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ABSTRACT

Current education in gerontology focuses on sharing knowledge and promoting intergenerational contact in order to shift students' attitudes about aging and elders. Existing interventions, however, may be less effective in modifying students' emotional reactions and implicit ageism. Contemplative pedagogy includes practices that help students notice cognitive and emotional patterns and that may serve to reduce bias. Suggestions are made for ways to incorporate contemplative pedagogy in the gerontology classroom.

Educators in gerontology see ageism, originally defined by Robert Butler as "a process of systematic stereotyping and discrimination against someone because they are old" (Butler, 2005), as a central concern for many reasons. We are aware that ageism has negative impacts on individuals (Barber & Lee, 2015; Levy, Pilver, Chung, & Slade, 2014; Levy, Slade, Chung, & Gill, 2015) and are motivated to help our students lessen their own ageism as a way of improving their own future experience of aging. We are aware of the ways that ageism creates intergenerational distance and discrimination against elders (Nelson, 2005), so we seek to lessen ageism because of social justice concerns. In addition, we are all aware of the need for people in all fields to address the challenges inherent in population aging so we seek to address ageism as one of the barriers to students choosing careers in the aging field (Mejia, Hyman, Behbahani, & Farrell-Turner, 2018). Recent research suggests that age stereotypes are increasing in negativity over time (Ng, Allore, Trentalange, Monin, & Levy, 2015).

Gerontology educators are using and assessing a wide variety of approaches, and many appear to be successfully increasing knowledge and shifting attitudes (Chonody, 2015). Imparting knowledge and cultivating positive role models and relationships, however, may not be shifting students' internalized, or implicit ageism. Contemplative pedagogy could offer new ways of thinking about aging as well as practices to use in the classroom that will foster more awareness of ageism. Contemplative pedagogy is a broad term that includes a variety of practices, all of which have an "inward or first-person focus" (Barbezat & Bush, 2013, p. 5). A goal of contemplative practice is to cultivate a state of mindfulness, or "paying attention … on purpose, in the present moment, and nonjudgmentally" (Kabat-Zinn, 1994, p. 4). The overall focus of contemplative pedagogy is incorporating experiences that help students notice and analyze their internal experience and connect this experience to the outer world.

This paper starts by reviewing the literature on current educational approaches to ageism, then reviews the literature on the ways that mindfulness affects implicit bias.

The paper then suggests a framework through which contemplative pedagogy can enhance current educational practice: first, by offering general mindfulness practices to enhance students' reflective capacity; second, by providing a way to understand the formation of implicit ageism; and finally, by applying these practices to aging content in order to help students recognize and change long-established cognitive and emotional patterns centered around aging.

Current pedagogical approaches to ageism

Because we tend to believe that most ageist discrimination comes from stereotyping, much of the effort to counteract ageism uses educational interventions as a way to change inaccurate stereotypes. Indeed, providing correct information has been shown to affect attitudes (Chonody, 2015). One recent study finds that lack of knowledge about aging is correlated with negative ageist behaviors (Cherry et al., 2016), and a study of nursing students in Spain reported a marked decrease in negative stereotypes after a single course focused on aging (Sarabia-Cobo & Castanedo Pfeiffer, 2015). However, another recent study reported that students in an interdisciplinary gerontology course improved their scores on the Facts on Aging Quiz but attitudes and aging anxiety did not change (Merz, Stark, Morrow-Howell, & Carpenter, 2018). The authors suggest that "implicit attitudes toward aging and anxiety about aging were resistant to change" (Merz et al., 2018, p. 42).

Deeply-held beliefs may be resistant to educational interventions. This has been demonstrated in the area of health literacy, where educational interventions designed to counter "myths" about arthritis showed limited effectiveness (Ansburg, 2016). While offering information to correct inaccurate ideas about arthritis was effective immediately after the intervention, five days later the impact had dissipated; participants endorsed myths at the same rate as they did before the intervention.

Because educators recognize the limitations of learning through reading, lecture, and discussion, contact with elders is often recommended as a way to counteract students' negative stereotypes. The PEACE (Positive Education about Aging and Contact Experiences) Model (Levy, 2018) suggests that both education about the aging process and positive contact with older adults are needed to shift student attitudes. This model draws upon intergroup contact (Pettigrew & Tropp, 2006) and life-review (Gaggioli et al., 2014) theories to suggest specific conditions for positive and mutually valuable intergenerational contact.

