



Age Differences in Age Stereotypes

The Role of Life Domain and Cultural Context

Clara De Paula Couto , Ronja Ostermeier, and Klaus Rothermund

Institute of Psychology, Friedrich Schiller University Jena, Germany

Editor's
Choice

Abstract: We examined the domain-specific views of young and old people held by young (18–30 years, $n = 278$) and older adults (60–85 years, $n = 289$) in Germany, the USA, and India. Views about old and young people differed between life domains but were mostly similar across age groups and countries. Older adults in the USA and Germany – but not in India – held slightly less negative views about old people than did young people in some domains, possibly indicating a projection of better-than-expected own aging experiences of older adults into their in-group stereotypes in Western countries. The findings of our study can be explained by socialization processes, supporting mostly a developmental perspective regarding the acquisition and endorsement of age stereotypes.

Keywords: age stereotypes, age bias, intergroup relations, country differences, age differences

Age stereotypes reflect beliefs individuals hold about different age groups and the aging process. For example, young people may be perceived as energetic but careless, whereas older adults may be perceived as wise but fragile. How people perceive different age groups and which beliefs they hold about them is a broadly investigated topic (see Kite et al., 2005, for a meta-analytic review). The primary focus of this study lies on age-group differences in the perception of young and old people. In investigating these differences, we focus on two ways of explaining how age stereotypes are acquired, and how they change over the lifespan. The developmental perspective suggests that age stereotypes are acquired early in life (Bigler & Liben, 2007; Lineweaver et al., 2017; Montepare & Zebrowitz, 2002; Rudman, 2004). According to this view, age stereotypes are assumed to be similar across all age groups, but changes in age stereotypes during old age may result from projecting one's own aging experiences onto the personally held views of the corresponding age group (Rothermund & Brandtstädter, 2003; see also Kornadt & Rothermund, 2012; Kornadt et al., 2017). The social-psychological perspective, on the other hand, assumes that evaluations of young and old people are determined by one's current age-group membership. According to social identity theory (Tajfel & Turner, 1986), people evaluate their own age group more favorably than other age groups – a phenomenon denoted as *in-group favoritism* or *in-group bias*. Accordingly, young and old people hold more positive views of young and old people, respectively.

To disentangle the developmental and social-psychological accounts of the acquisition of age stereotypes and change on a more fine-grained level, we also consider domain-specific and country differences in age stereotypes.

Specifically, own experiences of aging should differ between countries and domains, which in turn should influence projection processes accordingly. Furthermore, competition for scarce resources between the young and the old should be stronger for some domains and/or countries and should lead to stronger in-group biases for these domains and countries, respectively (North & Fiske, 2012).

Age Differences in Age Stereotypes

Age Stereotypes from a Developmental Perspective

From a developmental perspective, age stereotypes are learned early in life from the social environment and significant others (Kunkel et al., 2006; Taylor et al., 2000). Accordingly, the beliefs individuals hold about young and older adults reflect societal norms and cultural stereotypes acquired via socialization processes shared within a given culture. The family, peer groups, schools, and broader cultural values all represent important sources that influence the acquisition of stereotypes (Bandura, 1977; Lineweaver et al., 2017). Once established via socialization, stereotypes tend to solidify throughout life because of reinforcement and internalization of learned attributes, behaviors, and expectations attributed to different groups. Thus, age stereotypes are persistent and show only little variation over time. Indeed, cross-cultural studies have demonstrated that even though age stereotypes vary across different cultures (North & Fiske, 2015; Voss et al., 2018), within cultures

there seems to be little variation with age (Kite & Wagner, 2002; Vauclair et al., 2018). Further evidence in favor of a socialization account has also been found at the implicit level. Specifically, implicit age bias (measured with the IAT) was found not to differ between young and older adults, with both age groups showing a preference for younger adults (i.e., an implicit pro-young bias; Chopik & Giasson, 2017; Hummert et al., 2002; Nosek et al., 2002).

Although the developmental account assumes only little variation in age stereotypes within a culture, some developmental studies have shown slightly more differentiation on views on old age as individuals age (Heckhausen et al., 1989; Rothermund & Brandtstädter, 2003). Different from other social stereotypes, old age stereotypes have a particular characteristic because, over their lifetime, individuals should make a fluid transition from the young to the old group (Rothbaum, 1983; Wentura & Brandtstädter, 2003). How one views and perceives age and the aging process may therefore be influenced and assume different shapes as a result of this developmental transition. For example, age stereotypes may be influenced by one's own aging experiences, which may result in more elaborated and differentiated self-views. Such self-views may be projected onto the stereotypes of one's own age group (Rothermund & Brandtstädter, 2003; see also Kornadt & Rothermund, 2012; Krueger, 2000). On the other hand, if transitioning to old age is marked by experiences that are better than expected, people may then reject the previously acquired negative stereotypes and retain more positive views of aging.

Therefore, in line with the developmental perspective, we hypothesize that views on age should be mostly comparable across age groups because of similar socialization processes, with young and older individuals holding similar views of their own and other age groups. Finding slightly more positive views of old people among older adults could be interpreted as a proxy for projection processes (Kornadt et al., 2017).

Age Stereotypes from an Intergroup Bias Perspective

An alternative perspective on age stereotypes and on how age shapes them is provided by research on intergroup bias, where age (like race or sex) is a social category with different age groups being characterized by specific, particular features. As such, being a member of a certain age group may influence people's self-concept as well as their self-esteem, especially for those who strongly identify with their own group. Social identity theory (Tajfel & Turner, 1986) proposes that, when people strongly identify with their group members (in-group) and when their self-esteem is

linked to their perceived worthiness, they feel motivated to compare their in-group more favorably concerning members from other groups and sometimes to even derogate out-group members (Branscombe & Wann, 1994; Chasteen, 2005). This process is known as in-group favoritism or in-group bias. One interesting aspect of in-group bias related to age is that, over their lifetime, people transition from being young to being old, granting age the status of a social category marked by temporary group membership (Rothbaum, 1983). The change in age group membership is likely to lead to a shift in group identification, which consequently should be accompanied by a change in the direction of in-group biases. Once they have become old themselves, people should develop more positive stereotypes of other old people and less positive (or even negative) stereotypes of the young.

From an intergroup perspective, age stereotypes are shaped by group membership, with in-group bias being directly associated with it. Accordingly, if group membership shapes views on age, older adults should hold more positive age stereotypes of older than of younger people, whereas young people should show the opposite pattern. We refer to this as the *intergroup bias hypothesis*. Some studies that investigated age bias across age groups confirmed this hypothesis, with younger adults showing a preference for younger adults and older adults showing a preference for older adults – at least at the explicit level (Chopik & Giasson, 2017; Nosek et al., 2002). In line with this intergroup bias hypothesis, we expect that views about young and old people should vary with age as a result of a change in group membership.

