

Ageism toward older adults during the COVID-19 pandemic: Intergenerational conflict and support

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Abstract

A cross-national representative survey in Canada and the U.S. examined ageism toward older individuals during the first year of the COVID-19 pandemic, including ageist consumption stereotypes and perceptions of older people's competence and warmth. We also investigated predictors of ageism, including economic and health threat, social dominance orientation, individualism and collectivism, social distancing beliefs, and demographics. In both countries, younger adults were more likely to hold ageist consumption stereotypes, demonstrating intergenerational conflict about the resources being used by older people. Similarly, young adults provided older people with the lowest competence and warmth scores, though adults of all ages rated older individuals as more warm than competent. Particularly among younger individuals, beliefs about group-based dominance hierarchies, the importance of competition, and the costs of social distancing predicted greater endorsement, whereas beliefs about interdependence and the importance of sacrificing for the collective good predicted lower endorsement of ageist consumption stereotypes. Support for group-based inequality predicted lower perceived competence and warmth of older individuals, whereas beliefs about interdependence and the

importance of sacrificing for the collective good predicted higher perceived competence and warmth of older individuals. Implications for policies and practices to reduce intergenerational conflict and ageist perceptions of older individuals are discussed.

INTRODUCTION

As COVID-19 surged across North America in 2020, and economic and social consequences were experienced as a result of efforts to curb its spread, some argued that these efforts were excessive given the virus' disproportionate impact on older individuals (Kaushal, 2021). These reactions were at times accompanied by perceptions that older individuals were not worth the effort and that their protection was a burden on society (Lichtenstein, 2021; Malik et al., 2020), with some even advocating that older people should sacrifice their lives so that younger people could get on with theirs (Barrett et al., 2021). Indeed, there have been suggestions that discrimination toward older individuals increased during the pandemic (Malik et al., 2020). Yet there were also signs of increased concern and special treatment for older members of society (e.g., dedicated shopping hours, organized delivery of food and supplies; Monahan et al., 2020; Ng et al., 2022), though these actions may have inadvertently reinforced stereotypes of older people's incompetence (Monahan et al., 2020). In addition, reactions to COVID-19-related derogation of older individuals included reassertions of their worth and discussions of core beliefs about fairness (Barrett et al., 2021).

The purpose of this study was to investigate ageist perceptions of older individuals during the first year of the COVID-19 pandemic in North America and to determine what factors predicted these perceptions. To this end, we took advantage of a nationally representative survey being conducted in Canada and the United States to include measures of ageism and intergenerational tension and their possible predictors at that time. Understanding who is more likely to hold ageist perceptions of older individuals and what may underlie these perceptions, as well as what may promote more supportive perceptions, is essential for developing strategies to counteract ageism, particularly as nations attempt to rebuild following the pandemic.

Ageism

Ageism refers to stereotypes, prejudice and discrimination based on age (Butler, 1969, 1995; North & Fiske, 2013a). While ageism can affect people of all ages (WHO, 2021), the focus of the present research is on ageism against older adults. One way to measure ageism against older individuals is to assess prescriptive stereotypes about them (North & Fiske, 2012, 2013a). These prescriptive stereotypes are beliefs about how older individuals should behave, stemming from the motivation to control older individuals' use of scarce resources (North & Fiske, 2012, 2013a, 2013b, 2016). Considering younger, middle-aged, and older individuals, the assumption is that of the three groups, middle-aged individuals have the highest status and are seen as most entitled to societal resources. As a result, North and Fiske (2013b) argue that younger individuals are particularly likely to endorse prescriptive stereotypes about older people because younger people are most likely to lack resources themselves and have the most to gain from older individuals giving up or avoiding

use of resources. North and Fiske (2012, 2013a) propose three domains in which younger individuals might endorse prescriptive stereotypes about older individuals: succession, consumption and identity. Succession-based prescriptions are beliefs that older individuals should step aside from enviable resources and societal positions, such as retiring to open up employment opportunities for the young. In other words, they should not actively withhold desirable resources and positions. Consumption-based prescriptive stereotypes about older individuals focus on the idea that their passive consumption of shared resources should be minimized. For example, older individuals should not use more than their fair share of societal health care or social security resources. Identity-based prescriptions are beliefs that older individuals should not infringe on symbolic resources by engaging in activities and roles that are usually reserved for the young (e.g., attempt to act “cool” or go to places for younger people).

Support for such prescriptive stereotypes among younger individuals can be viewed as a form of intergenerational tension, a conflict between people of different generations (Ayalon, 2020). As expected, past research in the United States has shown that younger individuals are more likely to endorse such prescriptive stereotypes (North & Fiske, 2013a, 2013b, 2016). It is possible that the pandemic exacerbated these views, particularly among younger individuals (Malik et al., 2020). For example, some argued that the pandemic was an older people’s problem that was best managed by socially isolating them, rather than the entire population, because older people “already have lived their lives and now it is time for them to step down” (Ayalon, 2020, pp. 1221–1222).

The Stereotype Content Model (SCM; Cuddy et al., 2008; Fiske et al., 2002) offers another way to assess ageism against older individuals by focusing on descriptive stereotypes. In contrast to prescriptive stereotypes, descriptive stereotypes focus on what older individuals allegedly are (as opposed to how they should be). According to the SCM, perceptions of individuals and groups vary along two fundamental dimensions - warmth and competence. Individuals and groups perceived as high in warmth are seen as cooperative whereas those perceived as low in warmth are seen as competitive. Individuals and groups perceived as high in competence are seen as able to enact their intentions whereas those perceived as low in competence cannot. The SCM posits that different emotional reactions, forms of prejudice and behavioral action tendencies result from the four different combinations of low versus high perceived warmth and competence. In the case of older individuals, past research across cultures has shown that they tend to be perceived as high in warmth but low in competence (e.g., Cuddy et al., 2005, 2008, 2009; Kite et al., 2005). This set of perceptions tends to elicit pity and compassion, which in turn can be expressed as benevolent or paternalistic ageism through overaccommodating behaviors aimed at helping or protecting older individuals. For example, older individuals may be treated as lacking independence and spoken to in oversimplified or patronizing ways (Giles & Ogay, 2007; Nelson, 2005; Ryan et al., 1995). In the context of the pandemic, this may also have included well-intentioned helping behaviors that signaled to older people that they are dependent and helpless (Derrer-Merk et al., 2022; McDarby et al., 2022; Monahan et al., 2020; Ng et al., 2022). Research has shown that these type of behaviors (i.e., benevolent ageism) negatively affect the health, well-being and autonomy of older adults (Baltes & Wahl, 1996; Cary et al., 2017; Derrer-Merk et al., 2022; Langer & Rodin, 1976).