A good deal of the pedagogical research in gerontology looks at the impact of contact with elders on students (Roodin, Brown, & Shedlock, 2013). Usually this is considered within the framework of service-learning, which can be defined as

> A course-based, credit-bearing educational experience in which students participate in an organized service activity that meets identified community needs, and reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility (Bringle & Hatcher, 1995, p. 112).

According to this definition, we are already expecting students to be impacted in a number of different ways. Research suggests that, as educators, we are also looking for service-learning to shift student attitudes about aging, often through disconfirming stereotypes

(Chonody, 2015). Chonody's review of 58 articles on pedagogical interventions shows that attitudinal change was achieved in 88% of the studies reviewed.

Because quantitative data does not illuminate the process of attitude change, many studies use students' reflective writing to assess attitude change (Augustin & Freshman, 2016; Gardner & Alegre, 2019; Kalisch, Coughlin, Ballard, & Lamson, 2013; Teater, 2018). Analysis of students' reflections in these studies do show that service-learning challenges students' stereotypes of elders and often results in a shift to more positive attitudes. To avoid limiting students' responses, most studies provide fairly general guidelines for the reflections, often guiding students to not only describe what happened in the service-learning context but also what they thought and felt about it (Augustin & Freshman, 2016; Kalisch et al., 2013). In one case, students were given additional guidance to reflect on three specific areas – personal growth, civic engagement, and academic enhancement (Gardner & Alegre, 2019). While these types of general guidelines for reflection allow students to write about their own experience, we might not see deep reflection on certain topics unless students are directed to reflect on them. Students may be unwilling to share thoughts and feelings that they think will be seen as negative by instructors or researchers, and students may lack practice in noting thoughts and feelings as they arise.

Limitations of current approaches

Contact with elders in general, and service-learning in particular, clearly enhances students' experience in classes about aging. Short-term contact, however, is likely not enough to eradicate ageism. The limits of intergroup contact are recognized in the domain of racial bias, where the "some of my best friends are black" defense is being challenged (Eligon, 2019). A similar defense against ageism might be, "I can't be ageist because I love my grandma". Hoogland and Hoogland's word-listing study demonstrated that it is possible to have certain perceptions of a group in general (elders) while holding different perceptions for a subgroup (grandparents) (Hoogland & Hoogland, 2018). Impressions of a group in general reflect automatic processing, while the creation of subtypes uses controlled processing. Without explicit attention to students' general stereotypes and to the process of stereotype formation, exposing students to positive exemplars of aging may just create additional subtypes while leaving the negative impressions of elders in general untouched.

Educational interventions focused on shifting or softening stereotypes work with students' cognitive patterns – what they think about aging and elders. These interventions, however, may not effectively work with the emotional components of ageism. Braithwaite suggests that while stereotyping is an important component of ageism, other key components are prejudice, an emotional component related to stereotypes, and stigma, which leads to social distance and avoidance. Finally, she also identifies fear of aging as a key component of ageism (Braithwaite, 2002). The multidimensional nature of ageism is also recognized by the PEACE model, where Levy includes stereotyping, prejudice, discrimination, and anxiety as components of attitudes about aging and older adults (Levy, 2018).

Terror management theory gives an explanation for why our stereotypes about aging carry a negative emotional charge and contribute to aging anxiety. Because death is the ultimate threat to our self, humans create psychological defenses against this existential threat (Solomon, Greenberg, & Pyszczynski, 2004). Martens, Goldenberg and Greenberg suggest that aging presents a number of existential threats, including the threat of death,

the threat of physical degeneration, and the threat of becoming socially insignificant (Martens, Goldenberg, & Greenberg, 2005). Their analysis suggests that reducing ageism depends not only on "correcting" our stereotypes about aging with positive examples, but facing directly and openly these existential threats. Showing students positive examples of aging leaves these fears intact.

The terror management perspective shows promise as applied to gerontology education. Students' reactions to hypothetical persons, young and old, with and without dementia, showed that older targets generated more death-related thoughts as well as lower ratings of competence (O'Connor & McFadden, 2012). A study of graduate students in psychology showed that salience of death-related thoughts, death anxiety, and negative behaviors toward older adults were significant negative predictors of students' willingness and desire to work with older adults. In addition, salience of death-related thoughts and death anxiety were positively associated with negative behaviors toward elders (Mejia et al., 2018). This supports the assertion of terror management theory that those with greater salience of death-related thoughts and greater death anxiety may choose to distance themselves from elders.