Context Differences in Age Stereotypes: Culture and Life Domains

Research on age stereotypes demonstrated that views on old age and aging are not uniform but differ systematically regarding content and valence between life domains (Kornadt & Rothermund, 2011) and countries (Ackerman & Chopik, 2021; North & Fiske, 2015). Whereas in some contexts older people are evaluated negatively (e.g., regarding their health, fitness, and appearance), in others they are typically evaluated more positively (e.g., in the family domain and regarding their experience, personality, etc.; see Kornadt & Rothermund, 2011; Kornadt et al., 2016). In addition, systematic differences have also been reported regarding the age stereotypes characteristic to specific countries or regions (Ackerman & Chopik, 2021; Löckenhoff et al., 2009; North & Fiske, 2015), reflecting

the different “cultures of aging,” demographic trends, and economic conditions in these countries (Westerhof et al., 2012). Finally, country differences in views on aging have also been found to differ in their direction for different life domains (Boduroglu et al., 2006; Voss et al., 2018).

For the current study and its focus on different theoretical explanations for age-group differences in views on aging, considering the country- and domain-specificity of views on aging is of particular relevance, because they might indicate projection processes and intergroup conflict: (1) Older adults’ own experiences of aging is shaped differently depending on the domain and country. In particular, we expect older people from the USA and Germany to live under more positive economic conditions compared to older people from India. According to a developmental perspective, these differences in own experiences should influence projection processes and should result in older people in Western countries holding less negative views about their age group, compared to older people from Eastern countries. (2) According to the social-psychological perspective, in-group biases present in views on aging should depend on whether older and younger generations compete with each other. Such a competition should be more likely to occur in life domains in which societal resources are scarce (e.g., work, finances), which should result in more pronounced in-group favoritism in those domains.

To explore cultural variation in age stereotypes across age groups, we chose three countries: India, Germany, and the United States. Based on demographic data, we assume East/West differences in the contexts of aging of the chosen countries. In demographic terms, for example, compared to Germany (47.6%) and the USA (46.7%), in India the projected growth of the older population is much more accentuated (116.7% by 2050, Deutsche Stiftung Weltbevölkerung, 2018), with the percentage of Indian people aged 65 years and older expected to double within the next few decades. Such a rapid pace in demographic aging in India may have a greater impact on the country’s economic sustainability and may also create some intergenerational tensions regarding scarce resources (e.g., in finances and healthcare).

Another indicator of differences in the aging contexts among the countries is provided by the 2015 Global AgeWatch Index (AgeInternational, 2015), which aims to assess factors associated with the social and economic well-being of older people around the world. According to the index, Germany and the USA have similar contexts of aging (Germany ranks 4th and the USA ranks 9th) and are both different from India (ranked 71st). Ayalon and Rothermund (2018) recently introduced indicators of relative age disadvantage of older compared with younger people in European countries. When comparing these indicators with the AgeWatch Index, they found that relative age disadvantage

of older adults was associated with worse living conditions of both young and old, being therefore context dependent. Accordingly, more affluent countries are likely to be characterized by less age disadvantages.

The context of aging in India thus presents some important challenges for older adults in terms of social and economic aspects. For example, social-security mechanisms, such as pensions and health insurance, are only weakly provided. Income insecurity is one of the major causes of vulnerability in old age (United Nations Population Fund, 2017). Such inequalities and challenges related to old age may shape individuals’ views of the aging process even among older Indian adults, who may experience old age as a very difficult time. In contrast, in Germany and the USA, the contexts of aging are overall more favorable to older adults partly because of the existence of social welfare policies that aim to deliver universal pensions and better access to healthcare. Among others, these are necessary factors for older adults to be able to live well and independently.

The Present Study

This study contributes to our understanding of how young and older adults view their own as well as other age groups, and to what extent socialization, projection, conflict between generations, and in-group bias can account for similarities (or differences) in their age stereotypes. To that end, the study sample includes young and older participants and gathers their assessments of age stereotypes of both young and old people. In this study, we therefore employ a 2 (Rater age: young vs. old) \times 2 (Target age: young vs. old) design.

This study further advances the current state of the art by looking at age stereotypes in different life domains and cultural contexts. In line with the social-psychological perspective, we would expect to find a *different* pattern of age biases across age groups: Both young and old raters should show an in-group bias such that age stereotypes of their own group are more positive than age stereotypes of the out-group. According to this perspective, the extremity of these biases might depend on country and life domain, with in-group favoritism being stronger in those combinations of cultures and domains in which age groups compete for scarce resources, like work or healthcare, and in-group favoritism being smaller in domains in which there is more intergenerational contact, like family.

As to the developmental perspective, because of similar socialization processes, we would expect to find a *similar* pattern of age biases across age groups, which should be biased against older people, since this is the dominant

negative stereotype. Variation in the strength of this effect should occur between domains, since previous studies revealed that age stereotypes are context-dependent and differ regarding content and valence between domains (Hummert et al., 1994; Kornadt & Rothermund, 2011; see also Casper et al., 2011). Slightly less negative age stereotypes might be found in older people possibly because of a projection of (positive) own experiences onto their views on aging. Results may also depend on the cultural context because both own experiences of aging and perceptions of old age may vary in certain cultures (Voss et al., 2018; Westerhof et al., 2012). Specifically, we hypothesize that older adults are perceived less negatively in the Western countries, but not in India because of a projection of “better-than-expected own aging experiences” into the old age stereotypes of older people in the USA and Germany.

Method

Participants

The sample consisted of $N = 567$ young (18–30 years) and older participants (60 or more years) from the United States ($n_{\text{young}} = 100$, 50.0% female, $M_{\text{age}} = 25.74$, $SD = 2.41$; $n_{\text{old}} = 98$, 50.0% female, $M_{\text{age}} = 65.61$, $SD = 4.83$), Germany ($n_{\text{young}} = 83$, 55.4% female, $M_{\text{age}} = 24.02$, $SD = 3.70$; $n_{\text{old}} = 101$, 51.5% female, $M_{\text{age}} = 66.14$, $SD = 3.94$), and India ($n_{\text{young}} = 95$, 62.1% female, $M_{\text{age}} = 25.85$, $SD = 3.33$; $n_{\text{old}} = 90$, 42.2% female, $M_{\text{age}} = 65.24$, $SD = 4.62$). The young subsamples in all countries were balanced regarding sex, $\chi^2(2) = 2.90$, $p = .235$. As for age, German participants were slightly younger than the American and Indian participants, $F(2, 275) = 9.02$, $p < .001$; see Table 1). The older subsamples in all countries were balanced regarding sex and age and therefore did not differ regarding these variables, sex: $\chi^2(2) = 1.85$, $p = .369$, and age: $F(2, 286) < 1$. The young subsamples differed in terms of education level,¹ $F(2, 275) = 70.84$, $p < .001$, with young Indians reporting the highest level of education, followed by Americans, and Germans reporting the lowest education level. The same holds for the older subsamples, $F(2, 286) = 64.64$, $p < .001$. Importantly, there were no differences in the education level of young and older participants within each country, all $t_s \leq 1.37$, all $p_s \geq .10$.

