

“Let the strongest survive”: ageism and social Darwinism as barriers to supporting policies to benefit older individuals

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Abstract

The World Health Organization (WHO) identified +65 individuals as one of the most vulnerable populations in the current pandemic. Previous research has shown a robust association between ageism and derogatory attitudes and behaviors targeting older people. We proposed that reluctance of people under age 65 to endorse the policies that benefit older adults can be further explained by their adherence to social Darwinism. We tested a mediation model to examine whether social Darwinism would predict support for policies directly and indirectly through the endorsement of ageist attitudes. We conducted two correlational studies in Turkey (Study 1; $N = 1261$) and the U.S. (Study 2; $N = 210$). In Study 1, we collected data through social media and messaging platforms in April 2020. In Study 2, participants were recruited via Prolific Academic in May 2020. In both studies, we found that adherence to social Darwinist beliefs negatively predicted support for policies. We also found that this association was positively mediated by ageist attitudes. Overall, our research contributes to the scholarly effort to identify the social-psychological barriers to public support for legal initiatives aimed to secure a healthy and productive future for older people.

Keywords: Social Darwinism, ageism, coronavirus, COVID-19, anti-ageist policies

**“Let the Strongest Survive”: Ageism and Social Darwinism as Barriers to
Supporting Policies to Benefit Older Individuals**

The WHO’s 2030 Agenda established a universal plan of actions needed to secure healthy aging of the population, prioritizing social inclusion and economic safety of older adults (World Health Organization, 2019). This universal plan of action has gained urgency during the COVID-19 pandemic, which disproportionately affected older adults in many societies worldwide. According to the WHO, over 95% of the deaths from COVID-19 occurred among individuals older than 60 years, with over half of these fatalities being among people aged 80 years or older. Among the far-reaching consequences of the current pandemic for older adults, there are exacerbated physical and mental health problems, reduced social and economic opportunities, as well as perceived social exclusion. Global calls for renewed efforts to prioritize policies and interventions needed to improve older people’s well-being have seemingly received little consensus in societies. Understanding the social-psychological factors that facilitate or hinder public support for such policies is of pivotal importance.

During the coronavirus pandemic, older adults have often been the targets of ageism which is defined as prejudice regarding peoples’ age (Butler, 1969, p. 243). For example, research conducted by Garcia-Soler et al. (2020) examined individuals’ attitudes toward older adults during the coronavirus crisis in Spain in April 2020 and found that more than 50% of the participants reported stereotypical and discriminatory attitudes toward older adults (e.g., “*older adults are a burden on the health system*”). Some other studies, based on survey studies and Twitter data analysis, demonstrated that young people have frequently used hostile ageist expressions conveying the idea that taking care of older adults was less important in light of the COVID-19 pandemic, as compared to younger populations (Jimenez-Sotomayor et al., 2020; Lichtenstein, 2021). For example, Skipper and Rose (2021) used content analysis to classify tweets that used the ageist hashtag #BoomerRemover. The

findings showed that approximately 19% of the data consisted of tweets stating that COVID-19 was a generational equalizer and served as a payback for the older adults' wrongs. Also, Ng et al., (2022) found in their study that the support for older individuals increased in the advanced stages of the pandemic, but it still could not reach the positive side of the spectrum.

Since the onset of the pandemic, researchers have started paying more attention to identifying the possible antecedents of ageism as well as its consequences on intergroup relations (e.g., Meisner, 2021; Monahan et al., 2020; Rahman & Jahan, 2020; Swift & Chasteen, 2021). However, what makes ageism unique is that, unlike prejudices such as sexism and racism, every person can be the target of ageism in some part of their life (Palmore, 2001). Even though this type of prejudice targets both the young and the old (Bratt et al., 2018; Snape & Redman, 2003), in the current study, we focused on ageism for older adults as they have been one of the most vulnerable age/human subpopulation groups in the context of the pandemic. One crucial consequence of widespread and increasing ageist attitudes can be the decreased public support for policies aimed at healthy aging (e.g., healthcare equality, transportation, urban planning, and social welfare systems for older adults; Monahan et al., 2020). By extending previous findings, in the current research, we focused on whether ageism may predict support policies aimed to benefit older individuals in the post-pandemic period.

While outcomes of ageism have been extensively studied in the literature (e.g., Bodner & Cohen-Fridel, 2014; Bousfield & Hutchison, 2010; Lytle et al., 2020), less attention has been given to the psychological antecedents of ageism. In the present contribution, we suggest one factor that seems very relevant to ageism: *social Darwinist beliefs*. These beliefs reflect the idea that humans, like plants and animals, compete in a struggle for existence, in which the fittest survive while the weakest perish (Spencer, 1867). People who strongly adhere to these beliefs think that inequalities and hierarchies between groups are natural, and the

socially advantaged (e.g., youngest individuals) will survive as the fittest (Crandall & Eshleman, 2003). In the context of COVID-19, some people see the pandemic as a race where younger people persevere, and older adults get “eliminated” by the forces of nature (e.g., Jimenez-Sotomayor et al., 2020; Skipper & Rose, 2021). The adherence to social Darwinist beliefs among the public has gotten stronger, particularly in the first months of the pandemic because of the constraints people experienced in their access to health services and healthcare-related resources during this period (Aronson, 2020; TFN, 2020). In Italy, for instance, when the hospitals were full due to coronavirus in March 2020 and there were too many waiting patients outside the hospitals, some doctors had to decide who was going to live and who was going to die, and they chose to use their equipment and effort in favor of the young (Beall, 2020; Montalto-Monella, 2020). Several studies have shown that portraying older people as *vulnerable*, *weak*, and *powerless* (i.e., in line with social Darwinism conceptions of age) may have a significant impact on how people think and behave toward older people during the pandemic (e.g., Meisner, 2021; Monahan et al., 2020; Rahman & Jahan, 2020; Swift & Chasteen, 2021). Despite these findings, there has been no empirical attempt to explicitly examine the role of social Darwinism on support for policies that benefit older people.

The current investigation focuses on the associations between the endorsement of social Darwinism, ageism, and support for policies in favor of older individuals during the pandemic among people under age 65. Based on previous research, we predicted that endorsement of social Darwinism would be positively associated with ageism, which in turn would be linked to lower support for prosocial policies for older people across two cross-sectional studies.

