

Forum

Toward Reducing Ageism: PEACE (Positive Education about Aging and Contact Experiences) Model

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Abstract

The population of older adults is growing worldwide. Negative ageism (negative attitudes and behavior toward older adults) is a serious international concern that negatively influences not only older adults but also individuals across the age continuum. This article proposes and examines the application of an integrative theoretical model across empirical evidence in the literature on ageism in psychology, medicine, social work, and sociology. The proposed Positive Education about Aging and Contact Experiences (PEACE) model focuses on 2 key contributing factors expected to reduce negative ageism: (a) education about aging including facts on aging along with positive older role models that dispel negative and inaccurate images of older adulthood; and (b) positive contact experiences with older adults that are individualized, provide or promote equal status, are cooperative, involve sharing of personal information, and are sanctioned within the setting. These 2 key contributing factors have the potential to be interconnected and work together to reduce negative stereotypes, aging anxiety, prejudice, and discrimination associated with older adults and aging. This model has implications for policies and programs that can improve the health and well-being of individuals, as well as expand the residential, educational, and career options of individuals across the age continuum.

Keywords: Ageism, Education and training, Contact, Health, Intergenerational relationships

The population of older adults is growing worldwide ([World Health Organization, 2015](#)). “About one in every seven, or 14.1%, of the population is an older American; The population 65 and over has increased from 35.9 million in 2003 to 44.7 million in 2013...and is projected to more than double to 98 million in 2060” ([Administration on Aging, 2014](#), p.1). Yet, the United States and other countries have increasingly become more youth-centered with, for example, rampant anti-aging campaigns. Ageism (negative attitudes and behavior toward older adults) continues to be a “serious national problem” since it was first discussed in 1969 ([Butler, 1969](#), p.243) with concerns that the relatively small literature on reducing ageism is due to the institutionalism and acceptance of ageism ([Nelson, 2005](#); [Palmore, 1990](#)).

Ageism has far-reaching effects, as captured by the sentiment in the mass media that the growing older population is a burden and “natural disaster” ([Wilińska & Cedersund, 2010](#), p.339). Reviews of the literature indicate negative attitudes toward older adults from children to older adults themselves ([Ng, Allore, Trentalange, Monin, & Levy, 2015](#); [Palmore, 1982](#); [Robinson & Howatson-Jones, 2014](#); [Schigelone, 2003](#)). Older adults are stereotyped as cranky, forgetful, incompetent, lonely, sickly, and unattractive ([Ng et al., 2015](#); [Palmore, 1990](#)) and are sometimes avoided, bullied, disrespected, discriminated against, and physically abused ([Breckman & Pillemer, 2014](#), [Dong, 2014](#); [Equal Employment Opportunity Commission, 2013](#); [Palmore, 1990](#); [Pillemer, Connolly, Breckman, Spreng, & Lachs, 2015](#)). Ageism seems to contribute to low interest

in seeking employment with the growing older population (Hoge, Karel, Zeiss, Alegria, & Moye, 2015).

Theoretical Model for Reducing Ageism

In light of the increasing older population and increasing documentation of the far-reaching effects of ageism, this article puts forth a timely model of reducing ageism toward older adults. Scholars (Brown, Kother, & Wielandt, 2011; Palmore, 1982; Schigelone, 2003) have repeatedly lamented that interventions for reducing ageism are not sufficiently undertaken or tested and lack a sufficiently articulated theoretical or guiding framework to effectively reduce ageism. Other reviews of the literature suggest mixed and inconclusive findings about interventions (Robinson & Howatson-Jones, 2014; Roodin, Brown, & Shedlock, 2013) further suggesting the need for the application of a well-articulated theoretical framework.

Fortunately, there has been sufficient research, theorizing, and intervention efforts across fields (psychology, medicine, social work, sociology) that can be used to inform an integrative theoretical model of reducing ageism toward older adults. As depicted in Figure 1, the proposed integrative model for reducing ageism and promoting intergenerational peace called the Positive Education about Aging and Contact Experiences (PEACE) model focuses on two key contributing factors: (a) education about aging including facts on aging along with positive older role models that dispel negative and inaccurate images of older adulthood; and (b) positive contact experiences with older adults that are individualized, provide or promote equal status, are cooperative, involve sharing of personal information, and are sanctioned within the setting. These two key contributing factors have the potential to be interconnected and work together to reduce negative stereotypes, aging anxiety, prejudice, and discrimination associated with older adults and aging. In the sections that follow, the application of the PEACE model across empirical evidence from the literatures on ageism in psychology, medicine, social work, and sociology is examined.