Participants from Germany, the USA, and India differ in terms of marital status, $\chi^2(10) = 60.89$, $p < .001$, and occupational status, $\chi^2(10) = 53.42$, $p < .001$, as well as monthly household income, $F(1, 380) = 17.24$, $p < .001$.² The information on the current marital status differs particularly between West and East. In India, participants are more likely to be married and less likely to be in a partnership or divorced than in Western countries. Regarding occupational status, German young participants are more likely to work part-time, whereas older German participants are more likely to be retired than participants in the USA and India (for a detailed description of the samples, see Table 1).

Measures

Views About Young and Older Adults

We assessed the views about young and older adults using a scale adapted from the Brief Scales on Views on Aging developed by Kornadt et al. (2020), based on the original scales developed by Kornadt and Rothermund (2011).³ The study scale included 14 items assessing views about young and older persons on 10 life domains (Family, Friendships, Autonomy, Leisure, Personality, Finances, Work, Appearance, Health, and Fitness). Except for Family (2 items), Leisure (2 items), and Personality (3 items), all other domains had only one item. Each item was preceded by a one-sentence description of the domain, and participants had to rate “Old people” and “Young people” on a 6-point scale between two opposite poles, with higher values indicating more favorable evaluations (the scales are available in the Electronic Supplementary Materials (ESM 1)). The reliability of the scales assessing the evaluations of young and old people was .69 and .80 in the United States, .79 and .85 in Germany, and .86 and .89 in India, respectively.

Procedures

Participants were recruited online. Americans were recruited from Amazon’s Turk Prime (<https://www.turkprime.com>), Germans from Respondi (<https://www.respondi.com>), and Indians from Amazon’s Turk Prime and Prime Panels (<https://www.turkprime.com/LaunchedSurvey/PrimePanelsPreview>). The reason for recruiting participants from different online platforms was

¹ Based on the International Standard Classification of Education [ISCED 2011], UNESCO Institute for Statistics, 2012.

² With regard to the monthly household net income, we compared only Germany and the USA, since in India income was assessed in Rupees. This item therefore cannot be interpreted in the Indian sample compared to the German and American samples.

³ The scale employed in this study to assess views that people hold about the groups of young and old people was developed based on the domain-specific items from the Scales on Views on Aging (Kornadt & Rothermund, 2011; Kornadt et al., 2020). Since we were interested not only in views about the old, but also in views about the young, we adapted the items in each life domain to reflect beliefs that could match both age groups. Hence, the items in the adapted scale reflect views that can be applied to both young and old people.

Table 1. Sociodemographic information for the full sample and by country

Variable	All sample	All sample		Germany		USA		India	
		Young	Old	Young	Old	Young	Old	Young	Old
Sample <i>N</i>	567	278	289	83	101	100	98	95	90
Female <i>N</i> (%)	294 (51.9)	155 (55.8)	139 (48.1)	46 (55.4)	52 (51.5)	50 (50.0)	49 (50.0)	59 (62.1)	38 (42.2)
Age <i>M</i> (<i>SD</i>)	45.9 (20.6)	25.3 (3.3)	65.7 (4.5)	24.0 (3.7)	66.1 (3.9)	25.7 (2.4)	65.6 (4.8)	25.8 (3.3)	65.2 (4.6)
Family status <i>N</i> (%)									
Single	158 (27.9)	133 (47.8)	25 (8.7)	41 (49.4)	6 (5.9)	42 (42.0)	16 (16.3)	50 (52.6)	3 (3.3)
Living with a partner	92 (16.2)	81 (29.1)	11 (3.8)	37 (44.6)	6 (5.9)	35 (35.0)	5 (5.1)	9 (9.5)	0 (0.0)
Married	248 (43.7)	63 (22.7)	185 (64.0)	5 (6.0)	62 (61.4)	23 (23.0)	45 (45.9)	35 (36.8)	78 (86.7)
Divorced	45 (7.9)	0 (0.0)	45 (15.6)	0 (0.0)	19 (18.8)	0 (0.0)	24 (24.5)	0 (0.0)	2 (2.2)
Widowed	21 (3.7)	0 (0.0)	21 (7.3)	0 (0.0)	6 (5.9)	0 (0.0)	8 (8.2)	0 (0.0)	7 (7.8)
Other	3 (0.5)	1 (0.4)	2 (0.7)	0 (0.0)	2 (2.0)	0 (0.0)	0 (0.0)	1 (1.1)	0 (0.0)
Education ^a <i>M</i> (<i>SD</i>)	5.48 (1.63)	5.46 (1.61)	5.51 (1.64)	4.14 (1.81)	4.33 (1.83)	5.57 (1.16)	5.80 (1.17)	6.48 (0.87)	6.52 (0.86)
Occupational status <i>N</i> (%)									
Employed full-time	271 (47.8)	183 (65.8)	88 (30.4)	42 (50.6)	17 (16.8)	69 (69.0)	35 (35.7)	72 (75.8)	36 (40.0)
Employed part-time	120 (21.2)	66 (23.7)	54 (18.7)	35 (42.2)	18 (17.8)	14 (14.0)	24 (24.5)	17 (17.9)	12 (13.3)
Unemployed	26 (4.6)	23 (8.3)	3 (1.0)	5 (6.0)	0 (0.0)	13 (13.0)	2 (2.0)	5 (5.3)	1 (1.1)
Homemaker	15 (2.6)	5 (1.8)	10 (3.5)	0 (0.0)	1 (1.0)	4 (4.0)	1 (1.0)	1 (1.1)	8 (8.9)
Retired	131 (23.1)	0 (0.0)	131 (45.3)	0 (0.0)	64 (63.4)	0 (0.0)	34 (34.7)	0 (0.0)	33 (36.7)
Disabled	4 (0.7)	1 (0.4)	3 (1.0)	1 (1.2)	1 (1.0)	0 (0.0)	2 (2.0)	0 (0.0)	0 (0.0)
Monthly income ^b <i>M</i> (<i>SD</i>)				4.02 (1.91)	4.50 (1.44)	4.97 (1.57)	5.01 (1.68)	7.05 (1.55)	7.73 (1.03)

