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Doddering but Dear... Even in the Eyes of Young Children? Age Stereotyping and Prejudice in
Childhood and Adolescence

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Abstract

This study aims to explore age prejudice, and to examine age stereotyping in children and adolescents by adopting the Stereotype Content Model (SCM) as a theoretical framework. It was hypothesized that children are socialized into adopting an ambivalent representation of old age (socialization hypothesis) and that this cognitive bias becomes weaker in adolescence due to greater cognitive maturity (developmental hypothesis). By analysing representative data from Portugal (European Social Survey; N = 2367), it was ascertained that the ambivalent age stereotype (higher evaluations of warmth than competence for older people) is indeed a shared social representation of older people in Portuguese society. A total of 103 Portuguese children (6-10 year olds) and adolescents (11-15 year olds) were then sampled from a local school and responded to age-appropriate measures assessing age prejudice as well as age stereotypes. Contrary to previous studies, the findings do not provide evidence for the existence of age prejudice because both children and adolescents reported positive feelings towards older people. However, the socialization hypothesis was corroborated by showing that the ambivalent old age stereotype was already present in childhood. Contrary to the stipulated developmental hypothesis, the magnitude of this cognitive bias was very similar in adolescence.

Keywords: age stereotyping, stereotype content model, age prejudice, children, adolescents

Abstract: 198 words

Main text: 5710 words (5,430 words in main text + 280 words in endnotes)

There are currently 901 million people aged 60 or over in the world and this number is projected to rise to 1.4 billion in 2030 (United Nations, Department of Economic and Social Affairs, Population Division, 2015). The large majority is living in developing countries and Portugal ranks currently fifth among the countries with the largest share of older people. In this context, it is paramount to understand how old age is perceived. Several studies have already shown that adults often associate old age with negative representations and feelings, which seem to be widely shared across different societies and cultures (e.g., Cuddy, Norton & Fiske, 2005). In this paper, our goal is to examine whether children and adolescents in Portugal also endorse this view of older people.

Age is one of the first and most important dimensions children use to organize their perceptions of others (Brown, 2010). Categorizing others into broad categories such as 'young' and 'old' can lead to prejudice, and stereotypical inferences about older people's abilities and interpersonal characteristics (Nelson, 2005). There is empirical evidence that stereotypical beliefs about old age can cause young adults to discriminate against older people (e.g., Kwong & Heller, 2005). This bears wide-reaching implications for older people's successful aging. Recent cross-national evidence also suggests that negative perceptions about old age in society can harm older people's health (Marques, Swift, et al., 2015). According to Stereotype Embodiment Theory (Levy, 2009) this occurs because aging perceptions are internalized over the life-span. Amongst older people they can be activated in everyday life on an unconscious level and generate self-relevant expectations that act as self-fulfilling prophecies. Despite these important implications, very little is known about how age prejudice and stereotyping develop.

Comparing attitudes to age across young ages can shed some light on the mechanisms

that contribute to negative attitudes and the role that developmental processes play. This is crucial insight for anti-ageism interventions because the most effective ways of changing attitudes depend strongly on the basis of those attitudes. Studying ageist attitudes from a developmental perspective allows for a more comprehensive understanding of the factors that contribute to ageism (cf. Montepare & Zebrowitz, 2002). Hence, in this paper, we aim to shed light on the social developmental processes that are inherent to attitudes to age by comparing children's and adolescents' responses.

Components of Ageist Attitudes

Attitudes are typically conceptualized as a tripartite model involving cognitive, affective and behavioural components (Eagly & Chaiken, 2007). Consistent with this approach, ageist attitudes have been defined as negative or positive stereotypes, prejudice and/or discrimination against elderly people on the basis of their chronological age or on the basis of a perception of them as being 'old' (Iversen, Larsen, & Solem, 2009). Given the difficulty of measuring actual ageist behaviour in children, we will focus on examining the cognitive and affective components of ageist attitudes, i.e. age stereotypes and age prejudice. Each of them may have different developmental pathways that contribute to negative attitudes to age.