Another barrier to effectively shifting ageism in the gerontology classroom is that fact that individuals are often not aware of the extent to which they are ageist. We may have implicit age bias, just as we may exhibit implicit racism and sexism (Staats, 2013). Implicit ageism operates without conscious awareness, and includes both implicit age stereotypes and implicit age prejudice (Levy & Banaji, 2002). Implicit stereotypes are investigated using tools like the Implicit Association Test (IAT; examples available at https://implicit. harvard.edu/implicit/) and through stereotype priming. Implicit ageism can impact us across the lifespan through psychological, behavioral and physiological pathways, as implicit age bias is as strong for elders as it is for young people (Bargh, Chen, & Burrows, 1996; Levy & Banaji, 2002).

While most research on the impact of service-learning has focused on measuring attitudes, knowledge, and likelihood of increased contact, one recent study measured the impact of a service-learning course on students' implicit biases toward older adults and individuals with disabilities (Kogan & Schoenfeld-Tacher, 2018). In this study, students completed the IAT (for either abled versus disabled, or young versus old) both before and after a service-learning course engaging students in helping elderly or disabled pet owners. Regardless of the form of the IAT used, after the conclusion of the course students were more likely to indicate no preference for young or abled or a preference for old or disabled. However, the IAT is not immune from social desirability effects, since performance on the test reflects both evaluative associations and control over automatic habits (Gonsalkorale, Sherman, & Klauer, 2014).

Mindfulness and bias

Mindfulness practice is "the systematic and intentional cultivation of mindful presence, and through it, of wisdom, compassion, and other qualities of mind and heart conducive to breaking free from the fetters of our own persistent blindness and delusions" (Kabat-Zinn, 2005, pp. 109–110). Mindfulness, then, might be well suited to noticing and decreasing implicit bias. Brown-Iannuzzi and colleagues suggest that mindfulness can dampen the impact of perceived discrimination on depressive symptoms through three mechanisms: emotional regulation, ability to reduce and let go of negative thoughts, and

lower general emotional reactivity (Brown-Iannuzzi, Adair, Payne, Richman, & Fredrickson, 2014). An analysis of survey results from 624 U.S. respondents does show that trait mindfulness (as measured by the Five-Facet Mindfulness Questionnaire) buffers the impact of perceived discrimination and depressive symptoms. This effect is in addition to the moderating effect of positive emotions, since mindfulness may also tend to reduce negative emotions (Brown-Iannuzzi et al., 2014).

Lyons' 2016 study of 369 middle-aged and older gay men in Australia is the only study to look specifically at how mindfulness might affect the impact of age-related discrimination. Respondents were asked if they had ever been treated unfairly because of their sexual orientation or their age; 27% of the men had experienced sexuality-related discrimination in the past two years, while 41% had experienced age-related discrimination in the past two years. Respondents completed scales measuring dispositional mindfulness, psychological distress and self-esteem. In general, experiencing either type of discrimination was associated with greater distress and lower self-esteem. For men with higher mindfulness, however, there was no relationship between recent discrimination and distress and self-esteem (Lyons, 2016).

A number of recent articles report that mindfulness meditation can reduce bias. In one study, college students who listened to a 10-minute mindfulness meditation showed less age and race bias on the IAT than students in a control group (Lueke & Gibson, 2015). The study's authors attribute this result to the brief mindfulness intervention reducing the automatic activation of negative associations. Another study asked participants to sort photographs of both young and old people either by a single assigned category (low mindfulness), multiple assigned categories (moderate mindfulness), or multiple self-generated categories (high mindfulness). Using active categorization as the mindfulness intervention was also associated with decreases in automatic stereotype-activated behavior (Djikic, Langer, & Stapleton, 2008). Lovingkindness meditation, another type of mindfulness meditation, has also been shown to reduce bias (Kang, Gray, & Dovidio, 2014; Stell & Farsides, 2016).

A contemplative approach

This research suggests that incorporating mindfulness into gerontological education may help reduce ageist bias in students. Contemplative pedagogy uses experiential methods developed in a variety of traditions and settings to explore the human experience. Contemplative approaches that encourage increased awareness of students' experience of learning can complement traditional pedagogical approaches that often focus primarily on knowledge of specific subject matter. How contemplative approaches operate in the classroom can vary widely. The Center for Contemplative Mind in Society uses the Tree of Contemplative Practice to illustrate that the core intentions of cultivating awareness and compassion lead to a variety of types of practices in categories like stillness, generative, creative, activist, relational, movement, and ritual ("The Tree of Contemplative Practices | The Center for Contemplative Mind in Society," n.d.). It is worth noting here that many gerontology classrooms already incorporate practices that are seen as contemplative like journaling, dialog, and volunteering.