Ageism and Support for Policies to Benefit Older Individuals

Older adults are the target of discrimination in many life domains, including employment (e.g., Macdonald & Levy, 2016) and the health care system (e.g., Arun &

Pamuk, 2014; Ben-Harush et al., 2017; Robb et al., 2002). Legitimizing myths and stereotypes regarding older adults reinforce ageism because they convey the idea that older people are weaker, unproductive, infirm, incompetent, dependent on others, and depressed (Cuddy & Fiske, 2002; Gendron et al., 2016; Schmidt & Boland, 1986; Thornton, 2002), and as such present a burden to society (Martin et al., 2009).

As previous research has revealed, younger people are likely to sustain the idea that older subpopulations present the exhaustion of shared resources (e.g., government money) by passively consuming them that allegedly could be best used by younger generations (North & Fiske, 2012, 2013a, 2016). According to this view, younger people see older individuals as passive consumers who get a bigger share of the shared resource pool. This consumption-based ageism induces intergenerational competition and tensions because younger people believe that they should receive more share of the allocation of resources than their older counterparts. As such, discrimination toward older people was fueled by the idea that older citizens have some advantages in society and that these advantages victimize the young generations and undermine the economic system. For example, a study even before the pandemic demonstrated that the welfare programs provided to older people, the pension provision, and the frequent use of healthcare resources by older individuals created a perception of economic threat among young people (Abrams et al., 2011). Similarly, another study demonstrated that individuals older than 35 years who experienced underemployment and job insecurity perceived older people more as a threat in business, and such perceived threat was positively associated with ageism (Ospina et al., 2019). The coronavirus pandemic has particularly strengthened this consumption-based aspect of ageism. During the pandemic, older individuals were often seen as a burden because the healthcare resources were seen as insufficient and the infected older people used the healthcare resources more. According to a study conducted during the pandemic period, young people hold more consumption-based

ageism regarding resources compared to older individuals (Sutter et al., 2022). Even some said that older people should sacrifice themselves for the younger generations in the pandemic (Barrett et al., 2021).

Research concerned with the antecedents of ageism revealed that aging anxiety (Cooney et al., 2021; Ramírez & Palacios-Espinoza, 2016), fear of death (Bodner & Cohen-Fridel, 2014; Bodner et al., 2015), neuroticism (Allan et al., 2014), and identification with the young age group (Taşdemir, 2020) explain why people are likely to experience higher levels of ageism toward older people. Empirical studies have also shown that personality traits such as gratitude, openness, agreeableness (Allan et al., 2014), empathy (Boudjemad & Gana, 2009), as well as the frequency of positive intergroup contact are likely to act as a buffer against this form of age-related prejudice (Bousfield & Hutchison, 2010; Cooney et al., 2021; Levy, 2018; Lytle et al., 2020).

Ageism has also negative consequences for older individuals. First, ageism appears as an important barrier to healthy aging (Swift et al., 2017). Ageism negatively affects older people's mental health (Vogt-Yuan, 2007), reduces their well-being (Garstka et al., 2004), and increases depression and anxiety problems (Bai et al., 2016) as well as cardiovascular stress (Levy et al., 2008; Levy et al., 2000). Moreover, numerous studies have also found that, among older people, ageism predicts internalized negative stereotypes about aging (Levy, 2009; Stewart et al., 2012) and lower willingness to live (Levy et al., 1999-2000). Ageism, as mentioned above, might hinder support for policies that improve older adults' conditions and other prosocial intentions for adults (Bergman & Bodner, 2015; Bousfield & Hutchison, 2010), especially in the aftermath of the pandemic (Lytle et al., 2022). For example, Sutter and colleagues (2017) found that ageist university students were less willing to provide physical and emotional support to family members with chronic diseases. Also, Lytle et al. (2022) found that ageist attitudes before the pandemic negatively predicted university

students' prosocial intentions toward older adults in the aftermath of the pandemic period. Moreover, ageism reduced communication between healthcare professionals and older patients (Brown et al., 2011; Clarke et al., 2003). Benevolent ageism, which seems to be "positive" in terms of protecting older people, has also negative results because the help given to older individuals is patronizing, and they are often represented as dependent and weak (Cary et al., 2017). In line with previous research on ageism, we expect that ageism would negatively predict the public's support for policies that benefit older people in the post-coronavirus pandemic period.

The Role of Social Darwinism in Predicting Ageism and Support for Policies to Benefit Older Individuals

Social Darwinism is a part of a broader constellation of hierarchy-enhancing ideologies. Its distinct characteristic is that this ideology tends to apply evolutionary principles of natural selection (i.e., "struggle for existence") famously proposed by Charles Darwin in 1859. Social Darwinism was defined by Spencer's (1874) famous phrase "survival of the fittest." Spencer (1867) argued that social Darwinism is based on adaptation and competition, and accordingly, individuals and groups compete with each other for limited resources. In this competition, the weak and powerless are eliminated, while the strong survive in social life (Spencer, 1867). This phenomenon indicates that inequalities between groups in society are natural and the stronger and more advantageous are the *fittest* (Crandall & Eshleman, 2003).

The concepts of social Darwinism and ageism can be considered as closely related, despite rarely being studied in conjunction (see Marques et al., 2020, for a systematic review). Research in evolutionary psychology (e.g., Bowles, 2009; Henrich & Boyd, 1998; Mahajan et al., 2011) suggests that in the face of existential threat, people tend to display greater intergroup-outgroup bias (e.g., Wilson & Wrangham, 2003). This bias manifests itself in a

disproportionate tendency to secure one's own group survival by eliminating competitors or dissimilar others. Thus, perceived historical discontinuity and existential threat for one group may create an incentive structure in which people become more involved in discriminatory behavior—including antagonistic and violent actions against outgroups (e.g., Branscombe et al., 1999; Federico et al., 2009; Jetten & Wohl, 2012).

Importantly, the Darwinian vision of the social world can also be considered as a relatively stable individual difference. Research has documented that social Darwinism is positively associated with individuals' generalized desire to justify social inequalities favoring the dominant group, exploitative attitude toward people, desire to dominate, and general hostility toward people (e.g., Radkiewicz & Skarżyńska, 2021; Rudman & Saud, 2020; Saud, 2019). As a relatively stable individual-level variable, it can thus be examined as a precursor of different forms of intergroup prejudice, manifesting favoritism toward those considered “the fit and strong” and derogation toward those labeled as “the weak and unfit” (Spencer, 1867). Social Darwinism is often embedded in the argument that certain races are superior to others in terms of adaptation (Chung, 2014; Dennis, 1995; Francis, 1996; Tyner, 1999). Recent research showed that social Darwinism positively predicted prejudice against immigrants and support for anti-immigrant policies (Saud, 2019), anti-Semitism (Marten, 1999), and various system-justifying ideologies such as gender-, race-, and class-based system justification (Rudman & Saud, 2020). Relatedly, it has been suggested, yet not tested that social Darwinism's criterion for eliminating the weak may be positively related to age discrimination (Kane et al., 2011).