Economic and health threat

Little is known to date about the factors that might have driven ageist stereotypes and prejudice during the first year of the COVID-19 pandemic. According to past research, several factors could have led to increased ageism against older individuals during that time, including

perceived economic and health threats. Extensive research on intergroup relations has shown that when resources (e.g., economic resources, medical supplies and hospital beds) are perceived to be limited, perceptions of competition and threat are more likely to occur, which in turn can lead to more negative attitudes toward outgroup members (Esses, 2021; Esses et al., 2010; Stephan & Stephan, 2017). This is relevant to the current context given that the economic fallout from the pandemic affected the financial situation of many Americans and Canadians (Davis, 2020; Duffin, 2020; Hagan 2020; Statistics Canada 2020), increasing perceptions of economic threat at both the individual and national level. Lower availability of economic resources has been shown to be a significant determinant of ageism toward older people (Marques et al., 2020). In addition, at the beginning of the pandemic, COVID-19 was framed as mostly an older people's problem, and health care resources and medical supplies were described as in short supply (Cha & McGinley, 2020; Yang, 2020), increasing the salience of age group membership and use of health-related resources (Lichtenstein, 2021; Swift & Chasteen, 2021).

Furthermore, two additional theories explain why perceived health threat during COVID-19 may have led to increased ageism against older individuals. From an evolutionary perspective, when faced with the decision of who should get limited medical help, individuals may give preference to younger and healthier individuals because they are more likely to reproduce than older and sicker individuals (Burnstein et al., 1994; Duncan & Schaller, 2009). Similarly, from a terror management perspective (Greenberg et al., 1986), the perceived health threat of COVID-19 may have increased individuals' awareness of their own mortality and, thus, led to a desire to distance themselves from older people (Martens et al., 2005; McDarby et al., 2022).

Social dominance orientation and individualism/collectivism

Besides threat perceptions, past research suggests that specific beliefs and values may increase or decrease ageism toward older individuals. One of these beliefs is Social Dominance Orientation (SDO) which refers to the "extent to which one desires that one's in-group dominate and be superior to outgroups" (Pratto et al., 1994, p. 742). There is evidence from American samples showing that individuals higher in social dominance orientation are more likely to hold ageist beliefs (Henry et al., 2019; North & Fiske, 2013a). Furthermore, studies from several countries have shown that individuals who are higher in social dominance orientation are also more likely to perceive competition between groups for resources and benefits, and to react to these perceptions by denigrating potentially competitive outgroups (Esses et al., 2010; Pratto et al., 2006). Thus, social dominance orientation may have been an especially strong predictor of ageism toward older individuals during the pandemic when competition for health and economic resources were particularly salient. Some recent research has suggested that social dominance orientation may not always be unidimensional as initially conceptualized but that it consists of two complementary dimensions: SDO-Dominance, support for group-based dominance hierarchies, and SDO-Egalitarianism (reverse scored), support for group-based inequality (Ho et al., 2012). Little is known about whether these two dimensions are differentially predictive of ageism toward older individuals.

Past research has also found that values centered around individualism and collectivism are associated with ageism toward older people, though some contradictory findings have been evident. For example, in a meta-analysis of research from 23 countries, North & Fiske (2015) found that cultural individualism of countries predicted relative positivity toward older adults. In contrast, Ng et al. (2021) found that countries with higher individualism scores were more likely to

have negative aging narratives in their online news outlets during the initial months of the pandemic. It has also been suggested that cultures emphasizing collectivist values may be less likely to hold ageist beliefs (Wilińska et al., 2017). Of note, a recent study in the United States found that individuals high in collectivism were more likely to support COVID-19 public policies requiring personal sacrifices (Bok et al., 2021).

In terms of the current research, it is important to note that while Canada and the United States are countries with overall high scores on individualism (Hofstede et al., 2010) there may be considerable individual differences in the extent to which their citizens endorse these values (Vandello & Cohen, 1999; Vargas & Kemmelmeier, 2013). Furthermore, in the context of the pandemic, public health messages in the United States and Canada often included an emphasis on the collective, indicating that by following public health guidelines (e.g., physical distancing, mask wearing) one would not only protect oneself but also others (Berger et al., 2020; Dawson, 2020). While these guidelines were well received by some, they were met with resistance by people who wanted to reassert their individual rights (Brennan & Kovac, 2020; Pawson, 2020; Prasad, 2020). Therefore, it is possible that individual differences in individualism and collectivism may have been associated with ageism toward older people in the context of the pandemic.

Additionally, different types of individualism and collectivism may be endorsed (Triandis, 1995). According to Triandis and Gelfand (1998), a key attribute that helps to distinguish between the different types of individualism and collectivism is the relative emphasis on horizontal and vertical social relationships. If the emphasis is on horizontal social relationships, equality is valued, and if the emphasis is on vertical social relationships, hierarchy and social order are valued (Singelis et al., 1995; Triandis & Gelfand, 1998). This view of individualism/collectivism produces four types of value orientations: horizontal individualism, vertical individualism, horizontal collectivism and vertical collectivism. People who endorse horizontal individualist values emphasize uniqueness and self-reliance. They want to do their own thing without the interference of others. In contrast, people who endorse vertical individualist values emphasize uniqueness and self-reliance while also striving to do better than others and to advance in the social hierarchy.

In terms of the two types of collectivism, people who endorse horizontal collectivist values emphasize common goals with others, interdependence, and sociability (Singelis et al., 1995; Triandis & Gelfand, 1998). Importantly, they perceive that group members have equal status and strongly value cooperation with other group members. People who endorse vertical collectivist values also emphasize common goals with others, interdependence, and sociability. However, members of the group are seen as hierarchically positioned with unequal status. People who endorse vertical collectivist values believe that it is important to sacrifice personal desires to serve the superordinate goals of their group.