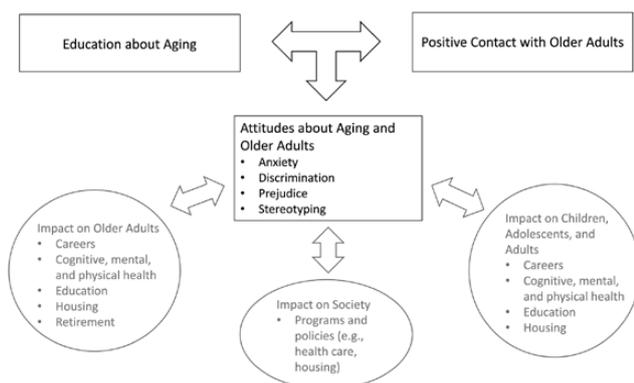


Figure 1. PEACE model.

PEACE Model

Education About the Aging Process

One key ingredient of the PEACE model for reducing ageism is education about aging and older adulthood. First, scholars repeatedly highlight the lack of or inadequate education about aging including in the home and primary and secondary schools, college, and professional programs involving interactions with older adults (Marshall, 2015; McGuire, Klein, & Couper, 2005). One might expect education about aging to naturally occur in the home as a place commonly involving direct contact across intergenerational lines; however, scholars such as McGuire and colleagues (2005) note that “no studies exist that look at the incidence of aging education in American homes; but such a study could be expected to have results that showed little occurring” (p.444). Although primary and secondary school curricula include units on child and adolescent development, there is little, if any, focus beyond adolescence for students or for teachers (Gilbert & Ricketts, 2008). High school students, for example, report poor knowledge of aging (Cherry, Blanchard, Walker, Smitherman, & Lyon, 2014). Thus, “Americans often reach later life with little or no formal education on aging or anticipatory guidance about aging” (McGuire et al., 2005, p.444). Teachers lack training in aging education, reporting inaccurate, negative portrayals of aging and older persons, and tend not to provide aging education to students (Huang, 2012; see McGuire et al., 2005). In college as well, aging education is uncommon, with few students enrolled in classes that address issues related to aging (Breckman & Pillemer, 2014; Marshall, 2015). Furthermore, courses on aging are underrepresented, even in the preparation of trainees who may assist older adults (Hoge et al., 2015).

At the same time, scholars have repeatedly documented inaccurate “education” concerning older adults in the mass media (e.g., movies, story books) depicting older adults as bored, cranky, having poor memory, incompetent, lonely, and sickly (Crawford & Bhattacharya, 2014; Nelson, 2005; Palmore, 1990). There is relatively less attention to positive aging such as cognitively and physically fit older adults (Hicken, 2013; Levy & Macdonald, 2016; Palmore, 1990).

Consistent with the lack of or inaccurate education on aging, studies consistently confirm that participants indeed have poor knowledge of the process of aging and instead endorse myths and stereotypes about the personality, skills, and behaviors of older adults (Cherry et al., 2014; Palmore, 1982, 1990). For instance, individuals tend to overestimate the amount of time older adults spend sleeping and watching television, and underestimate the amount of time older adults spend being active such as by working and volunteering (Wurtele, 2009; Wurtele & Maruyama, 2013). Moreover, people tend to overestimate the effects of aging on memory, the likelihood and incidence of Alzheimer’s disease, and rates of poverty and depression among older adults (Cherry et al., 2014; Palmore, 1990).

Importantly, studies do find that greater accurate knowledge of aging is associated with more positive attitudes toward older adults (Wurtele & Maruyama, 2013). Negative attitudes toward older adults can be improved through education about the actual rates of Alzheimer's disease, depression, employment, and poverty of older adults. College students enrolled in gerontology courses report more positive views of older adults and aging (Wurtele, 2009; Wurtele & Maruyama, 2013). Also, college students involved in a psychology department subject pool or enrolled in advanced psychology courses who were randomly assigned to an aging education intervention reported more positive attitudes toward older adults from pretest to posttest (Ragan & Bowen, 2001).