Note. ^aEducational level based on the International Standard Classification of Education [ISCED 2011] ranges from 1 (primary education) to 8 (Doctorate or equivalent level); ^bmonthly household income after taxes – in EUR ranges from 1 (0–500 EUR/US\$/INR) to 8 (> 10,000 EUR/US\$/INR).

two-fold: On the one hand, in Germany, Respondi is a much more common platform than Amazon's Turk Prime and allowed us to recruit a more representative sample of old and young German native speakers. On the other hand, to recruit Indian participants who spoke English, we needed to use a service that allowed us to access this specific sample of participants, which was feasible with Prime Panels. American participants received US\$1.25 for their participation. German participants received 2.50 EUR. Indian younger participants received US\$8 for their participation, with older participants receiving US\$9.35. Research procedures were approved by the Institutional Review Board at Friedrich-Schiller-University Jena (FSV 18/36). All participants provided consent before completing the online questionnaire.

Participants first answered the sociodemographic questions. A question about the participants' native language (i.e., English, German) was used as an inclusion criterion in the United States and in Germany, respectively. In India, the participants needed to indicate whether they were able to speak English fluently to continue. After the sociodemographic questions, participants then completed the measure of views about young and older persons. The presentation order was counterbalanced among participants (i.e., views about young first vs. views about old first).

Design

The study had a 3 (Culture: United States vs. Germany vs. India) × 2 (Rater age: young vs. old) × 2 (Target age: young vs. old) × 10 (Life domain: Family vs. Friendships vs. Autonomy vs. Leisure vs. Personality vs. Finances vs. Work vs. Appearance vs. Health vs. Fitness) design, with the first two factors varying between participants and the two latter factors varying within participants. Views on young and older persons were the dependent variables.

Results

To compare age stereotypes of young and old people across young and old age groups, cultures, and life domains, we carried out a 10-factorial ANOVA (Life domain: Family vs. Friendships vs. Autonomy vs. Leisure vs. Personality vs. Finances vs. Work vs. Appearance vs. Health vs. Fitness) × 2 (Target age: young people vs. older adults) × 2 (Rater age: young vs. older adults) × 3 (Culture: USA vs. DE vs. IN), with the first two factors varying within participants and the other two varying between participants. Table 2 gives detailed results of the ANOVA; the full pattern of means is illustrated in Figure 1 (all means, standard

Table 2. GLM ANOVA summary table for target age

Source	df	MS	F	p	Effect size
Target age	1	628.26	112.43	< .001	.167
Target age × Culture	2	36.90	6.60	.001	.023
Target age × Rater age	1	45.15	8.08	.005	.014
Target age × Culture × Rater age	2	26.71	4.78	.009	.017
Domain	9	95.36	98.27	< .001	.149
Domain × Culture	18	4.55	4.69	< .001	.016
Domain × Rater age	9	6.14	6.32	.010	.011
Domain × Culture × Rater age	18	.94	.96	.498	.003
Target age × Domain	9	255.74	185.24	< .001	.248
Target age × Domain × Culture	18	9.09	6.59	< .001	.023
Target age × Domain × Rater age	9	14.80	10.72	< .001	.019
Target age × Domain × Culture × Rater age	18	4.57	3.31	< .001	.012
Culture	2	82.58	15.40	< .001	.052
Rater age	1	198.44	37.01	< .001	.062
Culture × Rater age	2	28.54	5.32	.005	.019
Within groups	561				
Total	567				

Note. MS = Mean squares, effect size = partial η^2 .

deviations, and tests are available in Tables S1 and S2 of the ESM 2).

With only a few exceptions, all main effects and interactions were significant, indicating a highly complex pattern of results. By far the largest effects were obtained for target age, life domain, and their interaction, with each of these effects accounting for more than 15% of the variance in the data. Replicating and extending earlier findings, these effects indicate that, on average, beliefs about young targets are more positive than those of old targets (pro-young bias), but they also reveal a strong domain-specificity of age stereotypes, with some life domains showing either no general age bias or even a pro-old bias, indicating more positive evaluations of older people (e.g., Family, Personality, Autonomy, Work, and Fitness).

Age Differences in Age Stereotypes

Rater age (young vs. older adults) also had a substantial influence on the ratings, with older people giving overall more positive evaluations for both young and old targets. Most important for the present study is the significant two-way interaction of Target age × Rater age. Results indicated that the pro-young bias was larger among young raters than among older raters. As Table S1 (Aggregated domains) shows, this was because of older raters evaluating old targets more positively than did young raters. However, even though older raters held slightly more positive views about old targets than did young people, the overall pattern still indicated a pro-young bias in both age groups, which is in line with a developmental account.

Context Differences in Age Stereotypes: Life Domains

The three-way interaction of Target age × Life domain × Rater age indicated that the pro-young bias found among young and older raters differed across life domains (see Figure 2): For some domains, like Friendships and Health, we found an unqualified pro-young bias, whereas for the Family domain, we found an unqualified pro-old bias. For other domains, the pro-young bias found for the younger raters was weaker or absent in older raters (Leisure, Appearance, and Fitness). For the Autonomy and Personality domains, we found a pro-old bias among older raters that was weaker or absent among younger raters. Another domain showed a pattern in which older raters evaluated older people more negatively, whereas younger raters showed no difference in their ratings (Finances). Only the Work domain showed the expected pattern indicative of an in-group preference, with young raters holding more positive beliefs of young people and old raters evaluating older people more positively.

Context Differences in Age Stereotypes: Culture Differences

Our findings were further qualified by significant effects involving culture. Although the general pattern of findings is similar across the three countries (see Figure 1), the three-way interaction of Target age × Culture × Rater age indicates that the more positive evaluations of older people found for the older raters were situated entirely in the older