The evolutionary perspective contends that the scarcity of resources is a fundamental motivation for social Darwinism, therefore, the allocation of social and governmental resources can create intergroup competition. This competition shaped by the economic threat can also help to explain the intergenerational tension between younger and older. As

mentioned above, the consumption-based representation of older people is particularly prevalent during the pandemic. North and Fiske (2013a) state that the idea that older people do not contribute much to society a) but receive an unequally larger share of resources and b) in return fuels ageism. The assurances (e.g., pension provision) and services (e.g., intensive healthcare) provided to older individuals can be interpreted as they receive a greater share of resources than younger people. The unexpected difficulties and insufficient resources both in the economy and healthcare system that came with the pandemic stressed the scarcity and importance of resources (Aronson, 2020; TFN, 2020). Although there are young people among those hospitalized for coronavirus too, the existing stereotypes that older people are ill, weak, and vulnerable have drawn attention to older individuals' use of health resources and intensified ageism.

As much as the economic threat is one of the basic premises of social Darwinism, it also goes beyond that. The concept of “fit” in social Darwinism also refers to the socially, politically, and physically strongest (Crandall & Eshleman, 2003). In the present study, therefore, we focused on the consumption- and economic-based aspects of both ageism and social Darwinism in understanding the support for policies that benefit older individuals.

Since social Darwinism predicts prejudice and discrimination in various intergroup relations (Marten, 1999; Rudman & Saud, 2020) and perceived economic competition is positively associated with negative attitudes and behaviors of young people toward older individuals (North & Fiske, 2012, 2013a, 2016; Ospina et al., 2019), we claimed that social Darwinism would predict ageism. Likewise, one can argue that adherence to social Darwinist beliefs can potentially inhibit people's support for legislative programs of social inclusion that address different aspects of healthy aging, including support for housing and health care among low-income older people as well as budget allocations for mitigating the risks of their falling into poverty. Therefore, we argued that social Darwinism can act as a straightforward

predictor of support for policies that allow allocating resources such as social welfare to safeguard “the survival of the fittest in the struggle for life,” which might not be the case for older adults.

Social Darwinism can be applied to the study of ageism and age-related policies. Lack of support for health-related policies for older people may be affected by the “elimination of the weak” perspective of social Darwinism. Again, social Darwinism may have a negative role in supporting financial and government aid aimed at improving the lives of older adults, due to perceiving resource competition or seeing older people as a “burden.” Therefore, we proposed that people with firm social Darwinist beliefs may oppose making investments in health care for older adults. At the same time, social Darwinist beliefs not only have a direct effect on people’s support for policies improving the lives of older people but also predict their support for such policies indirectly through ageism.

As presented before, the prejudice-inducing role of social Darwinist attitudes on intergroup relations has been supported by a small number of studies in the literature (Marten, 1999; Rudman & Saud, 2020; Saud, 2019). These studies show the negative impact of the economic competitiveness of ageism on young-old relationships and prosocial attitudes toward older individuals (North & Fiske, 2012, 2013a, 2016; Ospina et al., 2019). However, as far as we know, there is no study examining the relationship of social Darwinism with the consumption-based aspect of ageism and the role of these discriminatory attitudes in supporting policies to benefit older people. Although our research theoretically leans on the above-mentioned studies, it aims to fill this gap in the literature by aiming to reveal the predictive effect of people’s perception of weak-strong and fit-unfit distinction on their ageist attitudes, which in turn, may predict their support for policies for older people.

Overview of Studies

In the current studies, we aimed to examine the role of ageism in the relationship between social Darwinist beliefs and support for policies to benefit older individuals during the COVID-19 pandemic. We argued that the phenomenon of ageism regarding the allocation of resources due to the limitations in the COVID-19 pandemic could predict the level of individuals' support for policies to benefit older individuals. We focused on participants younger than 65 years of age, as both studies investigated support for policies to benefit older people. Since the coronavirus has affected older people more negatively and +65 individuals are considered as a risk group (Yanez et al., 2020; Zheng et al., 2020), this age cut-off has begun to be seen as the old age limit. For example, in Turkey, a curfew on older people covered only individuals over the age of 65 (Bianet, 2020). For this reason, we only included individuals younger than 65 years of age in the studies to understand their support for older people. We hypothesized that higher social Darwinist beliefs would be associated with greater ageism, which in turn would be associated with less support for policies to benefit older individuals. To test our hypothesis, we carried out two correlational studies: 1) in Turkey (Study 1) and 2) in the U.S. (Study 2).

Study 1: Turkey

After it was announced that the coronavirus is especially lethal for older adults, various precautions such as lockdowns and restrictions on using public transport have been taken by the Ministry of Interior in Turkey for this particular group (+65). From March 22, 2020, a curfew was introduced for individuals over the age of 65, and this ban was stretched as of May 10, 2020, to allow them to go out for a few hours a day. The ban was completely lifted in March 2021 when the vaccines arrived. However, these precautions toward older adults have also increased negative attitudes and behaviors toward them. For example, news such as a young man mocking and forcing an old man to wear a mask (Birgün, 2020) and

police mistreating older adults using the coronavirus constraints as an excuse (T24, 2020) reveals that ageism has been pervasive in the pandemic period in Turkey.

According to İmamoğlu and İmamoğlu (1992), treating older adults with respect is considered part of Turkish culture. In this culture, where family ties are strong, it is common to see older adults as authority and obey them because of their greater life experience (McConatha et al., 2004). In such traditional and collectivist cultures, aging is respected and honored, and young people are expected to provide for the needs of older adults (Palmore & Maeda, 1985). Therefore, one can expect that there will be less ageism toward older individuals in a collectivistic country like Turkey. However, the findings point to the contrary. In their meta-analysis comparing Eastern and Western countries, North and Fiske (2015) found that there are more negative evaluations of old age in collectivistic cultures. Other research shows that people in Turkey hold more negative attitudes toward aging and are more worried about getting old compared to other countries (Bacanlı et al., 1994; İmamoğlu & İmamoğlu, 1992; McConatha et al., 2004) and discrimination toward older individuals are quite common both among caregivers (Arun & Pamuk, 2014) and university students (Köse et al., 2015; Yılmaz et al., 2012).