Education about aging can include facts on aging, as well as positive role models of older adults. The institutionalization of ageism is deeply woven in the culture such that people can be unaware of the lack of positive role models of older adults (Donlon, Ashman, & Levy, 2005; Nelson, 2005). Paltmore (1990) has advocated for greater attention to positive role models such as older adults at exercise classes and running marathons. However, research has tended not to test the effectiveness of positive role models of aging (see McCleary, 2014). Nonetheless, there is a sizeable literature indicating that information about role models is an effective means for combating negative stereotypes in nonage domains. For example, information about female role models in science helped dispel myths that being a woman was incompatible with being successful scientist (Rosenthal, Levy, London, Lobel, & Bazile, 2013). Further suggesting the potential value of older adult role models, a successful intervention involving aging education with facts seems to have included older adult role models. Ragan and Bowen (2001) used the video "Myths and Realities of Aging" to teach about aging, which included "many older adults reporting positive aspects to the [aging] process" and "the elderly who were interviewed for this program refuted these myths, offered positive affirmations of growing older" (http://www.iptv.org/series.cfm/4832/growing_old_new_age/ep:101/episodes).

Future studies are needed to help refine and expand the study of the aging education component of the PEACE model. As noted, education about aging among children and adolescents is particularly uncommon, and the efficacy of older adult role models is also understudied. Facts on aging may be more effective at reducing ageism when accompanied with vivid examples of older adult role models.

Positive Contact With Older Adults

Older adults are the fastest growing age group such that intergenerational contact seems likely in the community (World Health Organization, 2015). Positive intergenerational experiences is the other key component of the PEACE model.

Ageism unfortunately contributes to negative behavior toward older persons including disrespectful, avoidant, and patronizing behavior from community and family members, as well as bullying, muggings, and increasing rates of workplace discrimination (Equal Employment Opportunity Commission, 2013; North & Fiske, 2012; Paltmore, 1990). There is an increase in reporting of elder abuse, including by family (Breckman & Pillemer, 2014; Dong, 2014; Pillemer et al., 2015). Ageism also plays a role in health care professionals minimizing interactions with older patients and not sufficiently involving them in care decisions (Brown et al., 2011; Butler, 1963; Clarke, Hanson, & Ross, 2003; Perry & Paterson, 2005).

To understand and examine ways to reduce negative intergenerational interactions, researchers in fields including psychology, medicine, sociology, and social work have drawn upon theories such as intergroup contact theory (Allport, 1954; Pettigrew & Tropp 2006) and life-review theorizing (Butler, 1963; Gaggioli et al., 2014). These literatures collectively point to five overriding and optimal conditions for fostering positive and mutually valuable intergenerational contact: (a) individualized or one-to-one interactions, that (b) provide or promote equal status during the interaction and are (c) cooperative or involve working toward a common goal (e.g., an intergenerational service project), (d) involve sharing of personal information (e.g., life lessons and significant events), and (e) are sanctioned within the setting such as by authority figures (Abrams et al., 2006; Bousfield & Hutchison, 2010; Caspi, 1984; Clarke et al., 2003; Gaggioli et al., 2014; Harwood, Hewstone, Paolini, & Voci, 2005; McKeown, Clarke, & Repper, 2006; Newman, Faux, & Larimer, 1997; Pinquart & Forstmeier, 2012; Roodin et al., 2013; Schwartz & Simmons, 2001; Tam, Hewstone, Harwood, Voci, & Kenworthy, 2006). Some intergroup contact studies have focused on overall ratings of the "quality" of intergenerational interactions (which may be a proxy for some or all of the five aforementioned intertwined conditions), showing that participants (college students) who rate their past interactions with older adults to be of higher quality report more positive attitudes toward older adults (Bousfield & Hutchison, 2010; Schwartz & Simmons, 2001; also see Harwood et al., 2005).