Age stereotyping. Stereotypes are beliefs and knowledge about a particular group. One of the most prominent social psychological models of stereotyping is the Stereotype Content Model (SCM; Fiske, Cuddy, Glick, & Xu, 2002). The SCM holds that there are two underlying dimensions that organize the stereotypes of any social group in society: competence and warmth, i.e. the degree to which a group is characterized as intelligent/ capable and friendly/ likeable. SCM studies with adults have shown that the ingroup is usually evaluated

positively regarding both dimensions, whereas the outgroup 'elderly' is evaluated in an ambivalent and paternalistic way, i.e., seen as warm, but not so competent – thereafter referred to as the 'doddering but dear' stereotype (Cuddy et al., 2005). There is evidence that this ambivalent elderly stereotype is also pervasive across different cultures (see Cuddy et al., 2009).

To the best of our knowledge, no study has ever tested whether the ambivalent *rating* of older people on the warmth and competence dimensions is also pervasive across non-adult samples. Although there is one study that used a *ranking procedure* to examine age stereotypes endorsed by children and adolescents in Hungary (John, 2013), it has major limitations: (1) the sample was very small with less than 25 participants in each age group; (2) participants were asked to rank order portraits of children, adolescents, adults and seniors in terms of warmth and competence which has serious analytical implications (i.e., ipsative assessment restricting the statistical tests that can be used) as well as methodological issues (e.g., a possible inconsistency in the evaluation of targets depending on the items used; some portraits may not have been neutral enough); and (3) the items tapping into the warmth and competence dimensions might not have been reliable, as pointed out by the author. The author concludes that, especially for children, a rating procedure might have been more appropriate. Hence, we are cautious about the main conclusions of this study, especially that children were the most hostile towards older people stereotyping them as both cold and incompetent.

There are numerous other studies that have been conducted on children's and adolescents' beliefs about old age and stereotyping, yet the SCM has not been used as a guiding theoretical framework. Thus, the findings are scattered and inconclusive with some studies

suggesting that this population might hold both negative and positive images of aging (for reviews, see Gilbert & Ricketts, 2008; Robinson & Howatson-Jones, 2014; Montepare & Zebrowitz, 2002). Furthermore, stereotypical beliefs usually focus on older adult's physical and cognitive characteristics which are seen as negative, and their interpersonal characteristics (e.g., kindness) which are regarded as more positive. This suggests that old age is evaluated in an ambivalent way along the competence and warmth dimensions. This may be due to the fact that age-related physical changes in older people (e.g., impaired walking, diminished hearing) are generally associated with a loss of competence and seen as non-threatening (Montepare & Zebrowitz, 2002). Although these appearance cues may inform the early development of age perceptions, other processes should also be operating that shape and perpetuate them.

One of the most important cognitive mechanisms for stereotyping is the categorization process. Categorizing social groups broadly into 'us' versus 'them' occurs relatively early in childhood and leads to an ingroup bias, i.e. the favourable perception of one's own group relative to other social groups. There is substantial and consistent evidence showing that young children from age three onwards are able to categorize other people on the basis of visible and salient social categories, such as age (Brown, 2010).

According to Social Learning Theory, the *content* of stereotypes is learnt from others (Taylor, Peplau, & Sears, 2000). This should be especially true for age stereotypes, as people generally seem to be less cautious about expressing ageism explicitly (Nelson, 2005).

Stereotype embodiment theory also suggests that stereotypes are learned via socialization processes and that even older people endorse them via internalization processes (Levy, 2009).

If social learning shapes the content of age stereotypes, it is crucial to understand what kinds of age stereotypes prevail in Portuguese society. Previous studies conducted in Portugal (Durante et al., 2013; Marques, Lima & Novo, 2006) with adult samples strongly suggest that older people are viewed in an ambivalent and paternalistic way and portrayed as incompetent (e.g., dependent and unable), but friendly (e.g., nice and warm). Therefore, we hypothesized that Portuguese children are socialized in endorsing this paternalistic age stereotype and we refer to this as the *socialization hypothesis*.

The paternalistic stereotype is consistent with previous findings from other cultures (Cuddy et al., 2005) suggesting there are some culture-general tendencies in aging perceptions. However, a major limitation of these studies, including those conducted in Portugal, is that they did not use representative samples. In order to fully test our socialization hypothesis, we need to ascertain first that the paternalistic stereotype is indeed widely shared in Portuguese society. We will address this with a pre-study in which we analyse representative data from Portugal on old age stereotypes.