The current research

The current research had two main goals. First, we aimed to investigate Canadians and Americans' beliefs about and perceptions of older individuals during the first year of the COVID-19 pandemic. To this end, we first investigated Canadians and Americans' endorsement of prescriptive consumption stereotypes about older individuals. Among prescriptive stereotypes, we chose to focus on consumption stereotypes given that early on in the pandemic, as cases were rising in Canada and the United States, there were concerns about overstretched healthcare systems and limited supplies of medical equipment (e.g., ventilators, Cha & McGinley, 2020; de Puy Kamp et al., 2020; Zafar, 2020). Furthermore, as COVID-19 cases peaked, discussions of medical rationing

became more frequent (de Puy Kamp et al., 2020; Yang, 2020), and at the same time COVID-19 proved to be most deadly among older individuals (Achenbach & Cha, 2020). In line with North and Fiske's (2012, 2013a) description of prescriptive consumption stereotypes, this could be argued to be an example of a situation where older individuals would be perceived as using more than their fair share of scarce healthcare resources. Based on past research (North & Fiske, 2013a, 2013b, 2016), we therefore hypothesized that:

Hypothesis 1: Young Canadians and Americans would be more likely to hold ageist prescriptive consumption stereotypes than older Canadians and Americans.

We also investigated Canadians and Americans' perceptions of the warmth and competence of older individuals during the first year of the COVID-19 pandemic. Based on past research showing that older individuals tend to be perceived as high in warmth but low in competence (e.g., Cuddy et al., 2005, 2008, 2009, Kite et al., 2005), we hypothesized that:

Hypothesis 2a: Canadians and Americans (across all ages) would perceive older individuals as lower in competence than in warmth.

At the same time, North and Fiske (2013c) indicate that if older individuals are seen as the pitifully "doddering but dear" (Cuddy & Fiske, 2002), low in competence and high in warmth, then they are expected to make minimal use of the shared resource pool due to their low status and non-competitive societal position. If older people are perceived as using more than their fair share of societal resources; however, young individuals are more likely to perceive them as competitive and exploitative. In fact, past research in the United States has shown that younger individuals are more likely to rate older individuals as low in both competence and warmth if they are perceived to be violating prescriptive consumption stereotypes (North & Fiske, 2013b). For this reason, during the pandemic we also hypothesized that:

Hypothesis 2b: Young Canadians and Americans would be especially likely to perceive older individuals as lower in competence and also lower in warmth.

The second goal of the study was to identify the predictors of ageism during the COVID-19 pandemic for Canadians and Americans of different ages. To do so, we included several potential predictors that were related to the context of the pandemic and selected based on past findings. Many of these predictors – including health and economic threat perceptions at the individual and national level, social dominance orientation, and vertical individualism – may be seen as relevant to perceptions of threat and competition. Thus, based on past research, we hypothesized that during the pandemic:

Hypothesis 3: Economic threat at the individual and national level would be positively associated with the endorsement of ageist stereotypes.

Hypothesis 4: Health threat at the individual and national level would be positively associated with the endorsement of ageist stereotypes.

Hypothesis 5: SDO would be positively associated with the endorsement of ageist stereotypes. Separate predictions for the two dimensions of SDO - support for group-based dominance hierarchies and support for group-based inequality were not made.

Hypothesis 6: Vertical individualism would be positively associated with the endorsement of ageist stereotypes, whereas horizontal individualism would not show this association.

Collectivism, on the other hand, involves interdependence and willingness to make personal sacrifices for other ingroup members. Thus, we hypothesized that during the pandemic:

Hypothesis 7: Horizontal and vertical collectivism would be negatively associated with the endorsement of ageist stereotypes.

Because public health guidelines at the time of the survey were very much focused on social distancing, with also some strong resistance to these measures (Garrison, 2020; Jackson & Connolly, 2020; Pereira, 2020), the current study also examined the extent to which beliefs about balancing the costs versus the need for social distancing predicted ageist perceptions. We hypothesized that:

Hypothesis 8: Beliefs that social distancing entails more costs than benefits would be positively associated with the endorsement of ageist stereotypes.

Finally, we also included two demographic variables – political leaning and gender – in our analyses. There is limited past research on the relationship between political leaning and ageism. From a theoretical perspective, the endorsement of a conservative political ideology may be linked to greater prejudice as explained by right-wing authoritarianism and social dominance orientation (Duckitt & Sibley, 2010). Several studies have shown that overall measures of conservatism are positively correlated with social dominance orientation and right-wing authoritarianism (e.g., Feather, 1984; Whitley & Lee, 2000). In terms of the connection to ageism, a recent study conducted in the United States found that right-wing authoritarianism and social dominance orientation were positively associated with ageist beliefs (Henry et al., 2019). Based on these findings, we hypothesized that:

Hypothesis 9: The endorsement of a conservative political ideology would be positively associated with the endorsement of ageist stereotypes.

In terms of gender, a recent systematic review of the determinants of ageism did not find consistent relations between gender and ageism (Marques et al., 2020), and thus we did not have a specific hypothesis for gender.

We tested these hypotheses separately for young, middle-aged, and older adults to examine potential age differences in these predictions. Given that the context of the COVID-19 pandemic likely exacerbated intergenerational tensions (Ayalon, 2020), we expected that our hypotheses might be especially likely to be supported among younger individuals than among older individuals.

METHOD

The data for this research came from a survey of attitudes and opinions about the pandemic conducted in Canada ($N = 2110$) and the United States ($N = 2124$) in August 2020 (Stephenson

TABLE 1 Gender and age breakdown of the Canadian and American samples

	Canada	United States
Gender		
Men	48.9%	44.3%
Women	50.9%	54.8%
Unspecified	.3%	.9%
Age		
18 to 24 years	11.9%	9.7%
25 to 34 years	16.7%	16.9%
35 to 44 years	16.6%	18.4%
45 to 54 years	18.0%	19.6%
55 to 64 years	16.7%	16.6%
65 years or older	20.0%	18.7%

et al., 2020). The nationally representative survey relied on a probability sample of adult residents of Canada and the United States selected on the basis of age, gender, and region. For ethical reasons and efficient use of participants' time, the survey included items contributed by 17 researchers at [Western University] University with interest in the impact of the pandemic on various facets of life.¹ The questionnaires were available in each country's official languages (i.e., English/French in Canada; English in the U.S.), and participants were compensated by their panel according to their prior agreement. Table 1 displays the gender and age breakdown of the Canadian and American samples.

Ageism

Consumption stereotypes

To measure ageism toward older people, respondents were asked to what extent they agreed with two items from the North and Fiske (2013a) consumption scale, which was specifically developed to assess intergenerational tensions in terms of prescriptive stereotypes about what older people deserve and should be receiving. The items were: "Doctors spend too much time treating sickly older people" and "Older people are often too much of a burden on families" (strongly disagree – strongly agree; 7-point scales). The items were averaged for the analyses ($r = .57$ for Canadians and $.67$ for Americans, $p < .01$).