Although no known prior studies were designed to address these five conditions of intergenerational interactions, interventions are reviewed below to examine the potential efficacy of these conditions as part of the contact component of the PEACE model for reducing ageism.

There is a long history of intergenerational learning programs involving students and older adults, and some are structured in ways that seem to address the five conditions, although the effectiveness of these programs for improving intergenerational relations and attitudes is generally understudied (see Roodin et al., 2013). For example, the programs may involve "younger students work[ing] with older adults in service activities (e.g., together as equal

partners),” (Roodin et al., 2013, p. 6) and presumably involving some one-to-one interactions (suggesting conditions 1, 2, and 3). Instructors are sometimes described as volunteering for or leading these programs, suggesting that they sanction the intergenerational interaction (condition 5). As an example, Knapp and Stubblefield (2000) studied 10 older adults and 22 traditional age undergraduate students enrolled in a semester long Psychology of Aging course that was described as including intergenerational cooperation on a community service project (condition 3) facilitated by the instructor (condition 5). Qualitative responses from participants suggest that the other conditions were met for at least some participants: “greatest thing about this course has been the interaction between the younger and older adults...If this harmonious working together of young and old can continue...where an old person, all wrinkled and gnarled, can come up to a young teen and converse a little without being thought of as creepy” (pp. 619–620, from a 72-year old participant; suggesting conditions 1, 2, and 3) and “elder class members...were eager to offer their knowledge to us” (p. 619, from a 21-year old participant; suggesting condition 4). From pre-intervention to post-intervention and also in comparison to a control group (students enrolled in a criminal justice course), traditional-age college students in the intervention group reported improved knowledge of aging and more positive perceptions of older adults.

Intervention studies using the life-review method have been shown to successfully improve attitudes toward older adults (Gaggioli et al., 2014) and also seem to be structured in ways that address many of the five conditions for facilitating positive intergenerational contact. Life review (Butler, 1963) also called life story (McKeown et al., 2006) or reminisce (Gaggioli et al., 2014; Pinquart & Forstmeier, 2012) originally focused on “health care providers encourag[ing] older adults in their care to talk about their life experiences” (McKeown et al., 2006, p.238) and was expanded to other settings involving “unstructured autobiographical storytelling with the goal of communicating and teaching or informing others, remembering positive past events, and enhancing positive feelings” (Pinquart & Forstmeier, 2012, p. 541) such that the interaction is mutually valuable (Gaggioli et al., 2014). These interactions between patients and health care providers, for example, may be on a one-to-one basis and sanctioned within the setting. It may be that the older adults who share their life lessons experience a lifting of their relative status in their interaction (suggestive of the equal status condition), such as older patients interacting with their care provider, who otherwise has higher status during interactions. Indeed, the life-review approach has been described as humanizing patients; one older person said: “If the staff knew more, they would see you as a person not a number” (Clarke et al., 2003, p. 702). The life-review approach has been found to be both beneficial to older adults in terms of reducing depressive symptoms and improving positive well-being (Butler, 1963; Pinquart &

Forstmeier, 2012) and to those listening (health care providers, children in schools) in terms of receiving important life advice and improving their attitudes toward older adults (Gaggioli et al., 2014; McKeown et al., 2006).

Similar to life-review studies that focus on self-disclosure by older adults, intergroup contact researchers focus on principles of friendship and self-disclosure (for a review, see Davies, Tropp, Aron, Pettigrew, & Wright, 2011), showing that grandchildren who disclose more personal information to grandparents have more positive attitudes toward older adults (Harwood et al., 2005; Tam et al., 2006). Taken together, these findings highlight that positive and mutually valuable interactions may grow from both younger and older individuals sharing personally significant information with each other.

In summary, positive intergenerational interactions are related to reduced ageism; however, on the whole, there has been limited testing of the crucial conditions for fostering positive intergenerational relations, including among family members, as well as among nonfamily members in healthcare and workplace settings. There is suggestive evidence indicating the efficacy of interactions that are individualized, equal status, cooperative, sanctioned within the setting and/or involve sharing of personal information. In future research, for example, the life-review approach could be tested more widely in other settings (home, workplace) with intergenerational tensions while also aiming to pinpoint which aspects of the interaction contribute to improved intergenerational relations and attitudes.