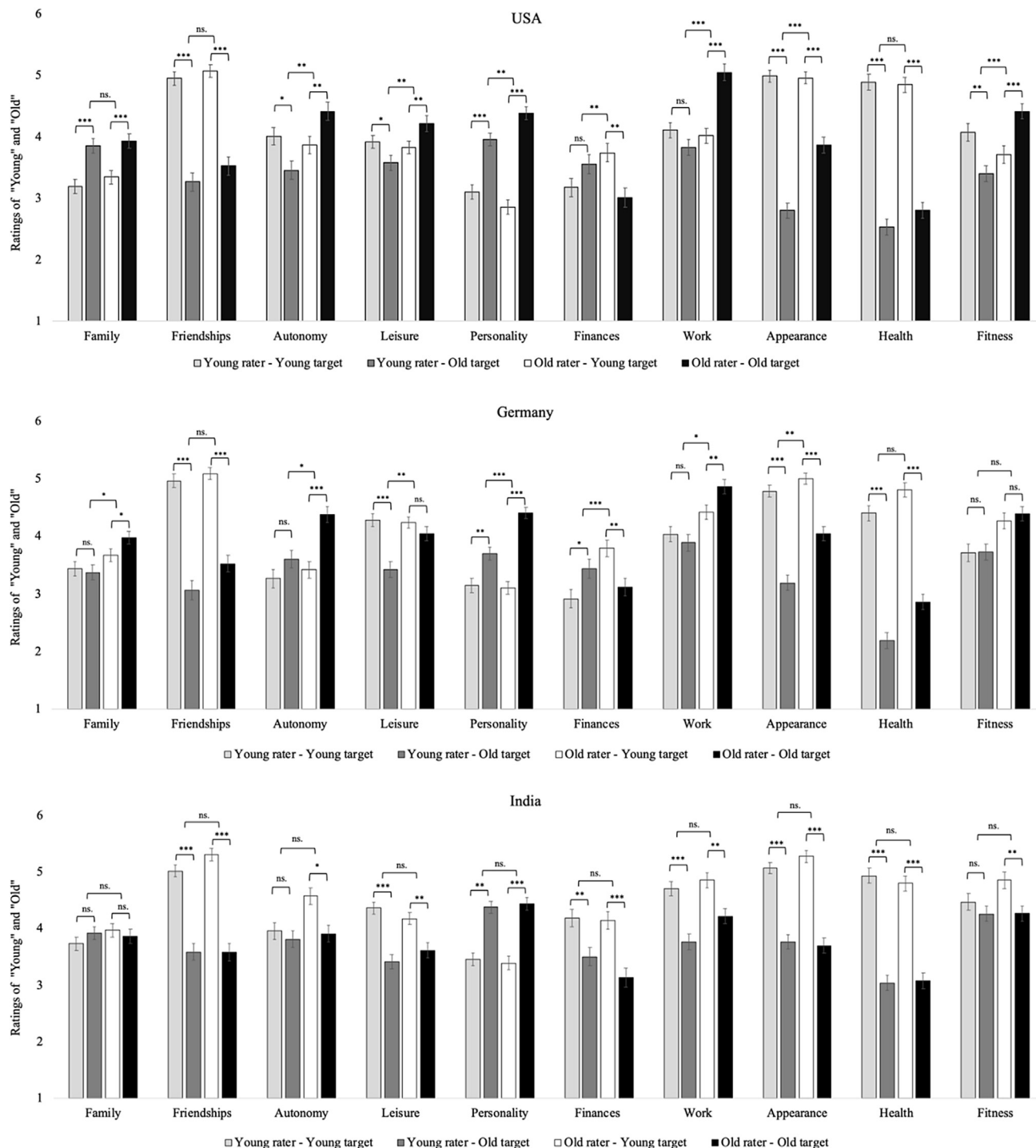


Figure 1. Mean ratings of young and old targets by young and older raters and by life domain in the United States (USA), Germany, and India, whiskers denote ± 1 SE (* $p < .05$, ** $p < .01$, *** $p < .001$). The rating scale ranges from 1 to 6 with higher values indicating more positive ratings.

samples in the West (USA and Germany), whereas no such effect was found for the East (India) (see Figure 3). As the four-way interaction of Target age \times Domain \times Culture \times Rater age indicated, this lack of a positive shift in the

evaluation of old people by the older Indian raters is particularly evident in the domains of Family, Autonomy, Leisure, Personality, Work, Appearance, and Fitness (see Figure 1, and Table S2 for details).

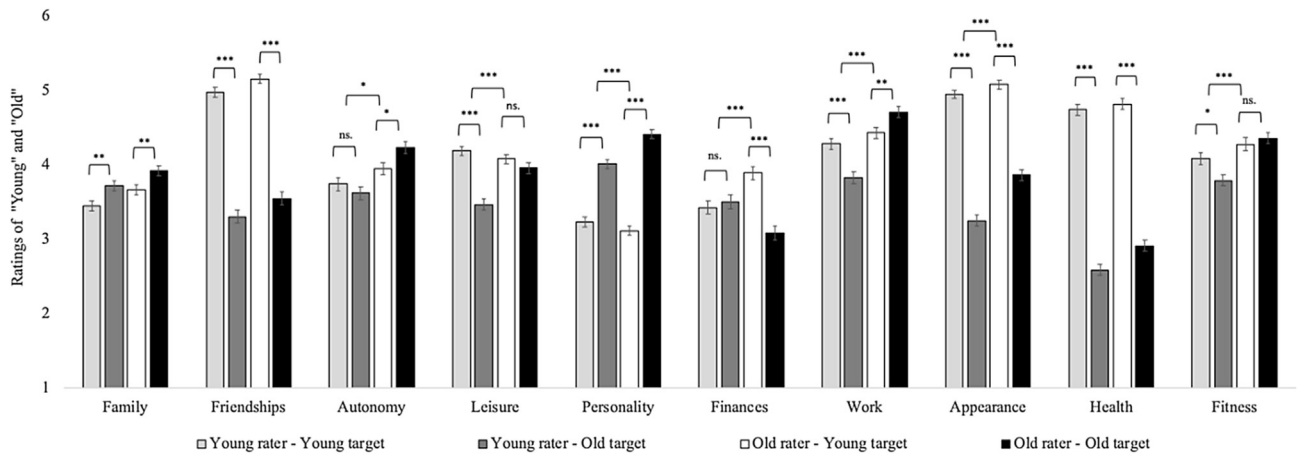


Figure 2. Mean ratings of young and old targets by young and older raters by life domain, whiskers denote ± 1 SE (* $p < .05$, ** $p < .01$, *** $p < .001$). The rating scale ranges from 1 to 6 with higher values indicating more positive ratings.