¹ Survey questions were organized into three modules: a group attitudes module, a COVID-19 module, and a health symptoms module. All variables for the current study were included in the group attitudes module and the COVID-19 module. The items assessing individualism and collectivism, perceived competence and warmth, consumption stereotypes, and social dominance orientation were included in the group attitudes module, with these items embedded among other survey questions. The items assessing economic and health threat as well as beliefs about social distancing were included in the COVID-19 module, with these items embedded among other survey questions. Participants were randomly assigned to one of two orders of modules, with the group attitudes module either before or after the COVID-19 module. In our analyses, we controlled for the order of the modules. For all participants, demographic variables such as age, gender and political leaning were assessed at the beginning of the survey.

Perceived competence and warmth

Ageism toward older people was also assessed through perceptions of their competence and warmth, with two items for each dimension (not at all – extremely; 5-point scales): competence: competent and capable ($r = .68$ for Canadians and $.66$ for Americans, $p < .01$), warmth: good-natured and warm ($r = .74$ for Canadians and $.71$ for Americans, $p < .01$). The two items were averaged for each dimension (Fiske et al. 2002).

Predictor variables

Table 2 presents an overview of the predictor variables included in the present research. For each predictor, we indicate the items and scale information.

In addition, age was assessed as a categorical variable and for purposes of the analyses was recategorized into three groups (young: 18–34, middle-aged: 35–54, and older: 55+). This decision was based on publicly available data on the relative risk of hospitalizations due to COVID-19 (CDC, 2021; Government of Canada, 2021). According to the Centers for Disease Control and Prevention (2021), while individuals aged 40–49 years are two times more likely to be hospitalized due to COVID-19 than individuals aged 18–29 years, the risk of hospitalization for older individuals is much higher (i.e., individuals aged 50–64 years are four times more likely and individuals aged 65–74 years are five times more likely to be hospitalized than 18–29-year-olds).

RESULTS

We first tested for mean differences in consumption stereotypes and perceived competence and warmth of older people as a function of the country in which respondents lived and their age (see Table 3 for descriptive statistics). Next, we examined the extent to which each of the predictor variables predicted consumption stereotypes and perceptions of older people's competence and warmth using regression analyses separately for the three age categories in each country. We conducted regressions for each country separately because COVID-19 prevalence differed substantially between the two countries (Coletta, 2020), and because Canada and the United States have very different healthcare and social service systems which might influence perceptions of competition and processes of ageism.

Given our large sample sizes, we reduced the p -value threshold to 1% for the interpretation of our results (Greene, 2003). Post hoc power analyses using an alpha of .01 revealed that the sample size allowed for analyses with good power ($> .80$, Cohen, 1988) to detect small effects. In the sections that follow, all significant effects are reported.

Mean differences in ageism as a function of respondent age and country

Consumption stereotypes

In order to test Hypothesis 1, we conducted a 2 (country: Canada vs. USA) x 3 (age: 18–34, 35–54, and 55+) ANOVA. The results showed that, on average, Americans and Canadians did not differ

TABLE 2 Overview of predictors included in the regression analyses

Predictor	Items	Scale information
Economic threat from COVID-19 at the individual level	How worried are you about the effects of the COVID-19 pandemic on your personal financial situation?	1 = not at all worried to 4 = very worried
Economic threat from COVID-19 at the national level	How worried are you about the effects of the COVID-19 pandemic on the Canadian/American economy?	1 = not at all worried to 4 = very worried
Health threat from COVID-19 at the individual level	Thinking about the risk to you or your family of contracting COVID-19, would you say you are...?	1 = not at all worried to 4 = very worried
Health threat from COVID-19 at the national level	How much of a threat, if any, is the COVID-19 pandemic for the health of the Canadian/American population as a whole?	1 = not at all a threat to 7 = a major threat
SDO - Support for group-based dominance hierarchies	Some groups of people are simply inferior to other groups. (Ho et al., 2012)	1 = strongly disagree to 7 = strongly agree
SDO - Support for group-based inequality	We should do what we can to equalize conditions for different groups. (reverse scored; Ho et al., 2012)	1 = strongly disagree to 7 = strongly agree
Horizontal individualism	I rely on myself most of the time; I rarely rely on others. (Triandis & Gelfand, 1998)	1=strongly disagree to 7=strongly agree
Vertical individualism	Winning is everything. (Triandis & Gelfand, 1998)	1 = strongly disagree to 7 = strongly agree
Horizontal collectivism	The well-being of my co-workers is important to me. (Triandis & Gelfand, 1998)	1 = strongly disagree to 7 = strongly agree
Vertical collectivism	It is my duty to take care of my family, even when I have to sacrifice what I want. (Triandis & Gelfand, 1998)	1 = strongly disagree to 7 = strongly agree
Beliefs about social distancing	Every country in the world is currently confronted with the COVID-19 pandemic. This pandemic imposes important societal choices, including how to balance the spread of the virus and economic activity. Some people believe that lives must be protected at all costs and that governments should enforce social distancing as long as we don't have a vaccine or a cure for COVID-19. Suppose we put these people at "1" on a 7-point scale. Others believe that life must go on and that social distancing carries with it too many problems like loss of jobs. Suppose we put them at the other end of the scale at "7". Where would you place yourself on this scale or haven't you thought much about this?"	1 = Social distancing must be enforced to 7 = Social distancing carries too many problems

(Continues)

TABLE 2 (Continued)

Predictor	Items	Scale information
Political leaning	Canada: In politics, people sometimes talk of left and right. Where would you place yourself on this scale? USA: We hear a lot of talk these days about liberals and conservatives. Here is a seven-point scale on which the political views that people might hold are arranged from extremely liberal to extremely conservative. Where would you place yourself on this scale, or haven't you thought much about this?	Canada: 0 = left to 10 = right USA: 1 = extremely liberal to 7 = extremely conservative
Gender	Are you...	Categories included: a man, a woman, or other

Note: The correlations between the two SDO items were weak and, thus, they were not combined.