Mindfulness is being used by Beth Berila as part of anti-oppression pedagogy (Berila, 2015, 2016). Berila's blog (http://www.contemplativepracticesforantioppressionpedagogy.com/) offers suggestions for practices that can create "embodied social justice". A post on "How Mindfulness Can Defeat Racial Bias" includes interpersonal exercises such as "Just

Like Me", in which participants are guided to look at a partner and reflect on the ways in which the other person is similar to you, despite actual or presumed differences (Magee, 2015).

In the field of gerontology, several recent articles have incorporated contemplative practices to help deepen student reflection. One practice involved using "reflective, mindful questions" to prompt small-group discussions of photos of elders, representing a range of situations from dependence to independence (Brand, Miller, Saunders, Dugmore, & Etherton-Beer, 2016). The goal of the activity was to get students to realize their own beliefs and values, and results from observational data suggest that students' assumptions were challenged. Another article reported on the use of contemplative pedagogy in hybrid and asynchronous online gerontology courses (Majeski & Stover, 2018). This course incorporates guided mindfulness meditation exercises intended to help students quiet their minds and practice concentration skills, as well as reflective journal entries designed to incorporate both first-person and third-person ways of knowing.

A contemplative approach to ageism in the classroom

These articles show that contemplative techniques, including meditation, can be incorporated into a variety of courses, but they may have more impact when embedded in a framework meaningful to both students and instructors. This contemplative framework points first to the importance of giving attention to students' own experience; formal mindfulness practices build students' capacity to critically examine thoughts and emotions, and course-specific exercises can help students engage with and reflect on experiences in the class. The rest of this paper offers suggestions for how a contemplative framework could be implemented in an introductory undergraduate gerontology setting. Because these courses are often students' first exposure to thinking critically about age and aging, it is an important setting in which to offer both information about implicit bias as well as practice observing it in ourselves.

While the term "mindfulness" will be familiar to many students, it is important to introduce students to the concepts and practices early in the course. As suggested by Majeski and Stover (2018), this can include information in the syllabus, discussion of the purpose of a contemplative approach in an initial class session, and an introductory reading on mindfulness. Inclusion of mindfulness meditation as a regular part of class time can be framed as training students in important capacities, including attentional, cognitive, and emotional regulation (Bresciani Ludvik, Evrard, & Goldin, 2016). Meditation sessions can be short (5–10 minutes), since research shows that even short sessions decrease bias (Lueke & Gibson, 2016). Instructors can lead the meditation themselves, or use guided meditations that are available online. Initial meditation sessions can focus on introducing basic techniques like mindfulness of the breath and awareness of physical sensations.

Because we intend for these practices to enhance students' capacity for reflection, meditation sessions can be paired with reflective writing. Reflective writing is a key piece of many educational interventions, especially service-learning (Kruger & Pearl, 2016), and is often used to assess service-learning (Augustin & Freshman, 2016; Cohen, Brown, & Morales, 2015; Gardner & Alegre, 2019; Kalisch et al., 2013). Pairing meditation

and reflective writing on a regular basis may enhance students' ability to note and reflect on thoughts and feelings.

In early stages, meditation and reflective writing can be paired by asking students to write a few sentences describing their experience during a five minute meditation on the breath. If students write their reflections anonymously on index cards, the instructor could share a few comments without identifying the students. This is a good opportunity to cultivate the kind and non-judgmental attitude that students will need when delving into their own implicit bias. For example, if a student writes, "I couldn't even follow one breath, I clearly can't meditate," the instructor can suggest different ways to describe the experience that offer a chance for further inquiry and growth. A more detailed description of the students' experience could include what happened during the breath and where the mind went when the focus left the breath. This models the sort of examination that can be fruitful for learning, since noticing processes is more helpful than simply reporting judgments.

In addition to opportunities to practice basic mindfulness techniques, we can offer students information relevant to the development of implicit ageism. These discussions can emphasize the universal nature of stereotype formation, as a common cognitive "shortcut" process related to social identity (Braithwaite, 2002). Discussions can also cover the terror management perspective, which can help students recognize evolutionary and individual-level causes of ageism (Marcus & Sabuncu, 2016). Introducing neurological explanations of implicit bias can also be helpful, as students begin to frame the inquiry into implicit bias as an exercise in observing "the way the brain works" rather than seeking personal deficiencies (Gieg, 2016).