From this point of view, even though it is a cultural norm to respect and cherish older adults in Turkey, this does not prevent the spread of ageism and the negative meanings attributed to old age. McConatha and colleagues (1991) explain this situation with the diminishing of resources. They argue that limited resources, coupled with population growth and economic difficulties, may lead young people to endorse ageism. In support of this argument, ageism toward older individuals in Turkey has increased considerably during the COVID-19 pandemic (see also Birgün, 2020; T24, 2020). Older adults, who are already seen as dependent and in need of care (Çayır, 2012), have been perceived as even more vulnerable and as a burden due to the lethal effects of the virus on older people. A qualitative study

conducted in Turkey indicated that between March-May 2020, most of the tweets on Twitter contained negative content for older adults (Taşdelen, 2020). Therefore, we expected that social Darwinist beliefs can predict support for policies to benefit older individuals among people under age 65 in Turkey directly and indirectly through the endorsement of ageism.

Method

Participants and Procedure

We received IRB approval for this research from Anonymous University. The study was advertised as a research project seeking to understand public opinion about the current pandemic in Turkey. We recruited participants in April 2020 through social media and messaging platforms such as Facebook, Twitter, and WhatsApp via snowball (i.e., participants in the research recommend other participants to the researcher; Cohen & Arieli, 2011) and convenience (i.e., participants are selected based on their accessibility or proximity; Bornstein et al., 2013) sampling. According to the report by the WHO (2020), on April 30, 2020, there were 117,589 COVID-19 cases and 3,081 coronavirus-related deaths in Turkey and the vaccination program had not yet started.

All participants completed the survey voluntarily and did not receive any compensation for their participation. After giving informed consent, participants filled out an online questionnaire that included measures of social Darwinist beliefs, ageism, and support for policies to benefit older individuals as well as demographic questions. Completing the study measures took approximately 15 minutes. As part of a multi-study data collection effort (see Anonymous, 2021), a total of 1309 participants were recruited. After excluding 48 participants from the data (e.g., they did not complete the survey or were above 65 years old), the final sample consisted of 1261 participants. Table 1 presents the demographic information of the participants in Study 1.

[Insert Table 1]

Measures

Except for demographic variables, all items used 7-point response scales (1 = *strongly disagree/not at all*, 7 = *strongly agree/very much*). All scales were presented to the participants in random order.

Social Darwinist Beliefs. We created three items to measure participants' general social Darwinist beliefs (see also Chiou & Pan, 2008). We asked participants to indicate to what extent they agree or disagree with the following items: "*The physically strongest always survive, while the weakest are eliminated,*" "*In nature, the stronger wins, the weaker are doomed to lose,*" and "*Inequalities between individuals are the law of nature; these inequalities should not be eliminated*" (Cronbach's $\alpha = .63$).

Endorsement of Ageism. To measure participants' endorsement of ageist attitudes toward older adults during the coronavirus pandemic period, we created four items inspired by North and Fiske (2013a). We asked participants: "*In this pandemic period, doctors spend too much time treating sickly older people,*" "*older people are a huge burden on the healthcare system,*" "*older adults are a burden rather than contributing to society,*" and "*older people, like young people, are part of society and should see the same value as young people (reverse coded)*" (Cronbach's $\alpha = .75$).

Support for Policies to Benefit Older Individuals. We created two items to measure participants' support for policies related to older adults: "*Over the next few years, I support the government to allocate an important budget to improve the living conditions of older individuals,*" and "*state policies that give priority to the problems of older adults*" ($r = .62$).

Results

Preliminary Analyses

Correlations, means, and *SDs* between variables are reported in Table 2. Bivariate correlations showed that greater social Darwinist beliefs were significantly associated with

higher ageism and lower support for policies to benefit older individuals. Finally, greater endorsement of ageism was also significantly associated with less support for policies to benefit older individuals.

[Insert Table 2]

Mediation Analysis

In order to test whether ageism mediates the relationship between social Darwinist beliefs and support for policies to benefit older individuals, we conducted a mediation analysis using PROCESS Model 4 with 5,000 bootstrapped samples (see Hayes, 2013). Results indicated that social Darwinist beliefs positively predicted endorsement of ageism, $b = .20$, $SE = .02$, $t(1259) = 10.80$, $p < .001$, 95% CI [.16, .24]. Ageism negatively predicted support for policies to benefit older individuals, $b = -.45$, $SE = .03$, $t(1258) = -16.45$, $p < .001$, 95% CI [-.51, -.40]. Social Darwinist beliefs negatively predicted support for policies to benefit older individuals, $b = -.15$, $SE = .02$, $t(1259) = -7.45$, $p < .001$, 95% CI [-.19, -.11]. Social Darwinist beliefs remained a significant predictor of support for policies to benefit older individuals even after including endorsement of ageism in the model, $b = -.06$, $SE = .02$, $t(1258) = -3.06$, $p = .002$, 95% CI [-.09, -.02]. As expected, the results showed a significant indirect effect of social Darwinist beliefs on support for policies to benefit older individuals, $b = -.09$, $SE = .01$, 95% CI [-.11, -.07]. Figure 1 shows standardized regression coefficients of the hypothesized model.

[Insert Figure 1]

We also tested an alternative model to examine whether social Darwinism mediated the relationship between ageism and support for policies to benefit older individuals. The results showed that ageism positively predicted social Darwinism, $b = .41$, $SE = .04$, $t(1259) = 10.80$, $p < .001$, 95% CI [.34, .49] and negatively predicted support for policies to benefit older individuals, $b = -.48$, $SE = -.02$, $t(1259) = -18.07$, $p < .001$, 95% CI [-.53, -.42]. Also

social Darwinism negatively predicted support for policies to benefit older individuals, $b = -.06$, $SE = .02$, $t(1258) = -3.06$, $p = .002$, 95% CI $[-.10, -.02]$. The results showed that although there is a significant indirect effect of ageism on support for policies to benefit older individuals, $b = -.02$, $SE = .01$, 95% CI $[-.04, -.01]$, the indirect effect in the alternative model is smaller than that in the hypothesized model.

Discussion

Consistent with our hypothesis, we found that there is an indirect relationship between social Darwinist beliefs and support for policies to benefit older individuals through ageism. Specifically, we tested the relationships among these three variables during the pandemic period when older adults were one of the most visible disadvantaged group minorities. Our study contributes to the literature on ageism by identifying a potential antecedent of ageism and subsequent inegalitarian behaviors. Previous research has found that ageism spreads stereotypes that characterize older adults as weak and burden (Cuddy et al., 2005; Martin et al., 2009; Thornton, 2002), causing discrimination (Macdonald & Levy, 2016) and thus negatively affecting peoples' intention to support for older adults (Bergman & Bodner, 2015; Lytle et al., 2022). However, our research has extended the previous studies in a way that the harming to solidarity with older people does not only associate with perceiving older adults as weak and burden but also with the belief that older adults who are seen as weak should be eliminated.