Regarding developmental changes in age stereotyping, previous evidence is also inconclusive to date. Past studies used a large variety of stimuli (e.g., photos of older people or verbal labels referring to old age targets) and assessments of stereotypes (e.g., ranking, rating, sentence writing) which makes it very difficult to distinguish true age effects from measurement effects and to understand at which developmental stage stereotypes about senior adults are more pronounced. Hence, we will restrict the next sections to a brief presentation of the most relevant developmental theory.

People who are categorized into the same group are usually seen as more similar to each other (within-group assimilation) and as more different from those in another group (between-group contrast). This leads to an exaggeration of between-group differences and within-group similarities, which may be much more pronounced in children. The reason is that at around seven years of age, children's thinking is sociocentric meaning that they focus on their own social group and consequently conceptualize other groups in terms of how they differ from their ingroup (Whitley & Kite, 2010). However, during adolescence (between 10 and 15 years of age), the sociocentric tendency declines and it is likely that the stereotypical perception of seniors becomes less pronounced. We refer to this as the *developmental hypothesis*.

In sum, we hypothesized a two-way interaction between stereotype content and target group: there should be an ingroup bias (high warmth and high competence evaluations for the ingroup) and an ambivalent paternalistic stereotype for the outgroup (higher warmth than competence ratings for older people). We also hypothesized that the two-way interaction is qualified by a three-way interaction in which the evaluation of the outgroup, but not the ingroup, depends on the participants' own age group. More specifically, we expected that the gap between competence and warmth ratings for the outgroup is more pronounced in children than adolescents.

Age prejudice. Prejudice is a negative feeling or emotion linked to a social group (Eagly & Chaiken, 2007). Previous studies on children's and adolescents' perceptions of older people often use measures of age stereotypes and prejudice interchangeably. In this study, we aim to

clearly distinguish between the two in order to examine whether they show similar or distinct results.

Alike the phenomenon of ambivalent age stereotyping, there is evidence that negative feelings towards older adults are already present in very young children (for a review, see Montepare & Zebrowitz, 2002). For instance, some studies found that children as young as four years old indicated more liking of younger adults in photographs than older ones. They also selected older adults less often in socio-metric questions, associated old age with more negative feelings in open-ended questions and word associations, or rated older adults negatively in semantic differential scales. There are very few studies that examined the development of age prejudice by comparing different age groups, and these rarely used clearly defined and quantifiable prejudice measures, making it very difficult to draw clear conclusions. Nevertheless, it has been suggested that prejudice seems to become stronger with the transition from middle childhood to early adolescence. We will explore whether this is also the case in this study.

Method

We first conducted a pre-study by analysing data from the European Social Survey (ESS; European Social Survey Round 4 Data, 2008) in order to verify if the ambivalent stereotype about older people is indeed a widely shared perception in Portugal. The data were collected through computer-based personal interviews in Portugal ($N = 2367$). Respondents' age ranged from 15 to 95 years ($M = 52.75$, $SD = 19.96$; 60.9% female). The warmth and competence dimensions of age stereotypes were assessed with the questions "How likely is it that most people in Portugal view those over 70 as ...friendly?" ...as competent?"(defined as "getting

things done effectively”; 0 = “not at all likely to be viewed that way” to 4 = “very likely to be viewed that way”). A very small proportion of the respondents refused to answer, did not know the answer or provided no answer (2.1% for friendliness and 2.9% for competence). These responses were coded as missing values. A repeated-measures ANOVA¹ on the two stereotype dimensions corroborated the ambivalent old age stereotype in Portuguese society: Warmth ratings of the old age target ($M = 2.85, SD = 0.99$) were significantly higher than competence ratings [$M = 2.59, SD = 1.07; F(1, 2300) = 172.72, p < .001, \eta p^2 = .07$]².

Next, we conducted a study with children and adolescents in Portugal in order to test our socialization and developmental hypotheses.

Participants. A total of 110 Portuguese pupils from 1st to 9th grade were recruited from a middle-class school located in a metropolitan area. Seven 16-18 year-olds attending the 9th grade were excluded from the analyses as they were beyond the sample’s age. The final sample comprised participants in middle childhood aged 6 to 10 ($N = 49, 53.1\%$ females, $M_{age} = 8.22, SD = 1.44$), and in adolescence aged 11 to 15 ($N = 54, 48.1\%$ females, $M_{age} = 13.44, SD = 1.44$). The majority lived with at least one of their parents (95.1%).

