to have adequate ratings across content validity, structural validity, and internal consistency (Ayalon et al., 2019). In the current study, 18 items pertaining to expectations about older people in general were used. This section of the ERA has demonstrated high internal consistency in a previous study (Blieszner & Roberto, 2010; $\alpha = 0.90$). Participants responded with choices of “Definitely True,” “Somewhat True,” “Somewhat False,” and “Definitely False” to items about their expectations of aging and these were scored as 1–4, respectively, and summed to create a total score in which higher values are interpreted as reflecting more negative attitudes toward aging and older adults. These 18 items had a good internal consistency ($\alpha = 0.89$) and scores were evenly distributed (skew = -0.04), but with limited variance (standard deviation [*SD*] = 7.67, range = -29 to 71).

Manipulation and attention check

After being prompted to complete the randomized reading embedded within the online survey platform, participants assigned each reading condition responded to three questions to assess their level of attention to that reading. For example, participants in the Aging-Reading condition responded to the following questions: “Did you read the PDF ‘Older Adults’ Health and Age-related Changes: Reality versus Myth?” with response options of “yes” and “no.” This was followed by two true/false questions. First, “according to the PDF, most older adults are living in nursing homes” to which the correct answer was false. Second, “according to the PDF, older adults are still capable of learning new skills” to which the correct answer was true. As a means of confirming attention to the survey details, all participants regardless of experimental condition also had several points during the survey in which they were instructed to respond in a specific way (i.e., “Please mark option C”).

CE preferences and utilization

Participants’ preference and interest in the CE courses provided were assessed both pre- and postmanipulation (i.e., before [T1] and after [T2] reading the assigned PDF). Specifically, they were asked “As described in the consent form, your compensation for participating is CE credits. Which of these CE options would you be more likely to select?” with choices of “Working with Older Adults” (coded as 1) and “Motivational Interviewing for Beginners” (coded as 2). Next, they were instructed “Using a 1–5 scale (1 = not interested at all, 5 = extremely interested), rate your level of interest in each of these CE course options.” After completing the survey (i.e., demographics, professional characteristics, ERA, FoA, and Pikes Peak Competency Tool) and being exposed to their experimentally assigned reading, participants

completed these items a second time (T2). They also rated several areas that contributed to their interest and choice of CE, responding on the same 1–5 scale (i.e., Medicare reimbursement limitations, interest prior to study, interest developed during the study, and relevance to their work).

As described in the *Procedures* section, data were received from the Professional Training department of the MIMH regarding completion of CE courses. Specifically, these data showed how many participants from each condition (as shown by the coupon code they used which was specific to their experimental condition) actually completed each CE course.

Preliminary Analyses

Missing data

A total of 139 individuals opened the survey, agreed to participate, and stated that they had not previously completed the survey; this constitutes 13.9% of the 1,000 counselors invited to participate. Of those who joined, 15 were removed from analyses due to having missing data on both manipulation check items and extensive missing responses ($>10\%$). Another three participants were removed due to not responding to questions regarding the reading manipulation and one was removed because they were retired and had not provided direct service in the past year. The final sample of 120 constitutes 12% of those initially invited to participate and 86% of those who entered the survey platform.

Data for these 120 participants were examined for missingness and very low rates of missing data were found; across all study variables, less than 1% of responses were missing for any independent or dependent variables. In light of these patterns, missing items within scales were replaced with Available Item Analysis, wherein replacements are made with the mean value of other items from that scale. This method has been shown to perform as well or better than more advanced statistical methods for missing items (Parent, 2013). No substitutions were made for missing items that were not part of a larger scale (i.e., questions related to choice and preference for CE), resulting in varied sample sizes across analyses.