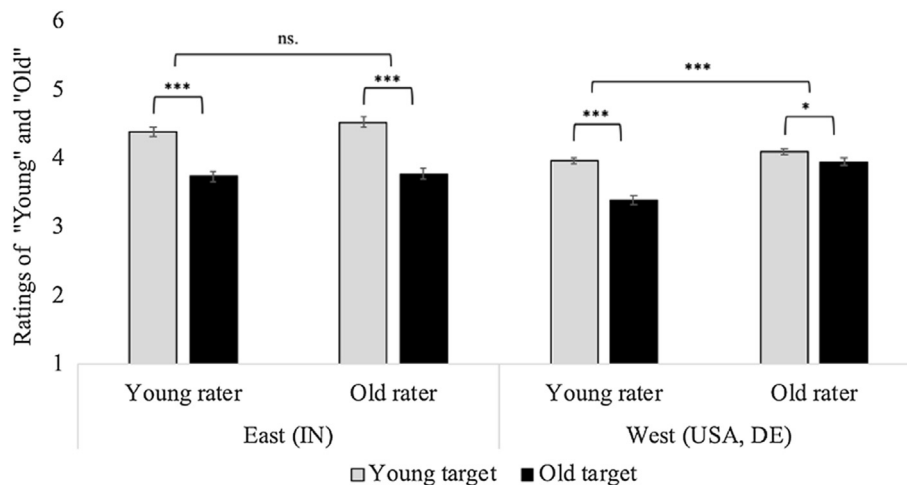


Figure 3. Mean ratings of young and old targets by young and older raters in the East (India) and West (USA, DE), whiskers denote ± 1 SE (* $p < .05$, *** $p < .001$). The rating scale ranges from 1 to 6 with higher values indicating more positive ratings.

Discussion

Altogether, our findings demonstrate a pro-young bias across age groups, with overall stronger effects among the younger raters. A strong influence of domain-specific age stereotypes was found, indicating more positive beliefs about young people (pro-young bias) for most domains, but more positive evaluations of older people (pro-old bias) for other domains for both age groups. This finding can be illustrated, for example, with the patterns found for the Health domain (general pro-young bias) and the Personality domain (general pro-old bias), which confirms previous research showing that overall younger people are perceived to be more energetic, whereas older persons are perceived to be wiser (Bowen et al., 2020). Furthermore, age-group differences modulate this general pattern, mostly – but

not always (see below) – in the direction that older raters show more positive evaluations for their own age group (i.e., weaker or absent pro-young bias or even pro-old bias depending on life domain).

In principle, this tendency of older adults to show less of a pro-young bias can be explained by both the social-psychological and the developmental approaches. In favor of the latter explanation, however, our study shows that not all older adults showed a reduction in the pro-young bias, but that this depended on the cultural context. Accordingly, this pattern was restricted to the Western countries, which can be plausibly explained by the different contexts of aging that characterize Eastern and Western societies. Accordingly, living conditions and own aging experiences presumably differ between the East and the West. Older adults in Germany and the USA are more likely to experience stability

or positive changes, whereas in India own aging experiences may confirm negative expectations for most of the older raters. This pattern of cross-cultural differences aligns with predictions from a developmental account. Even though our data are cross-sectional and we have not assessed self-views, we assume that projection processes could help in understanding the obtained pattern of cultural differences, based on the assumption that older adults project their own positive aging experiences onto their views of others their own age (Krueger, 2000; Rothermund & Brandtstädter, 2003). This interpretation is further supported by the fact that, in the domain of Finances, older adults on average demonstrated an even stronger pro-young bias than the young raters themselves – who on average showed no bias in this domain. These findings cannot be explained by the intergroup hypothesis, which would have predicted the strongest reversal of age biases in domains in which competition for scarce resources is strongest (i.e., finances), but can be incorporated in the projection model if one assumes that, as one gets older and reaches retirement age, they may experience money loss. In this case, the projection of the *experience of having less money after retirement* would shape the views of the old regarding finances.

Taken together, our findings provide some support for the socialization and projection accounts, with findings demonstrating a large degree of consensus regarding how old and young people are viewed in different life domains and across age groups. The differences between the age groups and cultures found in our study can be explained with the projection model, although such an explanation remains speculative, in particular since this study draws only on cross-sectional data and thus cannot make a strong case for the process-nature of projection.

Evidence for the social-psychological account of views on aging is limited at best. Only one out of 10 domains (Work) showed a pattern of age-group differences in agreement with what social identity theory proposes. This domain revealed a clear pattern of in-group bias, with young raters viewing young people more positively than old, and older raters viewing old people more positively than young. Intergenerational conflict may be especially salient in the work context (North & Fiske, 2016). On one hand, older workers report the highest levels of perceived discrimination in this domain (de Paula Couto & Rothermund, 2019). On the other hand, younger workers may resent older adults for not “stepping aside,” particularly when they face high unemployment rates (in 2019, the youth unemployment rate in Europe was 15.1%, Eurostat). The fact that our findings showed in-group bias in the Work domain may hence be explained by the saliency of this domain in terms of competition between generations. Still, no such pro-old bias was found in the subsample of older Indian raters, indicating

that the reversal of the age bias in the work domain may reflect projection rather than in-group bias because of intergroup conflict.

Findings from a study on age bias among young and old people from an intergroup perspective (Chasteen, 2005) pointed to a stronger in-group bias among younger raters. The lack of a strong own age bias among older adults in Chasteen’s study was interpreted in terms of their greater familiarity with the outgroup, since all older adults were previously young themselves. However, the pattern of cultural differences obtained in our study, with an age-independent pro-young bias across life domains in India, but not in the USA and in Germany, does not support this explanation.

Our findings are also important by highlighting the relevance of culture for our understanding of how people of different ages view old and young people. The overall pattern of cultural differences obtained in the views of young and old confirmed the results from the meta-analysis carried out by North and Fiske (2015). They contrast, however, with the findings by Ackerman and Chopik (2021), who showed that, in collectivistic countries, implicit age bias is reduced compared to Western countries. Given that implicit and explicit biases are typically only weakly correlated (Huang & Rothermund, 2021) and also diverge in content (with implicit measures only rarely assessing domain-specific stereotypes), this discrepancy probably reflects methodological differences in the study. A closer investigation of explicit and implicit biases, including context-dependent measures of implicit age biases (Casper et al., 2011; Huang & Rothermund, 2021), is definitely a major desideratum for future research.

Furthermore, in line with previous studies, cultures differed regarding their domain-specific age stereotypes (Voss et al., 2018). Most importantly for our study, however, is the finding that age-group differences in these views on aging also differ between cultures, with older adults in Western cultures showing a clear shift toward more positive evaluations of their own age group, whereas there was no evidence for such a shift for older raters from India.