Measures. Great care was taken to either adapt already existing measures or create new ones so that they suited the cognitive and linguistic capacities of the sample. All measures were pilot-tested regarding their comprehensibility ($N = 8; 6$ to 12 years of age).

Age stereotype. We adapted existing SCM measures (Fiske et al., 2002): participants were asked to evaluate older people (outgroup) and subsequently their ingroup along the competence and warmth dimensions. The competence dimension was assessed through the items: “In your opinion, how many [older people/ children/ adolescents] can ...do a good job?;

...do a job without the help of other people?; ...teach other people to do a good job?”. The warmth dimension was measured with the items: “How many [older people/ children/ adolescents] are ...friendly?; ...good to other people?; ...bad to other people?” (recoded). The sample aged 6 to 10 was presented with the label “children” when referring to their ingroup, while the sample aged 11 to 15 was presented with the label “adolescents”. Each item was followed by 5-point Likert response scale with the labels “no one”, “a few”, “some”, “many”, and “everyone”, and corresponding pictograms. Considering the low number of items, reliabilities were satisfactory for the constructs competence outgroup ($\alpha = .71$), competence ingroup ($\alpha = .64$), warmth outgroup ($\alpha = .61$) and warmth ingroup ($\alpha = .71$). Hence, we computed composite scores for the warmth and competence stereotypes for each target group.

Age prejudice. Participants were instructed to imagine that an older person enters the room to talk to them and were asked about how they would feel. They were presented with three bipolar response scales measuring the feelings “sad vs. happy”, “angry vs. glad”, and “scared to talk vs. willing to talk”. The 6-point response scales were accompanied by the labels “very sad”, “sad”, “a little bit sad”, “a little bit happy”, “happy”, “very happy”, and corresponding pictograms in the form of smileys. The items formed a highly reliable scale ($\alpha = .90$) and were therefore averaged into a composite score with higher values indicating more positive feelings in the imaginary scenario.

Participants were also instructed to think about older people in general and were asked “What do you feel about older people?” followed by a 5-point Likert scale (1 = “I don’t like

them at all” to 5 “I like them very much”), with each response option accompanied by a corresponding pictogram in the form of smileys.

Socio-demographics. Participants were asked about their gender, age, grade, nationality and with whom they lived most of the time. Towards the end of the questionnaire, they were also asked to think about an older person with whom they spend some time (paternal grandfather, paternal grandmother, maternal grandfather, maternal grandmother, other older people, no one)³. The large majority of the participants (90%) indicated spending some time with their grandparents. There was no difference between the two age groups regarding this variable, $\chi^2(5) = 9.02, p = .108$. They were also asked to indicate how often they see this person on a 5-point frequency scale (1 = “never”, 2 = “once a month”, 3 = “once a week”, 4 = “more than once a week”, 5 = “every day”).

Evaluation of the questionnaire. Participants were asked how difficult they found it to respond to the questions (1 = “very difficult” to 5 “very easy”). Both age groups found it relatively easy to respond, with those in the 11-15 age group finding it easier than those in the 6-10 age group ($M_{6-10 \text{ age group}} = 4.60, SD = 0.74; M_{11-15 \text{ age group}} = 4.09, SD = 1.14, t(92) = 2.46, p < .05$).

Procedure. A trained female experimenter in her 20s conducted all the testing sessions. Children completed the questionnaire in the form of an interview with the help of the experimenter. Adolescents completed the questionnaire autonomously and in a classroom setting. After a brief warm-up and introduction, the experimenter asked all participants to think about who an older person is. The discussion was guided in a non-directive way and participants were instructed to think of an older person as someone who is over 65 years of

age. Note that this age boundary is often adopted in ageism research with children (cf. Montepare & Zebrowitz, 2002) and corresponds roughly to the current retirement age in Portugal (OECD, 2015). Participants then responded to the measures in the questionnaire and finally to the socio-demographic questions. All participants were debriefed and thanked for their participation. It took the participants about 14 minutes to fill out the questionnaire ($M = 13.83$, $SD = 3.96$), with the participants in the 6-10 age group ($M = 15.51$, $SD = 3.10$) taking slightly more time than those in the 11-15 age group ($M = 12.25$, $SD = 4.05$; $t(99) = 4.45$, $p < .001$).