TABLE 3 Means and standard deviations for consumption stereotypes, competence and warmth by country and age

	Consumption stereotypes about older people		Competence of older people		Warmth of older people	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Canadians	2.43	1.44	3.63	.83	3.93	.77
Young Canadians	2.71	1.54	3.36	.90	3.80	.85
Middle-aged Canadians	2.54	1.50	3.62	.81	3.91	.79
Older Canadians	2.11	1.24	3.85	.71	4.05	.67
Americans	2.48	1.70	3.83	.87	4.04	.82
Young Americans	2.93	1.82	3.71	.96	3.99	.87
Middle-aged Americans	2.67	1.85	3.86	.88	4.06	.84
Older Americans	1.96	1.26	3.89	.78	4.07	.75

Note. Consumption stereotypes were assessed on a 1–7 scale, with higher values reflecting more endorsement of these beliefs. Competence and warmth were assessed on a 1–5 scale, with higher values reflecting more competence and more warmth.

in their endorsement of consumption stereotypes, $F(1, 3932) = 1.75, p = .186, \eta^2 = .00$. However, endorsement of consumption stereotypes differed as a function of respondents' age, $F(2, 3932) = 90.37, p < .001, \eta^2 = .04$, which was qualified by a significant interaction between country and age, $F(2, 3932) = 5.21, p = .005, \eta^2 = .01$. In the United States, endorsement of consumption stereotypes was highest among the young respondents, followed by the middle-aged respondents ($p < .01$). In Canada, endorsement of consumption stereotypes did not differ between the young and middle-aged respondents. In comparison to these two age groups, in both countries older respondents were significantly less likely to endorse these consumption stereotypes ($p < .001$). Overall, these results support Hypothesis 1 indicating that young Canadians and Americans are more likely to endorse prescriptive consumption stereotypes than older Canadians and Americans.

Perceived competence and warmth

To test Hypotheses 2a and 2b, we conducted a 2 (stereotype content: competence vs. warmth) \times 2 (country: Canada vs. USA) \times 3 (age: 18–34, 35–54, and 55+) ANOVA. The results revealed three significant main effects for stereotype content: $F(1, 3839) = 558.36, p < .001, \eta^2 = .13$, country: $F(1, 3839) = 45.57, p < .001, \eta^2 = .01$, and age: $F(2, 3839) = 35.01, p < .001, \eta^2 = .02$. However, these main effects were qualified by several significant interaction effects. There was a significant interaction between stereotype content and country, $F(1, 3839) = 15.36, p < .001, \eta^2 = .00$. Pairwise comparisons demonstrated, however, that in both countries, respondents were significantly more likely to perceive older individuals as warm than competent ($p < .001$), supporting Hypothesis 2a. Also, Canadians perceived older individuals as significantly less warm and less competent than did Americans ($p < .001$).

There was also a significant interaction between stereotype content and age, $F(2, 3839) = 19.46, p < .001, \eta^2 = .01$. In all three age groups, respondents were significantly more likely to perceive older individuals as warm than competent ($p < .001$). However, absolute ratings of warmth and competence differed significantly as a function of age. For perceived competence, the older respondents were, the more likely they were to rate older individuals as competent ($p < .001$). For perceived warmth, the young respondents had significantly lower warmth perceptions than the older respondents ($p < .001$). Overall, these findings provide support for Hypothesis 2b, with young Canadians and Americans especially likely to rate older individuals as lower in both competence and warmth.

The results also showed a significant country by age interaction, $F(2, 3839) = 9.00, p < .001, \eta^2 = .01$. In Canada, younger respondents perceived older people as significantly lower in competence/warmth than did middle-aged respondents ($p < .001$), who in turn perceived older people as significantly lower in competence/warmth than did older respondents ($p < .001$). In the United States, only the young respondents perceived older people as significantly lower in competence/warmth than did older respondents ($p < .01$). These findings again support Hypotheses 2b. Finally, young and middle-aged Americans perceived older people as significantly more competent/warm than did young and middle-aged Canadians ($p < .001$). Older Americans and older Canadians did not differ significantly in their perceptions of older individuals' competence/warmth.

Regressions for each age group in Canada and the United States

Correlations between all of the predictor and outcome variables by country are shown in Tables 4 and 5. Because the two items designed to assess social dominance orientation were only weakly correlated in both Canada and the United States, they were retained separately in all analyses, representing support for group-based dominance hierarchies and support for group-based inequality (Ho et al., 2012). In order to test Hypotheses 3 to 9, we conducted regression analyses which included all the predictors relevant to these hypotheses. Below we report the regression analyses for respondents' consumption stereotypes about older individuals and then the regression analyses for their perceptions of older individuals' competence and warmth.

TABLE 4 Correlations between predictor and outcome variables for Canada

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Consumption Stereotypes about Older People	-														
2 Competence of Older People	.28**	-													
3 Warmth of Older People	-.20**	.64**	-												
4 Economic threat from COVID-19 at the national level	.01	.02	.05	-											
5 Economic threat from COVID-19 at the individual level	.06**	-.03	-.02	.40**	-										
6 Health threat from COVID-19 at the national level	-.05	.13**	.07**	.16**	.16**	-									
7 Health threat from COVID-19 at the individual level	-.04	.05	.01	.24**	.37**	.48**	-								
8 SDO - Support for group-based dominance hierarchies	.34**	-.02	-.01	.07**	.09**	-.03	.03	-							
9 SDO - Support for group-based inequality	.10**	-.17**	-.17**	.08**	.03	-.26**	-.12**	.24**	-						
10 Horizontal individualism	.01	.03	.03	.05	.04	-.01	.00	.04	-.04	-					
11 Vertical individualism	.28**	-.03	-.01	.06**	.09**	.01	.01	.31**	-.11**	.15**	-				
12 Horizontal collectivism	-.17**	.20**	.17**	.09**	.01	.14**	.08**	-.19**	.21**	.18**	-.07**	-			
13 Vertical collectivism	-.12**	.17**	.18**	.11**	.05	.12**	.11**	-.05	.08**	.32**	.09**	.39**	-		
14 Beliefs about Social Distancing	.20**	-.06**	-.03	.03	.01	-.43**	-.31**	.19**	-.23**	.00	.12**	-.14**	-.10**	-	
15 Political Leaning	.13**	.07**	.08**	.15**	.04	-.10**	-.07**	.29**	-.29**	.06**	.25**	-.09**	.09**	.27**	-
16 Gender	-.15**	.10**	.02	.04	.06**	.12**	.12**	-.12**	.12**	.02	-.18**	.13**	-.01	-.07**	-.13**

Note. ** $p < .01$.