Our study has some limitations that should be acknowledged. First, even though we discuss and compare socialization and in-group bias as processes underlying age, culture, and life-domain differences in the views of the young and of the old, we did not assess variables that may indicate such processes (e.g., personal aging experiences, perceived intergenerational tension). In some cases, socialization and in-group bias may overlap. For example, life domains in which resource conflict is strong might also be those in which people make more negative aging experiences. One could disentangle this overlap by assessing variables like intergenerational conflict over resources and personal aging experiences directly. Hence, despite framing our

findings as reflecting mostly socialization processes, we must concede that our data do not fully allow disentanglement of the developmental and the social-psychological approaches. Second, despite our best efforts, our sample of older Indians comprised a select group of older individuals who spoke English and were familiar with taking part in online studies. Finally, our study was correlational, so that all reports of age-dependency of views on age need to be interpreted cautiously. Nonetheless, despite these shortcomings, we believe that our large overall sample size as well as the investigation of domain specificity of views on aging represent a significant contribution.

Conclusion

This study investigated age stereotypes of young and old people in different life domains among young and older persons in the USA, Germany, and India. By having young and older adults rate their views of the young and the old, we aimed to examine two prominent accounts of age-based differences regarding age stereotypes in psychology, namely, the social-psychological and the developmental one. We found a well-structured pattern of results, with findings revealing that age-stereotypes about young and old people were overall mostly similar across age groups, despite differing between life-domains. Our findings thus lend support to the developmental account, suggesting that there is agreement across distinct age ranges on the stereotypes of young and old people. Cultural variations in the views of aging were previously reported (e.g., Ackerman & Chopik, 2021; North & Fiske, 2015; Voss et al., 2018), which indicates that the context represents an important source for the acquisition of age stereotypes. Our findings align to this and show that older adults in the USA and Germany – but not in India – have less negative views of the old compared to young people. This may indicate that, as the years pass, such stereotypes become more differentiated and more positive, possibly via a projection of better-than-expected aging experiences of older adults in Western countries.

Electronic Supplementary Material

The electronic supplementary material is available with the online version of the article at <https://doi.org/10.1024/1662-9647/a000272>

ESM 1. Study scale

ESM 2. Additional result details (means, standard deviations, and tests)

References

- Ackerman, L. S., & Chopik, W. J. (2021). Cross-cultural comparisons in implicit and explicit age bias. *Personality and Social Psychology Bulletin*, 47(6), 953–968. <https://doi.org/10.1177/0146167220950070>
- AgeInternational. (2015). *Global rankings table*. <http://www.helpage.org/global-AgeWatch/population-ageing-data/global-rankings-table/>
- Ayalon, L., & Rothermund, K. (2018). Examining the utility of national indicators of relative age disadvantage in Europe. *European Journal of Ageing*, 15, 189–197.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Bigler, R. S., & Liben, L. S. (2007). Developmental intergroup theory: Explaining and reducing children's social stereotyping and prejudice. *Current Directions in Psychological Science*, 16(3), 162–166. <https://doi.org/10.1111/j.1467-8721.2007.00496.x>
- Boduroglu, A., Yoon, C., Luo, T., & Park, D. C. (2006). Age-related stereotypes: A comparison of American and Chinese cultures. *Gerontology*, 52(5), 324–333. <https://doi.org/10.1159/000094614>
- Bowen, C. E., Spuling, S. M., Kornadt, A. E., & Wiest, M. (2020). Young people feel wise and older people feel energetic: Comparing age stereotypes and self-evaluations across adulthood. *European Journal of Ageing*, 17, 435–444. <https://doi.org/10.1007/s10433-019-00548-4>
- Branscombe, N. R., & Wann, D. L. (1994). Collective self-esteem consequences of outgroup derogation when a valued social identity is on trial. *European Journal of Social Psychology*, 24, 641–657. <https://doi.org/10.1002/ejsp.2420240603>
- Casper, C., Rothermund, K., & Wentura, D. (2011). The activation of specific facets of age stereotypes depends on individuating information. *Social Cognition*, 29(4), 393–414. <https://doi.org/10.1521/soco.2011.29.4.393>
- Chasteen, A. L. (2005). Seeing eye-to-eye: Do intergroup biases operate similarly for younger and older adults? *International Journal of Aging and Human Development*, 61(2), 123–139. <https://doi.org/10.2190/07Q7-BWYT-NC9E-51FX>
- Chopik, W. J., & Giasson, H. L. (2017). Age differences in explicit and implicit age attitudes across the lifespan. *The Gerontologist*, 57(Suppl. 2), S169–S177. <https://doi.org/10.1093/geront/gnx058>
- De Paula Couto, M. C. P., & Rothermund, K. (2019). Ageism and age discrimination at the workplace: A psychological perspective. In M. E. Domsch, D. H. Ladwig, & F. C. Weber (Eds.), *Vorurteile im Arbeitsleben – Unconscious Bias erkennen, vermeiden und abbauen* (pp. 57–80). Springer Gabler.
- Deutsche Stiftung Weltbevölkerung (DSW). (2018). *Soziale und demografische Daten weltweit – DSW-Datenreport 2018* [Social and demographic data worldwide - DSW data report 2018]. https://www.globaleslernen.de/sites/default/files/files/link-elements/dsw-datenreport-2018_final.pdf
- Eurostat. (2019). *Regions in Europe: Statistics visualised*. <https://ec.europa.eu/eurostat/cache/digpub/regions/>
- Heckhausen, J., Dixon, R. A., & Baltes, P. B. (1989). Gains and losses in development throughout adulthood as perceived by different age groups. *Developmental Psychology*, 25, 109–121. <https://doi.org/10.1037/0012-1649.25.1.109>
- Huang, T., & Rothermund, K. (2021). *Implicit and explicit age stereotypes assessed in the same contexts are still independent*. Department of Psychology, Friedrich-Schiller University Jena. Manuscript submitted for publication.