Along with that, the alternative model in Study 1 showed that social Darwinism may also mediate the relationship between ageism and support for policies to benefit older individuals. However, we statistically observed that the indirect effect in the alternative model is smaller than that of the hypothesized model. Even though one can theoretically argue that it may be equally plausible for ageism to motivate the endorsement of social Darwinism and both models are equally likely. we consider our hypothesized model captures this theoretical

perspective better than the alternative model based on North and Fiske's (2013a) research that competition between young and the old fuels ageism.

Study 2: The U.S.

Study 2 was designed to replicate the findings of the first study in a different cultural setting: the U.S. Compared to Turkey, the United States has an individualistic culture (Hofstede, 1984; Zhang, 2013). North American culture embodies the autonomy attributed to the individual rather than the norms of seeing older people as group leaders and showing obedience (McConatha et al., 2004). Berger (2017) states that in the modern age where individualism is elevated and staying young is glorified, the disrespect and discrimination toward older people have increased in the United States. Studies show that ageism is quite common in the United States, and negative stereotypes and aging for older people are embedded in everyday language (Cuddy & Fiske, 2002; Gendron et al., 2016). As expected, discrimination against older people has increased in the COVID-19 pandemic in the United States as in Turkey. For instance, hostile tweets aimed at older adults were posted on social media (Lichtenstein, 2021; Skipper & Rose, 2021), and in the health system, the health of the young was put before the health of the older people (Aronson, 2020; TFN, 2020).

However, in the U.S., many positive steps have also been taken for older adults during the pandemic. Due to the quarantines in the pandemic, when many people started to shop in bulk from the markets, the crowd and scarcity of food and supplies negatively affected older adults. Thus, many stores arranged special hours for older people to protect them from this “panic buying” (Williams, 2020). In addition, many donation campaigns and charities involving older people were organized (Adamczyk, 2020; Stahl, 2021; Tekin et al., 2021). Yet, according to some national polls, the pandemic has reportedly fostered the public’s negative attitudes and discriminatory behavior toward older adults in this country (Aronson,

2020; Skipper & Rose, 2021; WHO, 2021). In line with this information, in Study 2, we aimed to replicate the findings of Study 1 in the context of the U.S.

Method

Participants and Procedure

We reached participants through Prolific Academic in May 2020. As the WHO (2020) report stated, on May 30, 2020, there were 1,694,864 COVID-19 cases and 100,304 coronavirus-related deaths in the U.S. and the vaccination program had not yet started. Participants received a payment of 2 US\$ for their participation. The original sample consisted of 225 participants. Thirteen participants were dropped from the data for failing the attention check, and two participants for being +65 years old, thus the final sample consisted of 210 participants. Table 3 presents the demographic information of the participants in Study 2.

[Insert Table 3]

Measures

We used the exact same measures used in Study 1 to assess social Darwinist beliefs (Chiou & Pan, 2008; Cronbach's $\alpha = .75$), endorsement of ageism toward older individuals (North & Fiske, 2013a; Cronbach's $\alpha = .82$), and support for policies to benefit older individuals ($r = .64$). We again asked the same demographic questions. Similar to Study 1, completing the study measures took approximately 15 minutes.

Results and Discussion

Preliminary Analyses

Correlations, means, and *SDs* are represented in Table 4. All variables were significantly associated with each other and in the same way as in Study 1.

[Insert Table 4]

Mediation Analysis

Similar to Study 1, we again conducted a mediation analysis in Study 2 using PROCESS Model 4 with 5,000 bootstrapped samples to test whether endorsement of ageism mediates the relationship between social Darwinist beliefs and support for policies to benefit older individuals. The results showed that social Darwinist beliefs were a significant predictor of endorsement of ageism, $b = .19$, $SE = .04$, $t(208) = 4.99$, $p < .001$, 95% CI [.12, .27], and endorsement of ageism significantly predicted support for policies to benefit older individuals, $b = -.45$, $SE = .10$, $t(207) = -4.58$, $p < .001$, 95% CI [-.64, -.25]. Social Darwinist beliefs significantly predicted lower support for policies to benefit older individuals, $b = -.12$, $SE = .06$, $t(208) = -2.12$, $p = .035$, 95% CI [-.24, -.01]. However, social Darwinist beliefs no longer predicted support for policies to benefit older individuals after ageism was included in the model, $b = -.03$, $SE = .06$, $t(207) = -0.59$, $p = .549$, 95% CI [-.15, .08]. As hypothesized, results also showed a significant indirect effect of social Darwinist beliefs on support for policies to benefit older individuals, $b = -.09$, $SE = .03$, 95% CI [-.14, -.03]. Standardized regression coefficients of the hypothesized model are displayed in Figure 2.

[Insert Figure 2]

As in Study 1, we again tested an alternative model in Study 2 to examine whether social Darwinism mediates the relationship between ageism and support for policies to benefit older individuals. The results showed that ageism positively predicted social Darwinism, $b = .54$, $SE = .10$, $t(208) = 4.99$, $p < .001$, 95% CI [.32, .75] and negatively predicted support for policies to benefit older individuals, $b = -.47$, $SE = .09$, $t(208) = -5.07$, $p < .001$, 95% CI [-.65, -.28]. However, in Study 2, social Darwinism did not significantly predict support for policies to benefit older individuals, $b = -.03$, $SE = .06$, $t(207) = -0.59$, $p = .549$, 95% CI [-.15, .08].

Discussion

The findings of Study 2 supported our hypothesis by showing that ageism mediates the relationship between social Darwinism and support for policies to benefit older individuals.

Similar to the first study, Study 2 revealed how ageism is negatively related to supporting policies that benefit older individuals. Further, as with Study 1, Study 2 revealed the unique role of social Darwinism in younger people's intentions not to support policies toward older adults. Study 2 also extended the previous studies by showing that social Darwinist and ageist attitudes toward older people can be considered a crucial obstacle to supporting prosocial policies during the pandemic period in both Western and non-Western cultures. These findings indeed revealed a similar pattern both in Turkey (Study 1) and the U.S. (Study 2), suggesting that even though the two contexts seemingly differ in cultural approaches to caregiving and social inclusion policies, the impediments of public support for policies to benefit older adults are ideological in nature and thus can be potentially generalizable (McConatha et al., 2004; Pyke & Bengtson, 1996).