TABLE 5 Correlations between predictor and outcome variables for the United States

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Consumption Stereotypes about Older People	-														
2 Competence of Older People	.03	-													
3 Warmth of Older People	-.06*	.66**	-												
4 Economic threat from COVID-19 at the national level	-.03	.08**	.08**	-											
5 Economic threat from COVID-19 at the individual level	.08**	.08**	.06*	.48**	-										
6 Health threat from COVID-19 at the national level	.04	.19**	.13**	.34**	.30**	-									
7 Health threat from COVID-19 at the individual level	.09**	.12**	.10**	.38**	.44**	.54**	-								
8 SDO - Support for group-based dominance hierarchies	.49**	.05*	.05*	-.06**	.09**	-.03	.04	-							
9 SDO - Support for group-based inequality	-.01	-.21**	-.19**	-.15**	-.13**	-.44**	-.26**	.14**	-						
10 Horizontal individualism	.00	.12**	.11**	.06**	.01	.05*	-.04	.08**	.01	-					
11 Vertical individualism	.41**	.13**	.12**	-.03	.08**	.00	.04*	.42**	-.01	.14**	-				
12 Horizontal collectivism	-.12**	.20**	.21**	.12**	.02	.21**	.05*	-.13**	.24**	.17**	-.01	-			
13 Vertical collectivism	-.15**	.16**	.20**	.09**	-.01	.07**	-.01	-.09**	.06**	.34**	.03	.45**	-		
14 Beliefs about Social Distancing	.22**	-.05*	-.03	-.15**	-.12**	-.51**	-.39**	.25**	-.33**	.02	.18**	-.13**	-.02	-	
15 Political Leaning	.08**	.03	.07**	-.09**	-.06**	-.31**	-.22**	.28**	-.33**	.05*	.17**	-.05*	.08**	.42**	-
16 Gender	-.18**	-.01	-.03	.03	.06**	.08**	.02	-.11**	.06**	-.03	-.20**	.02	.00	-.07**	-.07**

Note. ** $p < .01$.

Consumption stereotypes

Young Canadians and Americans

For young Canadians and Americans, support for group-based dominance hierarchies ($\beta = .30$, $p < .001$ and $\beta = .32$, $p < .001$, respectively), vertical individualism ($\beta = .13$, $p = .009$ and $\beta = .21$, $p < .001$, respectively), and the belief that social distancing carries too many problems ($\beta = .17$, $p < .001$ and $\beta = .28$, $p < .001$, respectively) were associated with greater endorsement of consumption stereotypes about older people. In contrast, horizontal collectivism was associated with lower endorsement of these consumption stereotypes among young Canadians only ($\beta = -.14$, $p = .003$).

Middle-aged Canadians and Americans

Similar to young respondents, for middle-aged Canadians and Americans, support for group-based dominance hierarchies ($\beta = .24$, $p < .001$ and $\beta = .35$, $p < .001$, respectively), vertical individualism ($\beta = .17$, $p < .001$ and $\beta = .28$, $p < .001$, respectively), and the belief that social distancing carries too many problems ($\beta = .14$, $p = .005$ and $\beta = .15$, $p < .001$, respectively) were associated with greater endorsement of consumption stereotypes about older people. In contrast, vertical collectivism was associated with lower endorsement of these consumption stereotypes among middle-aged Canadians and Americans ($\beta = -.13$, $p = .005$ and $\beta = -.20$, $p < .001$, respectively). Support for group-based inequality was associated with lower endorsement of consumption stereotypes among middle-aged Americans only ($\beta = -.14$, $p < .001$).

Older Canadians and Americans

For older Canadians and Americans, vertical individualism was associated with greater endorsement of consumption stereotypes ($\beta = .25$, $p < .001$ and $\beta = .15$, $p = .002$, respectively). For older Americans only, support for group-based dominance hierarchies was also associated with greater endorsement of consumption stereotypes ($\beta = .25$, $p < .001$), whereas horizontal collectivism was associated with lower endorsement of consumption stereotypes ($\beta = -.13$, $p = .008$).

Summary for consumption stereotypes

In predicting ageist consumption stereotypes, the results did not support Hypotheses 3 and 4. Economic threat and health threat at the individual and national level did not predict consumption stereotypes about older people for any of the age groups of participants. The results for the two separate components of social dominance orientation provided some support for Hypothesis 5. In particular, among all age groups (with the exception of older Canadians), support for group-based dominance hierarchies positively predicted ageist consumption stereotypes. An anomaly, however, was that for middle-aged Americans, support for group-based inequality had the opposite effect. The results also provided support for Hypothesis 6. In particular, as expected, vertical individualism positively predicted ageist consumption stereotypes in all age groups, whereas

horizontal individualism did not emerge as a significant predictor. Hypothesis 7 was partially supported. As expected, vertical collectivism negatively predicted ageist consumption stereotypes among middle-aged Americans and Canadians, and horizontal collectivism negatively predicted ageist consumption stereotypes among young Canadians and older Americans. It was also the case that among young and middle-aged individuals, the belief that social distancing entails more costs than benefits positively predicted ageist consumption stereotypes, supporting Hypothesis 8. No support for Hypothesis 9 was evident as political leaning did not show any significant effects in these analyses. In terms of age effects, we had also expected that our hypotheses would be especially likely to be supported among younger individuals than among older individuals. The overall pattern of results generally supports this prediction for ageist consumption stereotypes.

Perceived competence

Young Canadians and Americans

For young Canadians and Americans, support for group-based inequality was associated with perceptions of lower competence of older people ($\beta = -.16, p = .005$ and $\beta = -.20, p < .001$, respectively). For young Canadians only, horizontal collectivism was associated with perceptions of higher competence of older people ($\beta = .14, p = .009$). For young Americans only, vertical individualism was associated with perceptions of higher competence of older people ($\beta = .16, p = .004$).

Middle-aged Canadians and Americans

Similar to young respondents, for middle-aged Canadians and Americans, support for group-based inequality was associated with perceptions of lower competence of older people ($\beta = -.26, p = .005$ and $\beta = -.22, p < .001$, respectively). For middle-aged Canadians only, vertical collectivism was associated with perceptions of higher competence of older people ($\beta = .16, p = .001$). For middle-aged Americans only, vertical individualism was associated with perceptions of higher competence of older people ($\beta = .12, p = .009$). The only gender effect that was observed was for middle-aged women in Canada who provided higher competence ratings for older people than their male counterparts ($\beta = .12, p = .006$).

Older Canadians and Americans

For older Canadians and Americans, horizontal collectivism was associated with perceptions of higher competence of older individuals ($\beta = .19, p < .001$ and $\beta = .18, p < .001$, respectively).

Perceived warmth

Young Canadians and Americans

For young Americans only, support for group-based inequality was associated with perceptions of lower warmth of older individuals ($\beta = -.20, p < .001$), whereas vertical collectivism was associated

with perceptions of higher warmth of older individuals ($\beta = .20, p < .001$). For young Canadians only, horizontal collectivism ($\beta = .19, p = .001$) and being on the right of the political spectrum ($\beta = .17, p = .004$) were associated with perceptions of higher warmth of older individuals.