Interrelation Between Education and Contact

Although education about aging and positive contact experiences with older adults may have independent effects on reducing ageism, these components can be interconnected. Hence, there is a double arrow in Figure 1 of the PEACE model.

Aging education and intergenerational contact are sometimes naturally intertwined in the environment and in intervention studies, even if not recognized or reported as such. For example, children, adolescents, and late adolescents may receive aging education from instructors who are older adults and at the same time, may have positive intergenerational interactions with these instructors (Kaskie, 2016). According to the National Center for Education Statistics, in 2011–2012, 19.7% of teachers were ages 55 and over, and there is evidence suggesting that the majority of professors retire after the age of 65 (Hicken, 2013, also see Kaskie, 2016). These instructors may also be serving as positive role models of aging, which may strengthen the aging education component.

Similarly, studies of intergenerational contact may also be implicitly or explicitly providing education on aging. An example is Foster Grandparents (<http://www.nationalservice.gov/programs/senior-corps/foster-grandparents>), which involves older adults who mentor students in school

settings, juvenile correctional institutions, and in hospitals. In addition to being a source of positive intergenerational contact, the older adult tutors may serve as positive role models of aging who are active and competent, thereby dispelling mischaracterizations of older adults as sickly, incompetent, and not productive in society.

Several interventions in the literature seem to include the combination of aging education and positive contact with older adults with encouraging support for reduced ageism (McCleary, 2014; Perry & Paterson, 2005; also see Brown et al., 2011). As an example, Perry and Paterson (2005) developed an educational course for nurses having “an innovative variation of bedside teaching rounds” (p. 64), which involves experienced practitioners teaching nurses about the dementia experienced by their older adult patients, as well as discussing how to help make their patients feel “safe and comfortable” and what the “important principles of communication” are (p.67). The aging education along with the structured intergenerational interactions (which seemed to involve cooperative and sanctioned interactions) of this study were found to improve nurses’ positive views of older adults. As another example, McCleary (2014) had nursing and social work students view documentary films of older adults that provided education about aging, which was followed up with an in-person panel of female and male professionals ages 70 and older who “represented models of healthy aging” (McCleary, 2014, p.419). This intervention involving education about aging (including role models) along with structured intergenerational interactions (seemingly cooperative and sanctioned in the setting) with panelists who were held up as models (suggesting they were not low status) was found to improve students’ knowledge of aging and attitudes toward older adults. Furthermore, preliminary support for the combination of aging education and intergenerational contact comes from a longitudinal study of college students who enrolled or did not enroll in gerontology courses. Funderburk, Damron-Rodriguez, Levy Storms, and Solomon (2006) found that positive attitudes toward older adults was related to having contact with unrelated adults, completing an aging course as an elective, and having more accurate knowledge of aging.

Since these studies precede the PEACE model, future research is needed that explicitly considers within the same study both aging education and positive intergenerational contact. The combination of education and contact, when possible, would likely be a more powerful ageism reduction strategy relative to either strategy by itself; education provides the essential knowledge about aging and older adulthood, while positive intergenerational contact provides the essential positive exposure to older adulthood that is concrete and accessible.

Implications

In this section, the implications of the PEACE model are considered because ageism is a societal problem that

expands beyond negative attitudes toward aging (World Health Organization, 2015). The lower left of Figure 1 highlights that ageism can contribute to poorer cognitive and physical health of older adults and contribute to earlier retirement (Abrams et al., 2006; Levy, 2009; Levy et al., 2002; North & Fiske, 2012). For example, Abrams et al. (2006) found that when older adult study participants were reminded of ageism (the stereotype of younger adults’ performing better on intelligence tasks), they performed worse on intelligence tests involving comprehension, memory, and recall than those who were not reminded of ageism; interestingly, participants who reported more (vs less) positive intergenerational contact (such as with grandchildren) performed better on the test, suggesting that positive intergenerational contact can reduce negative cognitive effects of ageism on older adults. The lower right of Figure 1 calls attention to the influence of ageism on the health, well-being, and career interests of children, adolescents, and adults (Hoge et al., 2015; Levy, 2009; Schigelone, 2003). For instance, Marshall (2015), in proposing aging education through humanities courses, noted the potential for widespread impact on college students’ long-term well-being and pursuit of careers related to older adults. The lower middle of Figure 1 points to the influence of ageism on support or opposition for policies including health care (whether to provide dedicated geriatric care units in hospitals) and housing (whether to provide support [e.g., tax relief] for older adults’ housing choices or needs such as multigenerational living or age-segregated housing, e.g., Butler, 1969). Such distal potential outcomes of ageism are not often tested (Roodin et al., 2013).