Study 2 both statistically and theoretically found support for our hypothesized model over the alternative model: 1) we found an insignificant effect of ageism on social Darwinism in Study 2 and 2) previous studies also showed that economic competition is a predictor of negative attitudes and behaviors toward older individuals, not the other way around (North & Fiske, 2013a, 2016; Ospina et al., 2019).

General Discussion

In this set of studies, we aimed to investigate a) the extent to which individuals' adherence to social Darwinist beliefs predict their support for policies aimed to benefit older individuals and b) whether ageism mediates this relationship. Our theoretical model was consistently supported across two studies conducted in Turkey and the U.S. at the early stage of the COVID-19 pandemic. In both studies, we found that there was a positive relationship between social Darwinism and support for policies aimed to benefit older individuals through the endorsement of ageism.

The results of our research are important in terms of showing the role of social Darwinist attitudes in the prevalence of discriminative behaviors toward older adults in societies during the pandemic period. As such, our findings echoed the findings from some previous quantitative and qualitative studies that revealed that ageist attitudes are increasingly related to prejudice, stereotyping, outgroup derogation, and age-based discrimination in the context of the COVID-19 pandemic, especially on social media (Garcia-Soler et al., 2020; Jimenez-Sotomayor et al., 2020; Lichtenstein, 2021; Lytle et al., 2022; Skipper & Rose, 2021; Taşdelen, 2020). In particular, our research findings are in line with previous studies by showing that ageism has a negative role in public support for policies aimed to benefit older individuals. Our research is among the first to show that ageism is positively related to (and thus may be understood as rooted in) the deleterious ideology of social Darwinism and thus extends previous studies by showing the crucial role of social Darwinism. Noteworthy, across two different cultural contexts—Turkey and the U.S.—we found that the direct association between social Darwinist beliefs and policy support was mediated by ageism. This may imply that the “elimination process” brought by social Darwinism may feed prejudice and discrimination toward older people, especially during the pandemic period. This finding also complements ageism research which addresses the vulnerability of older adults to the virus during the pandemic (Jimenez-Sotomayor et al., 2020; Lichtenstein, 2021; Skipper & Rose, 2021).

Thus, our theoretical model was largely sustained in Western (the U.S.) and non-Western (Turkey) cultures showing that individuals’ reluctance to endorse inclusive policies to benefit older individuals is associated with their adherence to similar exclusive ideologies. The generalizability of this finding is particularly striking. Admittedly, North American culture is generally recognized as individualistic, where independence, autonomy, and age-based egalitarianism are core elements in a shared value system (Hofstede, 1984; Zhang,

2013). In the U.S., beliefs about natural selection and biological essentialism (as well as the endorsement of social hierarchies) have been shown to draw voters' support for a Republican candidate, Donald Trump, in the 2016 elections (Rudman & Saud, 2020). It is thus possible that to the extent that a large proportion of the population believes in the politicized narratives about industriousness and idleness as well as views society split into the "makers and takers" (where +65 individuals are portrayed as dependent), the more likely it is that there will be a lack of support for the policies that prioritize the redistribution of the budget and the reallocation of the resources in favor of older adults. This pattern of results was also replicated in Turkey which is commonly considered an example of a traditional collectivistic society, where intergenerational kinship and interdependence on family are the defining features of one's socialization (İmamoğlu & İmamoğlu, 1992; McConatha et al., 2004; Palmore & Maeda, 1985). Indeed, Turkish culture is characterized by traditional norms where older adults are respected and honored and where the wisdom of older age is viewed as beneficial to other societal members (e.g., Duru-Aşiret et al., 2017; Pyke & Bengtson, 1996). In this society, where the concept of family is essential, older adults are seen as the leaders of the family and as authoritarian figures (McConatha et al., 2004; Palmore & Maeda, 1985). Even though the U.S. and Turkey represent Western and non-Western cultures and thus may differ in caregiving practices (Pyke & Bengtson, 1996), our studies revealed that social Darwinism and ageism might hinder people's support for policies related to older people in both countries. In both samples, the intention not to support prosocial policies toward older adults during the pandemic was predicted by social Darwinist and ageist attitudes.

A possible explanation for this general pattern of the results may be the fact that we conducted both studies during the initial surge of the pandemic (April-May, 2020), when national health care systems in many countries, including Turkey and the U.S., were unable to handle the sanitarian crisis that had emerged (Aronson, 2020; Beall, 2020; TFN, 2020). The

discussions on age-based priority setting favoring older adults in healthcare, indeed, have gained public attention in many societies (Busse, 1999; Lees et al., 2002; Mossialos & King, 1999; Zweibel et al., 1993), with some openly questioning the rationale of such policies with respect to the age productivity curve. Therefore, although older adults are respected in many societies, competition over limited resources brought by the coronavirus may be related to ageist and social Darwinist attitudes toward older people. This competition complements the argument of researchers that scarcity of resources as a result of population growth can lead young people to express more hostile ageism and engage in discriminatory behaviors (McConatha et al., 1991; North & Fiske, 2013b).

We also tested alternative models in which social Darwinism mediated the relationship between ageism and support for policies to benefit older individuals. Across two studies, we found that the results regarding the alternative model were inconsistent. In Study 1, although we found that social Darwinism significantly mediated the association between ageism and policy support, the indirect effect in the alternative model was smaller than that of the indirect effect of the hypothesized model. In Study 2, the mediating effect of social Darwinism was not significant. Therefore, the hypothesized model better captured the nature of the associations between social Darwinism, policies, and ageism than the alternative model. Our current research program suggests that the mediating effect of ageism compared to the mediating effect of social Darwinism better characterizes the pattern between study variables in our study contexts.

From a theoretical perspective, social Darwinism provides people with a general framework of prejudice, which is likely to increase prejudice against certain groups. Previous studies have revealed that social Darwinism is related to exploitative attitudes toward people, desire to dominate, prejudice, and hostility (Radkiewicz & Skarżyńska, 2021; Saud, 2019). In support of this, there are findings in the literature that social Darwinism predicts anti-

immigrant (Saud, 2019) and anti-Semitic prejudices (Marten, 1999) as well as gender, class, and race-based system justification (Rudman & Saud, 2020). Besides these findings, we think that our hypothesized model is theoretically more acceptable than the alternative model as previous studies have also shown that economic scarcity and competition situations are associated with negative attitudes and behaviors toward older people (North & Fiske, 2012, 2013a, 2016; Ospina et al., 2019). We believe that it is the endorsement of social Darwinism that may motivate people to engage in ageist attitudes. However, future studies should also test the sequence of these processes with longitudinal and experimental studies.