Foundational skills in meditation combined with knowledge of implicit bias can then lead to contemplative exercises specifically geared toward the recognition and shifting of implicit bias. Some exercises can be designed to help students reflect on and integrate factual information. For example, the instructor can present information on different rates of cellular replacement throughout the body. This could then inform a body scan meditation where the instructions encourage the attention to move from place to place in the body and emphasize the body's ongoing processes of change and renewal. The reflective writing following the meditation would ask students to reflect on the meaning of physical age, given that our body is a collection of cells of many different ages.

Other exercises may ask students to sit with and observe emotional reactions. In the case of physical aging, the prompt for reflection (for both meditation and writing) could be one of the smartphone apps that "age" the face. It can be a challenge to use this vision of a possible older self as an opportunity for mindful and compassionate reflection since students' initial reactions are often consternation or laughter at the way their "aged" face looks, but once students are settled the meditation can move from visualizing their own older face to noticing their emotional reactions and cultivating kindness and compassion.

As Majeski and Stover (2018) suggest, a brief meditation may precede the viewing of a film or artwork and be followed by reflective writing. Most instructors probably already show film clips illustrating particular aspects of aging. While an instructor may not use meditation and reflective writing for a film on pensions, it may be a very important way to process a film highlighting the experiences of people with Alzheimer's disease. Instructors might choose to offer a brief centering practice focusing generally on the breath or body before showing the movie clip, then offer a few minutes of silent reflection and/or writing before beginning a class discussion. Specific prompts for reflection will vary according to

the media chosen, but in this instance an instruction to notice feelings of discomfort or confusion would be appropriate.

All of these examples offer students the opportunity to reflect on class material and notice their cognitive and emotional reactions, but do not explicitly work with implicit ageism. For this, instructors might choose to have students complete the IAT for aging as a prompt for reflection. What are students aware of when completing the IAT tasks? What is their reaction to seeing their scored results?

Conclusion

Future research on the effectiveness of this approach could consider a number of different research questions. Even in courses without a contemplative component, researchers could test if students' trait mindfulness is correlated with the impact of other educational interventions. Research could also test the effectiveness of each component of the contemplative pedagogy framework separately – general mindfulness practices, information about the formation of implicit bias, and contemplative practices connected to aging content. Another possible approach is to study the ways in which contemplative practices might enhance other educational interventions. Research could compare, for example, students doing service-learning with elders with an existing approach to students doing the same or a similar service-learning experience who also engage in contemplative practices.

Challenges to implementing a contemplative approach will include instructors' familiarity with contemplative practices. It will be more challenging for instructors who are not familiar with meditation to advocate for the importance of the contemplative approach and to facilitate the practices. Another challenge is deciding what the right "dose" for these contemplative practices might be. While some of the research cited suggests that even short practices can have an impact (Lueke & Gibson, 2015), those that want to offer students repeated opportunities to practice will have to decide how to accomplish other important course objectives. Other course characteristics (classroom or online, class size) will impact the choice of practices.

This literature suggests that order to effectively challenge ageism in our students, we need to be explicit about implicit ageism. Ageism is not something that exists only "out there" in society and the media, but also exists inside all of us socialized in an ageist culture. We can only shift ageism by "addressing the enemy within" (Levy, 2001). To do this, we must directly acknowledge and address students' fears and anxieties about aging in addition to offering positive examples of aging. Contemplative pedagogy offers both a framework and practices that help us understand and address implicit ageism by emphasizing observation of our default cognitive processing.

While social critique is vital to include in gerontology education (Sawchuk, 2018), "exposure of ageist practices through the media or advocacy groups may do little to change the ageist ideology of individuals" (Braithwaite, 2002, p. 326). Because ageist norms are acquired and enacted mindlessly, increased mindfulness is an important countermeasure (Golub, Filipowicz, & Langer, 2002).

This contemplative framework expands the kinds of tools we can use in gerontology education, and can complement strategies like service-learning and active learning that educators are already using. Giving students opportunities to learn about and practice self-observation and reflection can enhance students' learning during the class and shift implicit

ageism, and has the potential to open the door to other long-lasting benefits from enhancing the regulation of attention, cognition and emotion (Bresciani Ludvik et al., 2016).

Declaration of interest statement

No potential conflict of interest was reported by the author.

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