Conclusion

Ageism continues to be a serious, far-reaching societal problem. The core ingredients of education about aging and positive intergenerational contact in the PEACE model are relevant and translatable across many settings (education, employment, health care, home) and age groups (children, adolescents, adults) and can be put into practice by educators, health care providers, researchers, and others interested in reducing ageism and its negative consequences. With an increasing older population worldwide, a model such as the PEACE model is timely and important.

References

- Abrams, D., Eller, A., & Bryant, J. (2006). An age apart: the effects of intergenerational contact and stereotype threat on performance and intergroup bias. *Psychology and Aging, 21*, 691–702. doi:10.1037/0882-7974.21.4.691
- Administration on Aging. (2014). *Profile of Older Americans*. Retrieved from http://www.aoa.acl.gov/Aging_Statistics/Profile/2014/docs/2014-Profile.pdf
- Allport, G. W. (1954). *The nature of prejudice*. Cambridge, MA: Addison-Wesley.

- Bousfield, C., & Hutchison, P. (2010). Contact, anxiety, and young people's attitudes and behavioral intentions towards the elderly. *Educational Gerontology*, *36*, 451–466. doi:10.1080/03601270903324362
- Breckman, R., & Pillemer, K. (2014). *The risk and resiliency internship project: Engaging undergraduate in learning about elder wisdom and abuse*. National Adult Protective Services, Research-to-Practice-Webinar. Retrieved from <https://vimeo.com/107044996>
- Brown, C. A., Kother, D. J., & Wielandt, T. M. (2011). A critical review of interventions addressing ageist attitudes in health-care professional education. *Canadian Journal of Occupational Therapy*, *78*, 282–293. doi:10.2182/cjot.2011.78.5.3
- Butler, R. N. (1963). The life review: an interpretation of reminiscence in the aged. *Psychiatry*, *26*, 65–76.
- Butler, R. N. (1969). Age-ism: another form of bigotry. *The Gerontologist*, *9*, 243–246. doi:10.1093/geront/9.4_Part_1.243
- Caspi, A. (1984). Contact hypothesis and inter-age attitudes: a field study of cross-age contact. *Social Psychology Quarterly*, *47*, 74–80. doi:10.2307/3033890
- Cherry, K. E., Blanchard, B., Walker, E. J., Smitherman, E. A., & Lyon, B. A. (2014). Knowledge of memory aging across the lifespan. *The Journal of Genetic Psychology: Research and Theory on Human Development*, *175*, 547–553. doi:10.1080/00221325.2014.982069
- Clarke, A., Hanson, E. J., & Ross, H. (2003). Seeing the person behind the patient: enhancing the care of older people using a biographical approach. *Journal of Clinical Nursing*, *12*, 697–706. doi:10.1046/j.1365-2702.2003.00784.x
- Crawford, P. A., & Bhattacharya, S. (2014). Grand images: exploring images of grandparents in picture books. *Journal of Research in Childhood Education*, *28*, 128–144. doi:10.1080/02568543.2013.853004
- Davies, K., Tropp, L. R., Aron, A., Pettigrew, T. F., & Wright, S. C. (2011). Cross-group friendships and intergroup attitudes: a meta-analytic review. *Personality and Social Psychology Review*, *15*, 332–351. doi:10.1177/1088868311411103
- Dong, X. (2014). Elder abuse: research, practice, and health policy. The 2012 GSA Maxwell Pollack award lecture. *The Gerontologist*, *54*, 153–162. doi:10.1093/geront/gnt139
- Donlon, M. M., Ashman, O., & Levy, B. R. (2005). Re-Vision of older television characters: a stereotype-awareness intervention. *Journal of Social Issues*, *61*, 307–319. doi:10.1111/j.1540-4560.2005.00407.x
- Equal Employment Opportunity Commission. (2013). *Age discrimination in employment act*. Retrieved from <http://www.eeoc.gov/eeoc/statistics/enforcement/adea.cfm>