- Hummert, M. L., Garstka, T. A., O'Brien, L. T., Greenwald, A. G., & Mellott, D. S. (2002). Using the implicit association test to measure age differences in implicit social cognitions. *Psychology and Aging, 17*(3), 482–495. <https://doi.org/10.1037/08827974.17.3.482>
- Hummert, M. L., Garstka, T. A., Shaner, J. L., & Strahm, S. (1994). Stereotypes of the elderly held by young, middle-aged, and elderly adults. *Journal of Gerontology, 49*(5), 240–249. <https://doi.org/10.1093/geronj/49.5.P240>
- Kite, M. E., Stockdale, G. D., Whitley, B. E., & Johnson, B. T. (2005). Attitudes toward younger and older adults: An updated meta-analytic review. *Journal of Social Issues, 61*(2), 241–266. <https://doi.org/10.1111/j.1540-4560.2005.00404.x>
- Kite, M. E., & Wagner, L. S. (2002). Attitudes toward older adults. In T. D. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 129–161). MIT Press.
- Kornadt, A. E., Hess, T. M., & Rothermund, K. (2020). Domain-specific views on aging and preparation for age-related changes: Development and validation of three brief scales. *Journals of Gerontology: Psychological Sciences, 66*(2), 303–307. <https://doi.org/10.1093/geronb/gby055>
- Kornadt, A. E., Meissner, F., & Rothermund, K. (2016). Implicit and explicit age stereotypes for specific life-domains across the lifespan: Distinct patterns and age group differences. *Experimental Aging Research, 42*(2), 195–211. <https://doi.org/10.1080/0361073X.2016.1132899>
- Kornadt, A. E., & Rothermund, K. (2011). Contexts of aging: Assessing evaluative age stereotypes in different life domains. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 66*(5), 547–556. <https://doi.org/10.1093/geronb/gbr036>
- Kornadt, A. E., & Rothermund, K. (2012). Internalization of age stereotypes into the self-concept via future self-views: A general model and domain-specific differences. *Psychology and Aging, 27*, 164–172. <https://doi.org/10.1037/a0025110>
- Kornadt, A. E., Voss, P., & Rothermund, K. (2017). Age stereotypes and self-views revisited: Patterns of internalization and projection processes across the lifespan. *Journals of Gerontology: Psychological Sciences, 72*, 582–592. <https://doi.org/10.1093/geronb/gbv099>
- Krueger, J. I. (2000). The projective perception of the social world: A building block of social comparison processes. In J. Suls & L. Wheeler (Eds.), *Handbook of social comparison: Theory and research* (pp. 323–351). Plenum.
- Kunkel, A., Hummert, M., & Dennis, M. (2006). Social learning theory: Modeling and communication in the family context. In D. O. Braithwaite & L. A. Baxter (Eds.), *Engaging theories in family communication: Multiple perspectives* (pp. 260–275). Sage. <https://doi.org/10.4135/9781452204420.n17>
- Lineweaver, T. T., Roy, A., & Horth, M. (2017). Children's stereotypes of older adults: Evaluating contributions of cognitive development and social learning. *Educational Gerontology, 43* (6), 300–312. <https://doi.org/10.1080/03601277.2017.1296296>
- Löckenhoff, C. E., De Fruyt, F., Terracciano, A., McCrae, R. R., De Bolle, M., Costa, P. T. Jr., Aguilar-Vefaie, M. E., Ahn, C., Ahn, H., Alcalay, L., Allik, J., Avdeyeva, T. V., Barbaranelli, C., Benet-Martinez, V., Blatný, M., Bratko, D., Brunner-Sciarrà, M., Cain, T. R., Crawford, J. T., ... Yik, M. (2009). Perceptions of aging across 26 cultures and their culture level associates. *Psychology and Aging, 24*(4), 941–954. <https://doi.org/10.1037/a0016901>
- Montepare, J. M., & Zebrowitz, L. A. (2002). A social-developmental view of ageism. In T. D. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 77–125). MIT Press.
- North, M. S., & Fiske, S. T. (2012). An inconvenienced youth? Ageism and its potential intergenerational roots. *Psychological Bulletin, 138*, 982–997. <https://doi.org/10.1037/a0027843>
- North, M. S., & Fiske, S. T. (2015). Modern attitudes toward older adults in the aging world: A cross-cultural meta-analysis. *Psychological Bulletin, 141*, 993–1021. <https://doi.org/10.1037/a0039469>
- North, M. S., & Fiske, S. T. (2016). Resource scarcity and prescriptive attitudes generate subtle, intergenerational older-worker exclusion. *The Journal of Social Issues, 72*(1), 122–145. <https://doi.org/10.1111/josi.12159>
- Nosek, B. A., Banaji, M. R., & Greenwald, A. G. (2002). Harvesting implicit group attitudes and beliefs from a demonstration web site. *Group Dynamics: Theory, Research, and Practice, 6*(1), 101–115. <https://doi.org/10.1037/1089-2699.6.1.101>
- Rothbaum, F. (1983). Aging and age stereotypes. *Social Cognition, 2*(2), 171–184. <https://doi.org/10.1521/soco.1983.2.2.171>
- Rothermund, K., & Brandtstädter, J. (2003). Age stereotypes and self-views in later life: Evaluating rival assumptions. *International Journal of Behavioral Development, 27*(6), 549–554. <https://doi.org/10.1080/01650250344000208>
- Rudman, L. (2004). Sources of implicit attitudes. *Current Directions in Psychological Science, 13*, 79–82. <https://doi.org/10.1111/j.0963-7214.2004.00279.x>
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Nelson-Hall.
- Taylor, S. E., Peplau, L. A., & Sears, D. O. (2000). *Social psychology* (10th ed.). Prentice-Hall.
- United Nations Population Fund. (2017). *Caring for our elders: Early responses – India Ageing Report 2017*. <https://india.unfpa.org/sites/default/files/pub-pdf/India%20Ageing%20Report%20-%202017%20%28Final%20Version%29.pdf>
- Vauclair, C. M., Borges Rodrigues, R., Marques, S., Esteves, C. S., Cunha, F., & Gerardo, F. (2018). Doddering but dear ... even in the eyes of young children? Age stereotyping and prejudice in childhood and adolescence. *International Journal of Psychology, 53*(S1), 63–70. <https://doi.org/10.1002/ijop.12430>
- Voss, P., Kornadt, A. E., Hess, T. M., Fung, H. H., & Rothermund, K. (2018). A world of difference? Domain-specific views on aging in China, the US, and Germany. *Psychology and Aging, 33*(4), 595–606. <https://doi.org/10.1037/pag0000237>
- Wentura, D., & Brandtstädter, J. (2003). Age stereotypes in younger and older women: Analyses of accommodative shifts with a sentence-priming task. *Experimental Psychology, 50*, 16–26. <https://doi.org/10.1026/1618-3169.50.1.16>
- Westerhof, G. J., Whitbourne, S. K., & Freeman, G. P. (2012). The aging self in a cultural context: The relation of conceptions of aging to identity processes and self-esteem in the United States and the Netherlands. *The Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 67*(1), 52–60. <https://doi.org/10.1093/geronb/gbr075>

History

Received March 25, 2021

Accepted July 9, 2021

Published online August 19, 2021

Conflict of Interest

The authors declare no conflict of interest.

Editorial Note

Acting editor was Frieder Lang.


Funding

Open access publication enabled by Friedrich Schiller University Jena.

This work was supported by a grant of the Volkswagen Stiftung (Az. 93 272) to K. Rothermund.

ORCID

Clara De Paula Couto

 <https://orcid.org/0000-0003-2595-9579>**Dr. Clara De Paula Couto**

Institute of Psychology

Friedrich Schiller University Jena

Am Steiger 3/Haus 1

07743 Jena

Germany

clara.depaulacouto@uni-jena.de