While it is clear that the COVID-19 pandemic has led to widespread discrimination against older people, older people are not a homogeneous group. On the contrary, older people may come from very different backgrounds and share other advantaged and disadvantaged identities (e.g., being both old and female at the same time). For example, during the pandemic period, the disadvantages of older women compared to older men doubled because the female identity is already described as weaker and powerless compared to men in the eyes of society (Gutterman, 2022). In addition, being both old and disabled has caused these people to have more difficulties in accessing resources (e.g., scarcity of food and supplies in markets during the early days of the pandemic) and being seen as a burden in the pandemic (Arcieri, 2021; Tekin et al., 2021). As Greenwood (2012) rightly states that intersectional identities together create a more underprivileged identity, future studies should consider the intersectional identities of older people in understanding ageism toward them and thus contribute to understanding the barriers to support for policies that benefit older people.

As mentioned earlier, we conducted both studies during the period marked by a high salience of mortality issues in public discourse (e.g., Google Trends, 2020). Martens and colleagues (2004) state that ageism functions to reduce people's awareness of their own mortality. Before the pandemic, researchers found evidence for mortality salience as a

variable that positively predicts ageism (Bodner et al., 2015; Martens et al., 2004). Older people may be increasing people's mortality salience, as getting older reminds people of illness and ultimately death. For this reason, people may have ageist attitudes and behaviors to keep the mortality salience away from themselves which is often signaled by old age. Thus, the fatalities-related news people have been exposed to during this period may have evoked and induced ageist attitudes and social Darwinist beliefs in the participants. However, we have no data to support or deny this claim. Future studies may elaborate on the potential role of perceived extrinsic mortality risk as a moderator in the relationship between ageism and support for prosocial policies.

Further, we did not use any coronavirus-related variable in our study, but considering the uniqueness of the pandemic period, there may be coronavirus-related variables that may have an impact on support for older individuals. For example, during the pandemic period whether participants hold zero-sum beliefs that one group's gain is the other's loss (Meegan, 2010) may help explain the tension between young and old. Since zero-sum beliefs require the other group to lose in order to win in intergroup relations, it escalates the competition in intergroup relations. Sirola and Pitesa (2017) found that people's zero-sum beliefs increase in times of economic hardship, which reduces their helping behavior toward each other. Given the insufficient healthcare resources and the scarcity of food stock in the markets during the pandemic period, the loss of older people can be a somewhat gain for the young (van Bavel et al., 2020). Future studies may focus on zero-sum beliefs while addressing ageism to enhance our understanding of this conflictual relationship between older and younger people.

Another limitation is that our support for policies was somewhat vague as we did not provide an example of what these policies might be. Therefore, future studies should use better items to make the content of the items more clear. Also, ageism and social policy measures focus on older individuals specifically and there is no indication of age in the social

Darwinism scale in this research. For this reason, we are not sure whether the participants were thinking of older people while reading these items. This question could be clarified in future studies if age is specifically mentioned in the social Darwinism scale. Another limitation worth attention is the observable differences in the Cronbach Alpha coefficient of the social Darwinism measure in Studies 1 ($\alpha = .63$) and Study 2 ($\alpha = .75$), given the discussion of a suggested cut-off of $\alpha = .70$ (Taber, 2018). However, as we developed the social Darwinism measure for the current study and used it for the first time, it can be considered fairly reliable. Future research should expand on the potential multidimensionality of the construct.

Finally, we believe that the present study paves the way for various social policy implementations. Our research reveals that the ways to improve the quality of life of older individuals are to understand the role of ageism and social Darwinism in supporting policies to benefit older people. From this point of view, social workers and policymakers need to implement practices that will eliminate these motivations of social Darwinism. For starters, avoiding the representation of older people as a homogeneous group as “weak and ill” can reduce negative stereotypes about them. Since older people represent a heterogeneous cluster with a great amount of diversity, emphasizing this heterogeneity can change the representation of “vulnerable old” in people’s eyes as well (Gutterman, 2022). In addition, representing older people as vulnerable and in need of help in order to increase sympathy toward them in the media and in daily life may also fuel ageism. For example, showing older people more dependent than they already are can make them subjects of passive consumption, which North and Fiske (2013b) mentioned. Thus, welfare programs, pensions, and healthcare expenses for older individuals can become prominent in the eyes of young people. As a result, young people can be more reactive to the policies that support older individuals.

Further, seeing older individuals as an economic threat may facilitate the justification of ageism. In business life, for instance, older workers are often subjected to discrimination in recruitment processes (Francioli & North, 2021) and forced into retirement (Powell, 2010). The difficulties arising from the COVID-19 pandemic, especially the scarcity of resources in health care, may have prompted people toward social Darwinist and ageist attitudes. For this reason, emphasizing what older people have contributed to society in the past and will contribute in the future, and the recognition of their rights at the institutional level can encourage people to support policies for older individuals. In a related study, Lytle and Levy (2022) found that when young participants watched a short video highlighting the contributions of older people to society, their positive stereotypes toward older individuals increased. Since consumption-based discriminatory attitudes affect people's support for prosocial policies negatively, highlighting the contributions of older adults to society in the media may raise their awareness. Emphasizing solidarity-themed awareness in society as well as health awareness can act as a buffer against discriminatory behaviors.

In conclusion, improving the well-being of older adults, as one of the most affected population groups during the ongoing pandemic, requires urgent action. Recognition of older people's agency, acknowledgment of their special needs, and protection of their human rights must become a societal priority, reflected in nationally consistent policies to benefit older individuals (e.g., Daoust, 2020; Georgantzi, 2020). Our research contributes to the scholarly effort to identify the role of social-psychological phenomena on public support for social and economic policies to benefit older individuals. It suggests that people's reluctance to support governments' expenditures on older adults through tailored state-level policies may be rooted in their social Darwinism, the ideology of natural selection. Especially, considering the scarcity of resources during the pandemic period, seeing older people as an economic threat due to their intensive usage of healthcare resources and welfare programs has led to the

prevalence of consumption-based ageism. When both the scarcity of resources emphasized by social Darwinism and the consumption-based aspect of ageism are considered together, it will be useful to offer solutions focused on economic competition in interventions targeting intergenerational conflict in the post-pandemic period. As the ongoing COVID-19 pandemic has disproportionately affected older adults across the world (Tekin et al., 2021), we urge future research to design social interventions in order to tackle both social Darwinism and ageism at their roots.