Results

Age stereotypes. We conducted a 2 (Stereotype Content: competence vs. warmth) X 2 (Target: ingroup vs. outgroup) X 2 (Participant Age Group: 6-10 vs. 11-15 year old) mixed ANOVA with repeated measures on the first two factors. The hypothesised three-way interaction turned out to be non-significant, $F(1, 101) = 1.22$, $p = .27$, $\eta p^2 = .01$, indicating that stereotypical evaluations on the competence and warmth dimensions for the in-and outgroups did not differ significantly between the two age groups.

As predicted, we observed a significant two-way interaction between Stereotype Content and Target, $F(1, 101) = 50.53$, $p < .001$, $\eta p^2 = .33$. Planned comparisons confirmed our hypotheses showing that competence and warmth ratings differed as a function of the evaluated target group: participants evaluated the outgroup significantly more positively on the warmth ($M = 3.88$, $SD = 0.51$) than the competence dimension ($M = 3.24$, $SD = 0.71$, $F(1, 101) = 100.33$, $p < .002$, $\eta p^2 = .50$), yet they evaluated the ingroup as equally warm ($M = 3.57$, $SD = 0.51$) and competent ($M = 3.59$, $SD = 0.61$) showing the expected ingroup bias, $F < 1$. Moreover,

competence ratings for older people were significantly lower than for the ingroup, $F(1, 101) = 29.16, p < .001, \eta p^2 = .22$, however, older people were perceived as significantly more warm than the ingroup, $F(1, 101) = 26.11, p < .001, \eta p^2 = .20$ (see Figure 1).

There was also a significant two-way interaction between participant's Age Group and Stereotype Content, $F(1, 101) = 7.78, p = .006, \eta p^2 = .07$. Bonferroni adjusted pairwise comparisons revealed that children's evaluations on the warmth dimension ($M = 3.95, SD = 0.35$) were more positive than adolescent's evaluations [$M = 3.50, SD = 0.37, F(1, 101) = 36.18, p < .001, \eta p^2 = .26$]. Evaluations on the competence dimension did not differ significantly across age groups, $F < 2.05^4$.

- FIGURE 1 -

Age prejudice. All means were well above the mid-point of the scale suggesting overall positive feelings towards older people. Using a between-subjects ANOVA, we found that there was a significant main effect for Age Group in the imaginary intergenerational contact scenario, $F(1, 99) = 29.66, p < .001, \eta p^2 = .23$: children reported more positive feelings towards older people ($M = 5.21, SD = 0.74$) than adolescents ($M = 4.40, SD = 0.75$)⁵ and the same held true for the general feelings measure [$M_{children} = 4.31, SD = 1.05; M_{adolescents} = 4.00, SD = 0.73; F(1, 101) = 3.02, p = .085, \eta p^2 = .03$]⁶.

Discussion

Our study compares for the first time age stereotyping across young ages (i.e., childhood and adolescence) using the Stereotype Content Model (SCM; Fiske et al., 2002) as a theoretical framework and with a rating procedure. Previous research has shown that the

ambivalent old age stereotype held by adults is pervasive across different cultures (Cuddy et al., 2009). In this study, we show that it is also widely shared in Portuguese society and pervasive across childhood and adolescence, which points to influential socialization processes in young age and the perpetuation of age stereotyping over the life course. Our results suggest that the development of an ambivalent age stereotype has an early start: children as young as 6-10 years old already endorsed the stereotypical view of older people as being much nicer than competent while at the same time holding an ingroup bias, i.e. evaluating their own age group as relatively high on both the warmth and competence dimensions. This pattern of results applied also to adolescents aged 11-15 which means that our developmental hypothesis, i.e. less cognitive bias in this age group compared to the younger age group, was not supported.

One reason might be that categorization processes associated with *age* stereotyping are subjected to very strong socialization effects in that the exaggeration of between-group differences and within-group similarities is socially accepted and reinforced constantly in everyday life. Consequently, the age stereotypes adolescents learned when they were younger remain socially unchallenged and thereafter unchanged. This is consistent with the idea that ageism is still a socially acceptable form of discrimination (Nelson, 2005).

This study contributes in important ways to the internalization hypothesis proposed by Stereotype Embodiment Theory (Levy, 2009). We showed that children as young as six years old already share the pervasive 'doddering but dear stereotype' of older people. It is likely that this is the representation of older people they will embrace throughout their life course, which is also suggested by the results of our pre-test. This increases the chances that the paternalistic

stereotype will become a self-stereotype at an older age, with important implications for their health and well-being (Levy, 2009).