Randomization check

Participants in the three experimental conditions did not vary on demographic variables of gender ($\chi^2(2, N = 120) = 1.89, p = .39$), age ($F(2, 114) = 0.27, p = .76$), years since their highest degree ($F(2, 109) = 0.25, p = .78$), highest degree earned ($\chi^2(4, N = 120) = 2.45, p = .65$), or proportion of time in 2019 dedicated to working with older adults ($F(2, 117) = 2.11, p = .13$). The groups also did not vary on study variables of knowledge of aging ($F(2, 117) = 0.52, p = .60$), competence for working with older adults ($F(2, 117) = 0.14, p = .87$) or ageism ($F(2, 116) = 0.11, p = .90$). Thus, it appears that randomization was successful in equating the experimental conditions on key demographic and other variables related to study outcomes.

Manipulation check

Chi-squared analysis indicated that groups did not significantly differ in proportion of participants who had adequate engagement with the experimental manipulation ($\chi^2(2, N = 120) = 3.41, p = .18$).

Sample characteristics

The 120 participants ranged in age from 30 to 79 years ($M = 62.66, SD = 9.98$). Participants were overwhelmingly White

(91.67%) and heterosexual (92.50%) and mostly female (67.50%). Most of the participants were master's level clinicians and about one-fourth were LPCs who had earned a doctoral degree (23.33%). Over half of the participants spent 0% of their time working with older adults in the previous year (51.67%) and the mean proportion of time was 7.46%. Average time since licensure for participants was 28.51 years (*SD* = 10.26) and time ranged from 2 years to 51 years. Participants reported receiving training in aging informally (51.67%) and through workshops (45.00%), on-the-job training (42.50%), and graduate training (30.00%), and less frequently from practica (9.17%) and postgraduate training (8.33%). They were mostly working as employees (48.33%) or self-employed (40.83%); several participants were retired or semiretired but still provided clinical services in the past year (6.61%). Summaries of work characteristics are available in Table 1. More data regarding relationships between preintervention study variables are available to review (Schmidt et al., 2024).

Results

Hypothesis 1: Compared to participants in the two control groups, participants in the Aging-Reading group will be more likely to select the aging-specific CE option at Time 2.

A three-way Chi-Square of Condition × T1 CE choice × T2 CE choice examined impact of experimental condition on CE

preferences. All Chi-squared analyses were significant at the $p < .001$ level. The Aging-Reading group was the only group in which there was substantial change from T1 to T2, with 23 (60.53%) of participants choosing the aging-specific CE at T1 and 30 (78.94%) choosing the aging-specific CE at T2.

Stepwise logistical regression was run with Time 2 choice of CE (i.e., Working with Older Adults vs Motivational Interviewing for Beginners) as the dependent variable. Total score on the FoA quiz (knowledge), ERA (ageism), and Pikes Peak competency (competency) tools were entered in Step 1 of the model, then experimental group was added in Step 2, with both control groups (OUD-Reading and CE-Reading) pooled together compared to the Aging-Reading experimental group. Results are available in Table 2 and show that aging knowledge, ageism, and perceived competence as a block did predict CE choice, $F(3, 108) = 5.68, p < .001, R^2 = 0.14$. The inclusion of group into the model resulted in marginally significant improvement, $F(4, 107) = 5.35, p < .001; R^2\Delta = 0.03, p = .05$. Self-reported competency for working with older adults, as measured by Pikes Peak total score, was the only significant predictor in Step 1 ($B = -0.32, p < .001$). In Step 2, competency ($B = -0.32, p < .001$) was significant and group ($B = -0.18, p = .05$) was marginally significant. Participants who rated themselves as more competent for working with older adults were more likely to choose the aging-specific CE, and participants in

Table 1. Work Characteristics of Respondents ($N = 120$)

Variable	N (%)	Mean (SD)
Proportion of time with population		
Children		24.72 (35.79)
Adult		50.51 (39.03)
Older adults		7.46 (12.54)
Past training in aging		
Graduate training	36 (30.00)	
Practicum	11 (9.17)	
Postgraduate	10 (8.33)	
Workshop	54 (45.00)	
On-the-job	51 (42.50)	
Informal	62 (51.67)	

Note: *SD* = standard deviation.