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Table 1

Demographic information of Study 1

	<i>Frequency/Mean/SD</i>
<i>Gender</i>	
Female	732
Male	493
Other	6
No response	30
<i>Ethnic Identity</i>	
Turk	917
Kurd	94
Circassian	30
Arab	12
Other	168
No response	40
<i>Age</i>	<i>M = 31.59, SD = 9.44</i>
18-25 years old	395
26-35 years old	468
36-45 years old	269
46-55 years old	76
56-64 years old	20
No response	33
<i>Education</i>	
MSc/PhD degree	296
University degree (4 years)	595
University degree (2 years)	65
High school degree	269
Secondary school degree	6
Primary school degree	1

RUNNING HEAD: Social Darwinism and Ageism

No response 29

Political Orientation $M = 3.08, SD = 1.58$

Range = 1 (*left*) – 9 (*right*)

Table 2

Means, standard deviations, and correlations between variables in Study 1

Variables	<i>M</i> (<i>SD</i>)	1	2	3	4	5	6
1. Gender	1.41 (0.5)	-	.046	-.094**	-.039	.093**	-.143***
2. Age	31.59 (9.44)	-	-	.426***	-.048	-.244***	.284***
3. Education level	6.73 (1.07)	-	-	-	-.093**	-.175***	.205***
4. Social Darwinism	3.37 (1.39)	-	-	-	-	.292***	-.205***
5. Ageism	1.99 (0.97)	-	-	-	-	-	-.454***
6. Support for policies to benefit older individuals	5.94 (1.03)	-	-	-	-	-	-

Note. *** $p < .001$, ** $p < .01$

Table 3

Demographic information of Study 2

	<i>Frequency/Mean/SD</i>
<i>Gender</i>	
Female	123
Male	85
Other	2
<i>Ethnic Identity</i>	
White	154
Black	19
Asian	13
Hispanic	10
Mixed ethnic background	9
Native American	1
Other	2
No response	2
<i>Age</i>	<i>M = 32.34, SD = 11.57</i>
18-25 years old	77
26-35 years old	65
36-45 years old	39
46-55 years old	21
56-64 years old	8
<i>Education</i>	
MSc/PhD degree	27
University degree	78
Associates degree	28
High school degree	67
Some high school degree	1
Did not complete any high school	5

RUNNING HEAD: Social Darwinism and Ageism

Other 4

Political Orientation $M = 3.30, SD = 2.64$

Range = 0 (*liberal*) – 10 (*conservative*)

Table 4

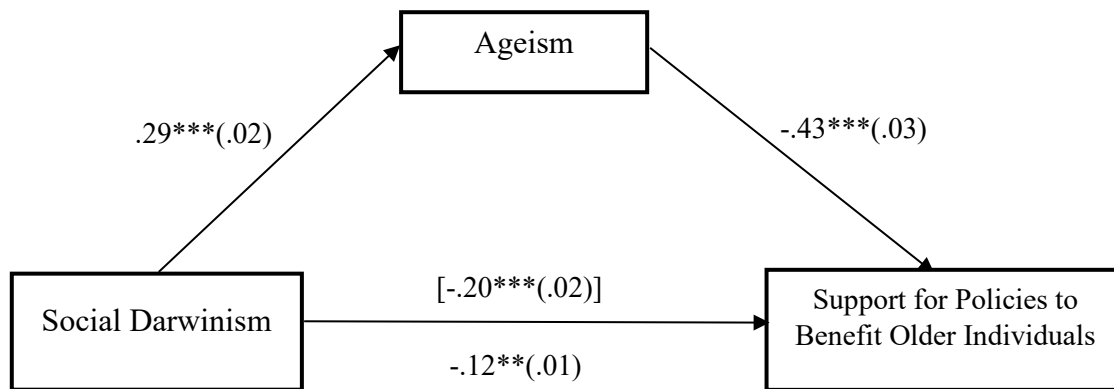
Means, standard deviations, and correlations between variables in Study 2

Variables	<i>M</i> (<i>SD</i>)	1	2	3	4	5	6
1. Gender	1.42 (0.5)	-	-.157*	.030	.089	.228**	-.202**
2. Age	32.34 (11.57)	-	-	.157*	.039	-.058	.171*
3. Education level	4.31 (1.23)	-	-	-	-.125	.070	.076
4. Social Darwinism	3.45 (1.39)	-	-	-	-	.326***	-.136*
5. Ageism	3.13 (0.84)	-	-	-	-	-	-.332***
6. Support for policies to benefit older individuals	5.25 (1.19)	-	-	-	-	-	-

Note. *** $p < .001$, ** $p < .01$, * $p < .05$

Figure 1

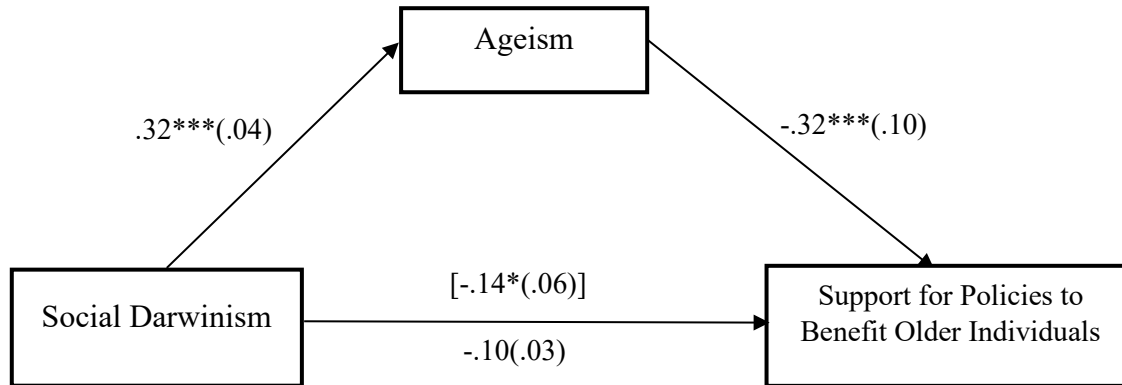
Mediational analysis illustrating the direct and indirect associations of Study 1



Note: The figure displays standardized regression coefficients (and standard errors). The numbers in brackets represent the standardized regression coefficient (and standard error) for the relation between social Darwinism and support for policies to benefit older adults after adjusting for ageism. *** $p < .001$, ** $p < .01$.

Figure 2

Mediational analysis illustrating the direct and indirect associations of Study 2



Note: The figure displays standardized regression coefficients (and standard errors). The numbers in brackets represent the standardized regression coefficient (and standard error) for the relation between social Darwinism and support for policies to benefit older individuals after adjusting for ageism. $^{***}p < .001$, $^{*}p < .05$.

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