Another implication of the results is that older people are likely to become targets of a paternalistic form of age discrimination (see Cuddy, Fiske, & Glick, 2007). Age discrimination – regardless whether benevolent or hostile – constitutes an important psycho-social stressor which can increase the risk of ill-health in older adults (e.g., Vauclair et al., 2015). Besides the implications for the discriminated individuals, this has also important consequences for aging societies such as Portugal, because the effects of age discrimination may constitute an additional financial burden regarding public health expenditure.

Regarding feelings towards older people, our explorative analyses suggested that both children and adolescents showed a tendency to report relatively positive feelings towards older people. This is somewhat less surprising when considering that these measures are affective constructs that tap somewhat into the warmth dimension of stereotyping, i.e. liking of older people and feeling comfortable interacting with them – probably because they are seen as *nice*. Future research could examine this issue more thoroughly by including measures that assess a form of age prejudice that is conceptually unrelated to the warmth dimension of stereotyping (see e.g., Cuddy et al., 2007). The difficulty lies in constructing age-appropriate measures for complex emotions (e.g., contempt) so that even six-year-old children can respond to them.

Regarding age group differences, it is noteworthy that there was convergent evidence that children scored consistently higher than adolescents on measures tapping into the warmth dimension, i.e., the warmth stereotype for *both* in- and outgroup targets as well as the

prejudice measures. We did not find this response tendency for the competence dimension, which suggests that it is not a general response style of acquiescence, but rather a particular developmental tendency to agree that others are nice and friendly without differentiating along the target age. It might be that agreeableness, i.e., showing kindness *towards* others and perceptions of kindness and warmth *in* others, is highly socialized and an important social concern at this age and still undifferentiated compared to later developmental stages. This might also explain the inconclusive results about age differences in ageist attitudes in previous studies (see Robinson & Howatson-Jones, 2014; Montepare & Zebrowitz, 2002). Our within-subjects design, in which the same respondents evaluate both in- and outgroup targets, together with a multicomponent approach to measuring ageist attitudes and a multidimensional approach on assessing stereotyping enabled us to detect this peculiarity.

Limitations and Future Research

It is noteworthy that although the relative difference in ratings for the stereotype measures indicated a paternalistic stereotype, the means were close to the mid-point of the scale in both the ESS data and the main study. This tendency has already been identified in previous studies with other cultural samples (e.g., Japan, South Korea, see Cuddy et al., 2009). The reason may be that respondents from collectivistic cultures as well as young respondents favour the mid-point of the response scale (Borgers, Sikkels, & Hox, 2004; Chen, Lee, & Stevenson, 1995). Future research may circumvent this issue by not offering a neutral mid-point as a response option.

Another limitation is that we examined the cognitive and affective components of age attitudes, yet we did not assess the behavioural component, i.e. discriminatory intentions and

acts against older people. Following from the theoretical framework of the SCM, the ambivalent age stereotype is associated with both active facilitation (e.g., helping behaviour) and passive harm (e.g., neglect; Cuddy et al., 2007). Few studies have examined children's actual behaviour towards older adults, because it is very difficult to design such studies. However, the existing studies provide some support that our results should be related to these ageist behavioural tendencies. Isaacs and Bearison (1986) found that children showed more avoidant behaviour (i.e., passive harm) when working on a puzzle with an older adult compared to a younger one. Kwong, Rasmussen and Pertman (2012) used a modified Piagetian conservation task to examine behavioural expressions of age stereotyping in children and found indications of patronizing behaviour. Yet, more research is needed that broadens the toolkit for the assessment as well as onset of ageism in children, which will require different and creative methodological approaches such as puppet plays (cf. Kwong & Heller, 2005).

Conclusion

This study makes an important contribution to the literature by showing that the so-called 'doddering but dear' age stereotype is not only pervasive across different cultures, but also across young ages (i.e., children and adolescents). Given that age stereotypes are associated with a host of negative consequences for older people's well-being and that they can also lead to age discriminatory behaviours, there is an urgent need to attend to this issue. Appearance cues in seniors are likely to trigger the development of children's age perceptions; however, socialization processes seem to further shape and perpetuate them over the lifespan -- probably because ageist beliefs are not socially sanctioned. We would recommend tackling socialization processes by establishing social norms that condemn expressions of ageism.