Table 2. Hierarchical Regression Analyses for Choice of CE ($N = 112$; Hypothesis 1A)

Predictor variables	β	<i>R</i>	$R^2/\text{Adj } R^2$	ΔR^2	<i>F</i>	ΔF
Step 1		0.37	0.14/0.11		5.68***	
FoA total	-0.02					
ERA total	0.15					
Pikes Peak total	-0.32***					
Step 2		0.41	0.17/0.14	0.05	5.35***	3.92
FoA total	-0.01					
ERA total	0.14					
Pikes Peak total	-0.32***					
Experimental group	-0.18					

Notes: CE = continuing education; ERA = Expectations Regarding Aging; FoA = Facts on Aging; Pikes Peak total = Perceived Competency measure. *** $p < .001$.

the Aging-Reading condition were marginally more likely to choose the aging-related CE.

The same analyses were run excluding the FoA ageism measure due to the poor distribution. In this model, Step 1 did significantly predict CE choice at T2, $F(2, 110) = 7.37$, $p = .001$, $R^2 = 0.12$, and competency was the only significant predictor ($B = -0.33$, $p < .001$). The addition of group to the model added predictive power to the model, $F(3, 109) = 6.52$, $p < .001$; $R^2\Delta = 0.03$, $p = .04$. Competency ($B = -0.33$, $p < .001$) and group ($B = -0.19$, $p = .04$) were both significant predictors in this model.

Hypothesis 2: Compared to participants in the two control groups, participants in the Aging-Reading group will be more likely to report a higher degree of interest in aging-specific CE at Time 2.

Hierarchical linear regression analyses were run to test Hypothesis 2 with the continuous Time 2 dependent variable of interest in the aging-specific CE ($M = 3.65$, $SD = 1.23$). Results are available in Table 3 and showed that aging knowledge, ageism, and perceived competence had marginal significance in predicting interest in the aging-specific CE, $F(3, 107) = 2.70$, $p = .05$, $R^2 = 0.07$. Perceived competence was the only significant predictor ($B = 0.27$, $p = .01$). The inclusion of experimental group to the analyses did result in a significant model and added predictive power over and above the first step of analyses, $F(4, 106) = 3.41$, $p = .01$; $R^2\Delta = 0.04$, $p = .02$. Perceived competency ($B = 0.27$, $p = .01$) and experimental condition ($B = 0.21$, $p = .02$) were the only significant predictors in Step 2. Participants who had higher self-perceived competence for working with older adults and those who were in the Aging-Reading condition reported higher interest in the aging-related CE option.

Again, due to poor scale distribution, these same analyses were run excluding the ageism measure. In this model, Step 1 did significantly predict interest in the aging-specific CE at T2, $F(2, 109) = 4.63$, $p = .01$, $R^2 = 0.08$, and competency was the only significant predictor ($B = 0.29$, $p = .003$). The addition of experimental group to the model added predictive power to the model, $F(3, 108) = 4.88$, $p = .003$; $R^2\Delta = 0.04$, $p = .03$. Competency ($B = 0.29$, $p = .003$) and group ($B = 0.20$, $p = .03$) were both significant predictors in this model.

Self-reported influences on choice

Data on self-reported factors that contributed to participants' interest and choice of CE were also collected (i.e., Medicare reimbursement limitations, interest prior to study, interest developed during the study, and relevance to their work). Medicare reimbursement limitations were rated as the least important ($M = 1.83$, $SD = 1.33$). Other factors were rated as more important, including interest developed during the study ($M = 3.13$, $SD = 1.26$), interest before study ($M = 3.31$, $SD = 1.33$), and relevance to their work ($M = 3.56$, $SD = 1.25$). Specific to interest developed during the study, participants in the Aging-Reading group rated this as a more important factor ($M = 3.49$, $SD = 1.27$) than those in the other conditions ($M = 2.95$, $SD = 1.22$; $t(117) = 2.27$, $p = .03$).