Middle-aged Canadians and Americans

For middle-aged Canadians and Americans, support for group-based inequality was associated with perceptions of lower warmth of older individuals ($\beta = -.28, p < .001$ and $\beta = -.20, p < .001$). For middle-aged Americans only, vertical individualism was associated with perceptions of higher warmth of older individuals ($\beta = .14, p = .001$). In contrast, for middle-aged Canadians only, vertical collectivism was associated with perceptions of higher warmth of older people ($\beta = .15, p = .001$).

Older Canadians and Americans

For older Canadians and Americans, being on the right of the political spectrum or being more conservative was associated with perceptions of higher warmth of older individuals ($\beta = .17, p = .001$ and $\beta = .14, p = .009$). For older Americans only, support for group-based inequality was associated with perceptions of lower warmth of older people ($\beta = -.15, p = .004$), and horizontal collectivism was associated with perceptions of higher warmth ($\beta = .21, p < .001$).

Summary for perceived competence and warmth

Once again, there was no support for Hypotheses 3 and 4. Economic threat and health threat at the individual and national level did not predict perceptions of older people's competence or warmth. However, there was some support for Hypothesis 5. In particular, for young and middle-aged individuals, support for group-based inequality predicted lower perceptions of older people's competence. For middle-aged individuals in both Canada and the United States, and young and older Americans, support for group-based inequality predicted lower perceptions of older people's warmth. The results provided no support for Hypothesis 6 and, indeed, for Americans of different age groups, the results for vertical individualism were at times in the opposite direction to those expected. Support for Hypothesis 7 was more evident. In particular, horizontal collectivism predicted higher perceptions of older people's competence for young Canadians and for older Canadians and Americans, and predicted higher perceptions of older people's warmth for young Canadians and older Americans. In addition, vertical collectivism predicted higher perceptions of older people's competence for middle-aged Canadians, and predicted higher perceptions of older people's warmth for young Americans and middle-aged Canadians. For perceptions of older people's competence and warmth, there was not support for Hypotheses 8 and 9, and indeed the few effects for political leaning were in the opposite direction to those predicted. In addition, there was no evidence that the predictions were more likely for younger individuals than older individuals for these descriptive stereotypes.

DISCUSSION

In line with past research (North & Fiske, 2013a, 2013b, 2016), the present study found that in the first year of the COVID-19 pandemic, younger adults in both Canada and the United States were more likely than older adults to endorse ageist consumption stereotypes, demonstrating intergenerational conflict about the resources being used by older people and potential sacrifices for them. Beliefs and values related to group relations and the priority of the individual versus the collective played a central role in predicting these ageist consumption stereotypes, supporting past research linking specific values and beliefs to ageism (Bok et al., 2021; Henry et al., 2019; Ng et al., 2021; North & Fiske, 2013a). In the context of the pandemic, we also found that beliefs about social distancing predicted ageist consumption stereotypes. These relations were especially strong among younger adults.

These results suggest that the belief that some groups are inferior to others and that the world is a competitive place may play an important role in ageist consumption beliefs and resulting intergenerational conflict. Also, in the context of the pandemic, the belief that social distancing carries too many costs may have served to exacerbate ageist consumption stereotypes, particularly among younger adults, further fueling intergenerational conflict. In contrast, believing that it is important to sacrifice for the collective and that collective goals are important may reduce these ageist consumption stereotypes among some individuals.

The differentiation between vertical and horizontal individualism in predicting ageist consumption stereotypes is noteworthy. Whereas vertical individualism consistently predicted ageism, horizontal individualism did not. Thus, individualism on its own does not seem to be implicated in promoting these stereotypes. Instead, individualism that includes a component of competitiveness seems to be required for ageism to be exacerbated.

In terms of perceptions of the competence and warmth of older people during the first year of the pandemic, for all age groups in both Canada and the United States, older people were rated as more warm than competent. This finding is consistent with previous research on the stereotype content model as applied to older individuals (e.g., Cuddy et al., 2005, 2008, 2009, Kite et al., 2005). Age differences in competence and warmth ratings of older people were also apparent. In both countries, the youngest age group provided older people with the lowest competence and warmth ratings, indicating that in addition to being more likely to endorse ageist consumption stereotypes, young people in Canada and the United States held less favorable overall perceptions of older people.

Beliefs and values related to group relations and the priority of the individual versus the collective also played a role in predicting these descriptive ageist stereotypes, though fewer significant relations were evident than for prescriptive consumption stereotypes. The results suggest that support for group-based inequality may play a role in promoting ageist competence and warmth stereotypes, whereas vertical and horizontal collectivism may serve to reduce these stereotypes about older individuals.

The current study also revealed some interesting similarities and differences between the American and Canadian samples. Overall, the endorsement of ageist consumption stereotypes did not differ between Americans and Canadians. However, young and middle-aged Canadians perceived older individuals as significantly less warm and less competent than young and middle-aged Americans. In terms of the factors predicting ageist consumption stereotypes of older individuals, there were many similarities between Americans and Canadians. However, in the case of competence and warmth perceptions of older individuals, it is interesting to note that among young

and middle-aged Americans vertical individualism played a much more important role in predicting competence and warmth perceptions than among young and middle-aged Canadians. In fact, among young and middle-aged Canadians vertical individualism did not play a role at all. Instead, horizontal and vertical collectivism emerged as significant predictors. This pattern of results may be a reflection of what values are emphasized in the two countries. In the United States, a country that has been a central player on the world stage, values centered around competition and winning may be more salient. In Canada, a country that takes pride in its social security system, values centered around interdependence and collectivism may be more salient.

Overall, from a theoretical perspective, the current study highlights the importance of differentiating between prescriptive and descriptive stereotypes (North & Fiske, 2013b). Although both are valuable measures of ageism, the current study reveals some differences in terms of what type of beliefs and values predict these measures. For example, in the case of prescriptive consumption stereotypes, support for group-based dominance hierarchies and beliefs about the costs of social distancing were relevant. In contrast, in the case of the descriptive competence and warmth stereotypes, these beliefs did not play a role. Instead, support for inequality was more important.

In addition, even though the current study did not include measures to assess prescriptive stereotypes in all three domains identified by North and Fiske (2012, 2013a), the results of this study provide some indirect evidence that there may be important differences between these domains. For example, Martin and North (2022) found that support for group equality predicted more ageist succession stereotypes but did not predict ageist consumption stereotypes. Similarly, in the current study support for group inequality did not predict ageist consumption stereotypes.