Counter-ageism intervention programs could be introduced as early as in the first grade and address the competence aspect of age stereotyping. The finding that children and adolescents do not feel negatively towards older people is especially encouraging. Intergenerational contact programs could be developed in which children and adolescents interact with highly competent and capable senior individuals (see e.g., Marques, Vauclair, et al., 2015). The exposure to these contra-stereotypical exemplars should lead to an individualization process and consequently to less ageist beliefs.

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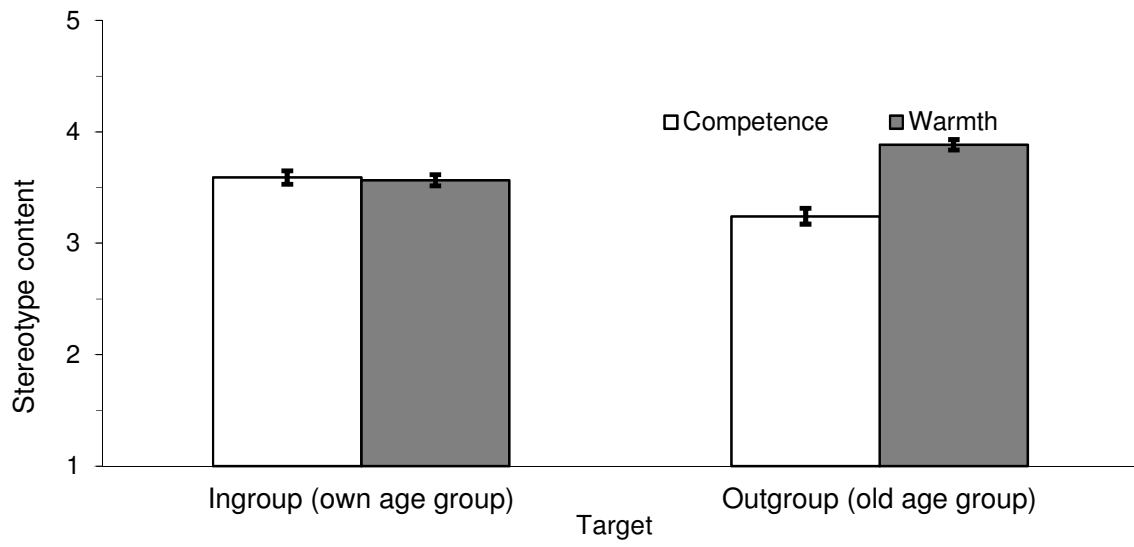


Figure 1. Competence and warmth ratings for the combined sample (children and adolescents) regarding the in- and outgroups.

Endnotes

¹ ESS design weights were applied to the analyses.

² The results remained the same when excluding older people (over 65 years of age) from the analyses, $M_{\text{warmth}} = 2.82$, $SD = 1.00$; $M_{\text{competence}} = 2.56$, $SD = 1.07$; $F(1, 1636) = 117.00$, $p < .001$, $\eta p^2 = .07$.

³ Participants were also asked to indicate their feelings about being with this older person on a 5-point Likert scale (1 = "I don't like it at all"; 5 = "I like it very much"). However, given the little variance this variable displayed ($M = 4.80$, $SD = 0.40$, $Min = 4$, $Max = 5$), it was not included as a potential covariate in the tested models.

⁴ When we included the frequency of intergenerational contact as a covariate into the model, there was neither a significant main effect of Contact, $F(1, 96) = 1.05$, $p = .308$, $\eta p^2 = .01$, nor did Contact interact significantly with other variables, $F_s < 2.62$, or predict any of the dependent variables, $\beta_s < -.12$. The hypothesized three-way interaction remained non-significant, $F(1, 96) = 0.59$, $p = .44$, $\eta p^2 = .01$, and the predicted two-way interaction between Stereotype Content and Target became marginally significant, $F(1, 96) = 3.88$, $p = .052$, $\eta p^2 = .04$. Hence, this variable had only a minimal impact in this study.

⁵ The results remained unchanged when controlling for the frequency of intergenerational contact, $F(1, 94) = 5.92$, $p = .017$, $\eta p^2 = .06$. There was no evidence that increased Contact was related to more positive feelings towards older people nor did any significant interaction emerged with this variable, $F_s < 1$.

⁶ The marginally significant effect disappeared when we included Intergenerational Contact as a covariate, $F_s < .1$.