To examine potential influences of COVID-19 on the responses, participants were asked to rate the impact of COVID-19 on their responses to the survey using a 1–5 scale. The modal response from about three fourths of the participants (73.3%) was 1 (not at all) and no participant responded with 5 (a great deal).

Actual CE behaviors

Data were received from the Professional Training department of the MIMH regarding follow-through of the 60 participants (50% of sample) who completed an online CE course using the coupon codes provided as the recruitment incentive. The proportions of participants selecting "Working with Older Adults" for CE completion was remarkably similar across the Aging-Reading ($n = 19$; 67.86%), OUD-Reading ($n = 8$; 72.73%), and CE-Reading ($n = 14$; 68.33%) experimental groups. The Chi-squared test examining proportion of participants in experimental groups who used their coupon code to access the actual CE training was not significant, $\chi^2(2) = 0.13$, $p = .94$, with 68% of all participants selecting the "Working with Older Adults" webinar training rather than "Motivational Interviewing."

Pooled data on any CE completion by experimental condition are provided in Table 4. This Chi-squared analysis was significant, $\chi^2(2) = 12.48$, $p = .002$, with individuals in the Aging-Reading condition most likely to follow through and complete a CE professional training of any kind.

Table 3. Hierarchical Regression Analyses for Interest in Aging-Specific CE ($N = 111$; Hypothesis 1B)

Predictor variables	β	R	$R^2/\text{Adj } R^2$	ΔR^2	F	ΔF
Step 1		0.27	0.07/0.04		2.70	
FoA total	-0.05					
ERA total	0.02					
Pikes Peak total	0.27**					
Step 2		0.34	0.11/0.08	0.04	3.41*	5.23*
FoA total	-0.07					
ERA total	0.03					
Pikes Peak total	0.27**					
Experimental group	0.21*					

Notes: CE = continuing education; ERA = Expectations Regarding Aging; FoA = Facts on Aging; Pikes Peak total = Perceived Competency measure. * $p < .05$. ** $p < .01$.

Table 4. Actual CE Completion by Experimental Condition for All Study Participants

Group	Completed either CE	Did not complete any CE	Total
Aging-Reading	28 (68.29%)	13 (31.70%)	41
OD-Reading	11 (29.73%)	26 (70.27%)	37
CE-Reading	21 (50.00%)	21 (50.00%)	42
Total	60 (50.0%)	60 (50.0%)	120

Notes: CE = continuing education; OD = opioid use disorder.

Discussion

This study investigated the impact of receiving foundational information about aging on LPCs' choice of pursuing CE related to working with older adults. Results showed that higher self-perceived competence for working with older adults predicted both choice and level of interest in aging-related CE. Exposure to a brief educational reading on aspects of mental health and aging—compared to reading on substance abuse treatment or CE requirements for LPCs—also increased degree of interest in the aging-related CE above and beyond the other predictors. Self-perceived ageism and knowledge of aging were not shown to be related to choice of CE or interest in the aging-specific CE among participants. In addition to participants' stated choices and interest in the CE options, we were able to compare data on actual CE completion. Although proportion of CE completers choosing the aging-specific CE was roughly similar—and rather high—across participants in all three groups, those in the Aging-Reading group had a higher likelihood of following up and completing a CE of any kind.

The PEACE model proposed by Levy (2018) suggests that attitudes about aging and older adults are expected to be improved through accurate education about aging and positive contact with older adults. This study focused on the accurate education aspect of the theory and attempted to provide that education as a means of improving attitudes toward aging and interest in pursuing further education in aging. Access to the aging education did indeed increase choice of and interest in the aging-specific CE. However, the specific mechanism of this effect is unknown. This model suggests that it may be due to a change in attitudes from that education, but other factors such as salience of the reading condition or a sense of duty to serve older adults while still holding negative attitudes, for example, could also contribute to this effect. Future studies could measure these attitudes to further investigate other factors that mediate the relationship between access of education and interest in aging-related education.