Finally, the current study adds to the literature by providing insight into the factors that drove ageist perceptions of older individuals during the early stages of the pandemic. While beliefs and values were central in predicting the endorsement of all the three types of ageist stereotypes assessed, the current study found that, in contrast to what the intergroup relations literature on perceived threat (Esses et al., 2010; Stephan & Stephan, 2017) and terror management theory (Greenberg et al., 1986) would predict, individual and national health threat and economic threat did not predict ageist perceptions of older individuals. Thus, the health and economic threats from COVID-19 itself did not seem to be driving more negative beliefs about older individuals (see also Esses et al., 2021). A possible explanation why individual and national economic threat did not predict ageist perceptions of older individuals is that, in Canada and the United States, older people might not have been perceived as responsible for the negative economic consequences of the pandemic nor particularly economically competitive in that context. In terms of individual and national health threat, especially early in the pandemic, a major mitigation strategy took the form of physical and social isolation from older people. Because of this, it is possible that older individuals were not seen as a threatening source of infection. It is also possible that individuals' perceptions of the pandemic and ageism might have been linked not through perceptions of health threats, but instead through threats to personal liberty as captured by other variables in the regression models, such as the belief that social distancing carries too many problems. For example, it is possible that those individuals who believed that social distancing carries too many problems might have felt that they were asked to sacrifice too much (by way of personal freedom or liberty) to protect older individuals, which in turn positively predicted ageist consumption stereotypes. Indeed, in the correlation tables it is evident that the belief that social distancing carries too many problems was significantly related to lower perceptions of health threat and higher ageist consumption stereotypes.

Limitations

One of the limitations of the current research is related to the fact that the data came from a collective survey that was designed to assess the impact of the COVID-19 pandemic on various facets of life. As a result, we had to compromise on the number of items included in the survey to limit its overall length. This means that most of our measures consist of single items, potentially reducing the reliability of our measurements. However, we tried to offset this limitation by selecting high-loading items from well-established scales. Future research may be advised to conduct more focused, in-depth research with multi-item scales.

Another limitation of the present research is its correlational design, preventing us from making definitive causal statements about the relations between the variables. For example, while we would suggest that the belief that social distancing carries too many problems led to greater endorsement of ageist consumption stereotypes among young and middle-aged adults, it is likely that the effects are mutually reinforcing, with ageist stereotypes also contributing to the belief that social distancing carries too many problems. To untangle these potential causal connections, future research could study the causal relations among these variables by using experimental and longitudinal study designs.

Similarly, given that the current study took place at a single point in time, we could not assess the extent to which the pandemic impacted the endorsement of ageist stereotypes. In order to answer this question, future research could conduct a similar survey post-pandemic and compare the findings to those of the current study in order to track to what extent the endorsement of ageist stereotypes changed over time and whether the factors predicting these ageist stereotypes remain the same.

Practical implications

The data for the current study came from a survey that was conducted during the first year of the COVID-19 pandemic, in August 2020. Since then, the pandemic and its management have continued to evolve. For example, by the end of 2020, Canada and the United States introduced vaccines to fight the spread of COVID-19 (CBC News, 2020; Cullinane et al., 2020). However, given the limited supply, vaccine delivery was at first prioritized for frontline healthcare workers, residents of long-term care homes and older people (Fox, 2020, The Canadian Press, 2020). It is possible that the limited supply of vaccines may have promoted a greater sense of competition, potentially further fueling ageist perceptions of older individuals. Furthermore, as Canada and the United States eased restrictions and reopened their economies in 2021 (Caldwell, 2021; CBC News, 2021), the rise of new virus variants led to increases in case counts in both countries (Pelley, 2021; Ratner & Mendez, 2021). In some areas, this meant reopening discussions on hospital triage plans to cope with limited ICU beds (Snowdon, 2021). Overall, events such as these may lead to more perceived competition between groups based on age, and may intensify the priming of hierarchy and group-based inequality beliefs, thus further promoting ageist perceptions of older individuals.

To address ageism, in particular, ageist consumption stereotypes, the present research suggests that beliefs about group-based dominance hierarchies and competition need to be targeted and reduced, while beliefs in sacrifice for the collective good and in the importance of collective goals need to be encouraged. Strategies to do so could include, for example, public health messaging emphasizing that individuals of all ages share the risk of COVID-19 and the responsibility of

fighting the pandemic (Ayalon, 2020; Fraser et al., 2020). In addition, the promotion of intergenerational contact and solidarity may help to ease perceived intergenerational conflict among younger adults. For example, Bengtson and Putney (2006) suggest that individualized intergenerational contact helps to reduce ageism and promotes norms of solidarity and relatedness. There is also evidence showing that if intergenerational contact (in-person, online or witnessed) is coupled with education on ageing, ageism can be successfully reduced (Levy, 2018; Lytle & Levy, 2019; Lytle et al., 2020; Lytle et al., 2021; Lytle & Levy, 2022). Such interventions seem particularly important during times of perceived competition over resources and separation of generations (e.g., due to physical distancing guidelines isolating older people). In fact, some have stressed the importance of finding creative ways to still engage in intergenerational contact while maintaining physical distancing, such as talking to older people on online platforms or over the phone, writing letters, or performing common activities such as watching a movie or reading a book and then discussing it (Ayalon et al., 2021; Jarrott et al., 2022).

Our findings regarding predictors of perceptions of older adults' competence and warmth also hold some promise. Though the pandemic's early disproportionate impact on older adults may have reinforced their perceived frailty and dependence (Vervaecke & Meisner, 2021), reinforcement of egalitarianism beliefs and collectivist norms may promote more favorable perceptions of their competence and warmth. In line with the idea of encouraging egalitarianism beliefs, it has also been suggested that positive attributes of older individuals should be promoted to reduce ageist perceptions. For example, Cabin and Jardin (2021) argue that negative stereotypes should be replaced by "truthful empirically based findings of older adults" (p. 2), such as that they are "knowledgeable" (p. 2) and "emotionally savvy" (p. 2). Similarly, Ehni and Wahl (2020) highlight that older people have a vast amount of life experience and are able to deal with new situations without having to be told by others how to act. These positive attributes of older individuals could, for example, be promoted through social campaigns (Ayalon & Okun, 2022).

Overall, the current research provides evidence of intergenerational conflict. It also demonstrates that beliefs regarding dominance and inequality, as well as individualistic and collectivistic values, are important predictors of ageism toward older individuals, with the COVID-19 pandemic potentially making these predictors particularly salient. To utilize the skills of North Americans of all ages during the recovery from COVID-19 and beyond, it will be important to reduce intergenerational conflict and ageist beliefs toward older individuals, with public health messaging and political discourse mobilized toward this goal.

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