- Funderburk, B., Damron-Rodriguez, J., Levy Storms, L., & Solomon, D. H. (2006). Endurance of undergraduate attitudes toward older adults. *Educational Gerontology*, *32*, 447–462. doi:10.1080/03601270600685651
- Gaggioli, A., Morganti, L., Bonfiglio, S., Scaratti, C., Cipresso, P., Serino, S., & Riva, G. (2014). Intergenerational group reminiscence: a potentially effective intervention to enhance elderly psychosocial wellbeing and to improve children's perception of aging. *Educational Gerontology*, *40*, 486–498. doi:10.1080/03601277.2013.844042
- Gilbert, C. N., & Ricketts, K. G. (2008). Children's attitudes toward older adults and aging: a synthesis of research. *Educational Gerontology*, *34*, 570–586. doi:10.1080/03601270801900420
- Harwood, J., Hewstone, M., Paolini, S., & Voci, A. (2005). Grandparent-grandchild contact and attitudes toward older adults: moderator and mediator effects. *Personality & Social Psychology Bulletin*, *31*, 393–406. doi:10.1177/0146167204271577
- Hicken, M. (2013). *Professors teach into their golden years*. Retrieved from <http://money.cnn.com/2013/06/17/retirement/professors-retire/>
- Hoge, M. A., Karel, M. J., Zeiss, A. M., Alegria, M., & Moye, J. (2015). Strengthening psychology's workforce for older adults: implications of the Institute of Medicine's report to Congress. *American Psychologist*, *70*, 265–278. doi:10.1037/a0038927
- Huang, C. (2012). A study of elementary and secondary teacher knowledge and attitudes toward aging and the implementation of aging education in Taiwan. *Educational Gerontology*, *38*, 812–823. doi:10.1080/03601277.2011.645446
- Kaskie, B. (2016). The academy is aging in place: assessing alternatives for modifying institutions of higher education. *The Gerontologist*. Advance online publication. doi:10.1093/geront/gnw001
- Knapp, J. L., & Stubblefield, P. (2000). Changing students' perceptions of aging: the impact of an intergenerational service learning course. *Educational Gerontology*, *26*, 611–621. doi:10.1080/03601270050200617
- Levy, B. R. (2009). Stereotype embodiment: a psychosocial approach to aging. *Current Directions in Psychological Science*, *18*, 332–336. doi:10.1111/j.1467-8721.2009.01662.x
- Levy, S. R., & Macdonald, J. L. (2016). Progress on understanding ageism. *Journal of Social Issues*, *72*, 5–25. doi:10.1111/josi.12153
- Levy, B. R., Slade, M. D., Kunkel, S. R., & Kasl, S. V. (2002). Longevity increased by positive self-perceptions of aging. *Journal of Personality and Social Psychology*, *83*, 261–270. doi:10.1037/0022-3514.83.2.261
- Marshall, L. (2015). Thinking differently about aging: changing attitudes through the humanities. *The Gerontologist*, *55*, 519–525. doi:10.1093/geront/gnu069
- McCleary, R. (2014). Using film and intergenerational colearning to enhance knowledge and attitudes toward older adults. *Educational Gerontology*, *40*, 414–426. doi:10.1080/03601277.2013.844034
- McGuire, S. L., Klein, D. A., & Couper, D. (2005). Aging education: a national imperative. *Educational Gerontology*, *31*, 443–460. doi:10.1080/03601270590928170
- McKeown, J., Clarke, A., & Repper, J. (2006). Life story work in health and social care: systematic literature review. *Journal of Advanced Nursing*, *55*, 237–247. doi:10.1111/j.1365-2648.2006.03897.x
- Nelson, T. D. (2005). Ageism: prejudice against our feared future self. *Journal of Social Issues*, *61*, 207–221. doi:10.1111/j.1540-4560.2005.00402.x
- Newman, S., Faux, R., & Larimer, B. (1997). Children's views on aging: their attitudes and values. *The Gerontologist*, *37*, 412–417. doi:10.1093/geront/37.3.412
- Ng, R., Allore, H. G., Trentalange, M., Monin, J. K., & Levy, B. R. (2015). Increasing negativity of age stereotypes across 200 years:

- evidence from a database of 400 million words. *PLoS ONE*, *10*, e0117086. doi:10.1371/journal.pone.0117086
- North, M. S., & Fiske, S. T. (2012). An inconvenienced youth? Ageism and its potential intergenerational roots. *Psychological Bulletin*, *138*, 982–997. doi:10.1037/a0027843
- Palmore, E. (1982). Attitudes toward the aged: what we know and need to know. *Research on Aging*, *4*, 333–348. doi:10.1177/0164027582004003004
- Palmore, E. (1990). *Ageism: negative and positive*. New York: Springer.
- Perry, J., & Paterson, B. L. (2005). Nursing rounds as a pedagogical strategy: anchoring theory to practice in gerontological nursing. *Nurse Education in Practice*, *5*, 63–69. doi:10.1016/j.nepr.2004.03.001
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, *90*, 751–783. doi:10.1037/0022-3514.90.5.751
- Pillemer, K., Connolly, M. T., Breckman, R., Spreng, N., & Lachs, M. S. (2015). Elder mistreatment: priorities for consideration by the white house conference on aging. *The Gerontologist*, *55*, 320–327. doi:10.1093/geront/gnu180
- Pinquart, M., & Forstmeier, S. (2012). Effects of reminiscence interventions on psychosocial outcomes: a meta-analysis. *Aging & Mental Health*, *16*, 541–558. doi:10.1080/13607863.2011.651434
- Ragan, A. M., & Bowen, A. M. (2001). Improving attitudes regarding the elderly population: the effects of information and reinforcement for change. *The Gerontologist*, *41*, 511–515. doi:10.1093/geront/41.4.511
- Robinson, S., & Howatson-Jones, L. (2014). Children's views of older people. *Journal of Research in Childhood Education*, *28*, 293–312. doi:10.1080/02568543.2014.912995
- Roodin, P., Brown, L. H., & Shedlock, D. (2013). Intergenerational service-learning: a review of recent literature and directions for the future. *Gerontology & Geriatrics Education*, *34*, 3–25. doi:10.1080/02701960.2012.755624
- Rosenthal, L., Levy, S. R., London, B., Lobel, M., & Bazile, C. (2013). In pursuit of the MD: the impact of role models, identity compatibility, and belonging among undergraduate women. *Sex Roles*, *68*, 464–473. doi:10.1007/s11199-012-0257-9
- Schigelone, A. S. (2003). How can we ignore the why? A theoretical approach to health care professionals' attitudes toward older adults. *Journal of Gerontological Social Work*, *40*, 31–50. doi:10.1300/J083v40n03_04
- Schwartz, L. K., & Simmons, J. P. (2001). Contact quality and attitudes toward the elderly. *Educational Gerontology*, *27*, 127–137. doi:10.1080/03601270151075525
- Tam, T., Hewstone, M., Harwood, J., Voci, A., & Kenworthy, J. (2006). Intergroup contact and grandparent-grandchild communication: the effects of self-disclosure on implicit and explicit biases against older people. *Group Processes and Intergroup Relations*, *9*, 413–429. doi:10.1177/1368430206064642
- Wilińska, M., & Cedersund, E. (2010). "Classic ageism" or "brutal economy"? Old age and older people in the Polish media. *Journal of Aging Studies*, *24*, 335–343. doi:10.1016/j.jaging.2010.07.003
- World Health Organization. (2015). *10 facts on ageing and the life course*. Retrieved from <http://www.who.int/features/factfiles/ageing/en/>
- Wurtele, S. K. (2009). Activities of older adults survey: tapping into student views of the elderly. *Educational Gerontology*, *35*, 1026–1031. doi:10.1080/03601270902973557
- Wurtele, S. K., & Maruyama, L. (2013). Changing students' stereotypes of older adults. *Teaching of Psychology*, *40*, 59–61. doi:10.1177/0098628312465867