Our sample had a return rate of 13.9% for participation. A workforce study of psychologists e-mailed prospective participants with a link to the online survey and reported a return rate of 14.5% (Moye et al., 2019). One potential influence on our return rate was the COVID-19 pandemic, as our mailings were sent in summer 2020 to the work address listed on the Missouri licensure registry. As many individuals across fields transitioned to working from home over the previous months, it is possible that some of the mailings were missed or overlooked at the workplace. There may have been additional impacts of COVID-19 on our sampling, or on responses, without participants having explicit awareness of that impact. For example, much media attention focused on the susceptibility of older adults to COVID-19, some participants had likely

worked with clients who had lost parents or grandparents, or with older adults seeking counseling due to concerns related to the pandemic.

Our sample LPCs had an average age of 62.66 years, which raises interesting implications both for sampling and results. Regarding the method of recruitment, this may suggest that older participants are more likely to respond to mailed invitations or to CE credits as an incentive. Age also correlated with many other study variables, including interest in the aging-specific CE at T1 and T2, knowledge of aging, and perceived competence. Therefore, we may have seen different results with a younger sample of counselors. Interestingly, some of the older participants may have had those higher scores on the FoA quiz (i.e., higher scores on knowledge of aging) due to knowledge generated from their own lived experience, whereas younger participants would not have this same information.

Competence for Working With Older Adults

Perceived competence, as measured by the Part 1 of the Pikes Peak Geropsychology Knowledge and Skill Assessment Tool, was a significant predictor in all steps of regression models predicting CE choice and interest. This study was intended to capture generalist practitioners because of the need for increasing competency for working with older adults among generalist practitioners (Hoge et al., 2015). Only two of the participants reported 50% or more of their direct service time working with older adults, with a mean proportion of 7.46%, suggesting that participants in this study were not specialists in aging. Still, among non-aging-specific counselors, ratings of perceived competence averaged between “Intermediate” and “Advanced” levels and were correlated moderately with knowledge of aging ($r = 0.24$). Importantly, perceived competence in working with older adults explained much of the variance in their CE choice and interest.

These results also highlight a potential divide between individuals with some interest and perceived competency for working with older adults versus those with no interest and perceived competency. Specifically, in our sample, participants who reported 0% of their time working with older adults reported less interest in the aging-specific CE than participants who did work with older adults, although their interest was still above the middle point of the scale. Even for individuals with no intent to directly work with older adults, factors related to aging are certain to play a role in their work at some point. Issues of caring for older parents or grandparents, anticipatory or actual grief and bereavement, grandparents raising grandchildren, planning for retirement and older adulthood, etc. are topics likely to be faced by counselors working with children and younger and middle-aged adults. For these counselors, although an aging-specific CE may not

be a priority, some foundational knowledge on mental health and aging would still be beneficial.

Ageism

Ageism was measured in this study with 18 items from the ERA scale. The scale had very low variance, and therefore low correlations and impact in hypothesis testing. As with perceived competence, the scale is based on self-report, and therefore subject to biases from participants. Unlike perceived competence, however, there is likely more social desirability to respond in a way that shields oneself from ageism versus lower competence in working with older adults. Meta-analysis has shown that even anonymous, online surveys are subject to social desirability bias (Dodou & de Winter, 2014). The low variance of scores on this measure in our study lead to limited ability to measure the impact of ageism on participants' CE choice and interest, as well as how ageism is associated with other study variables in this sample. Recent meta-analysis, however, has shown education on aging to be part of effective intervention for ageism (Apriceno & Levy, 2023). Future studies could include tests of ageism through use of an implicit association test (Greenwald et al., 1998), which has been used to measure ageism in the past (Levy & Banaji, 2002). These are important relationships to examine and would certainly provide more nuance for considering implications of these data.

Implications

Access and barriers to CE

A strength of this study was its use of a behavioral outcome (i.e., choice of CE) and access to follow-up data on this outcome. Although this was a forced-choice between an aging-specific CE and a Motivational Interviewing CE, data showed that even before any experimental manipulation or prompting of aging-related information, the aging-specific CE was a popular choice with high interest. An interesting follow-up could examine interest among a larger group of options, or within a free response questionnaire. An underlying assumption of this study was that disinterest in aging-related CE by behavioral health providers is at least partially due to ageist stereotypes that can be alleviated through foundational knowledge. Based on the high interest in the aging-specific CE at T1 of this study, an alternative explanation may be that practitioners just do not know that they want this type of CE until it is offered, or that they are unaware of how to access such CE. Therefore, a major part of increasing the competency for working with older adults among generalist practitioners may be increased advertising and offerings of trainings and CE, in addition to focusing on reducing ageism.

Based on data received from the Professional Training department of the MIMH, about half of all participants followed through with completion of either CE. Information about what factors influenced participants completion of CE is unavailable because these data were not tied to their survey data. The literature on this type of participation incentive is relatively underdeveloped. This study may help to establish some baseline for CE completion as a study incentive. Furthermore, if future studies reveal that our follow-through participation was relatively higher or lower than normal, this might be reflective of the power of the experimental manipulation, or of the aging content as part of the CE incentive.

Regarding factors that participants reported to have had an impact on their interest in the CE choice, Medicare reimbursement issues were not rated as very impactful. LPCs have

been directly affected by Medicare reimbursement ineligibility (Fullen et al., 2020, 2022), including at the time of this study. Despite this, participants were interested and reported other factors that were more crucially affecting their CE choice (i.e., interest prior to and developed during study, relevance for work). Now that both LPCs and MFTs are eligible for Medicare reimbursement coverage, the impetus for advancing aging-related professional training is even more urgent.

General Limitations

This study employed a randomized group design with an experimental manipulation. Although readings were chosen because of their similarity in length and structure, the Aging-Reading may have simply been more aligned with the aging-specific CE than the OUD-Reading was with the MI-specific CE, which may have partly contributed to the present results.

Data on the race, sex, and age of Missouri LPCs are not available, so it is unclear how normal or divergent our sample is from that population or from LPCs practicing in other states and regions of the United States. Results may look different with a more heterogeneous sample, especially those who are younger, more regionally and more ethnically diverse.

Conclusion

Even relatively brief interventions have the potential to increase interest in and involvement in aging-related professional training. Providing brief education can influence behavioral health professionals' choice of and interest in CE options. Participants did report a fairly high level of interest in the aging-specific CE, and indeed preferred it to the MI-specific CE even prior to the experimental manipulation. These findings raise important implications regarding increasing availability of and access to aging-specific CE across fields, as well as providing more foundational education in school and training programs. Given ongoing demographic changes, behavior health professions and professional organizations must act to prepare for increased need and demand. This study suggests that practitioners may be open to the work required to reach that competency and eager to learn more, if given the opportunity.

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Conflict of Interest

None.

Data Availability

An earlier version of this work was submitted as the first author's doctoral dissertation (Schmidt, 2021). Data are not available because authors have not completed their original work with the data set. This study was not preregistered.

Author Contributions

Nicholas Schmidt (Conceptualization [lead], Data curation [lead], Formal analysis [lead], Methodology [lead],

Writing—original draft [lead], Writing—review & editing [equal]), Brian Carpenter (Conceptualization [supporting], Methodology [supporting], Supervision [equal], Writing—review & editing [equal]), and Ann Steffen (Conceptualization [supporting], Data curation [supporting], Formal analysis [supporting], Investigation [supporting], Methodology [supporting], Project administration [supporting], Resources [lead], Software [lead], Supervision [equal], Writing—review & editing [equal])

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