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Differences and Disparities in Ageism Affecting Older US Adults: A Review

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Abstract

Purpose of Review: This review summarizes findings from quantitative research studies published between 2010 and 2022 providing insight on sociodemographic differences and disparities in ageism among US adults ages 50 and older.

Findings: Across 21 studies, disparities in ageism were more consistently found such that those who were older (57% of studies), with less education (64%), and of lower socioeconomic status (100%) reported more ageism than their counterparts. Amount of ageism did not differ by sex in the majority (71%) of studies. Findings regarding race/ethnicity were mixed. Other possible differences in ageism, assessed in a small number of studies, were patterned by employment characteristics, geographic residence, religiosity, and political affiliation but not by marital or employment status.

Summary: Given that ageism is both common and associated with poor health outcomes, identifying disproportionately affected segments of the older adult population is a necessary prerequisite for developing targeted interventions to reduce negative outcomes linked to ageism and associated health disparities. Evidence within this review suggests that the patterning of ageism may deviate from that typically documented for other social and structural disadvantages.

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Author Contributions

All authors contributed to the study conception, design, and methodology. Literature searches and data collection were conducted by Lauren Elias and Josie Greenwood. Julie Ober Allen conducted the data analysis and took the lead role in drafting the manuscript. All authors read and approved the final manuscript.

Author Information

Julie Ober Allen, PhD, MPH, is an Assistant Professor of Health Promotion and the Director of the Stress and Health Disparities Lab at the University of Oklahoma. Her research investigates how chronic stressors rooted in social and structural inequities (e.g., discrimination, race and gender ideologies, ageism) get “under the skin” to generate disparities in chronic disease among older US adults.

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Competing Interests

The authors have no relevant financial or non-financial interests to disclose.

Some groups traditionally considered to be socially marginalized were found to report more ageism while others did not.

Keywords

Ageism; discrimination; disparities; health; older adults; United States

Ageism targeting older adults may be the most common and socially acceptable form of discrimination in the US [1-4]. Estimates suggest that between 77% and 93% of older adults report experiences with ageism [2, 5]. Ageism is defined as discrimination, prejudice, and narrow stereotypes related to aging processes, old age, and older adults [6]. While inextricably linked to chronological age and biological aging processes, ageism is a socially constructed phenomenon rooted in dominant beliefs, attitudes, and expectations about life at different ages and stages within the life course. While people of any age may be discriminated against because of their age, older adults are believed to be more negatively affected by ageism because they are systematically disempowered, devalued, and excluded across multiple life domains [7]. While definitions of “older adults” vary, age discrimination is commonly reported among those ages 50 and older [8] and is most often identified as beginning when people are in their 50s [9].

Ageism is deeply entrenched in contemporary society. It is embedded in major life events, such as being forced out of the workforce or one’s home primarily due to factors related to age [10-12]. It can also be present in routine aspects of older adults’ day-to-day lives, which is referred to as everyday ageism [2, 13]. Ageism manifests and affects the lives of older adults in a variety of ways: commonplace beliefs and prejudices about aging and older adults; the ubiquity of social and environmental cues reinforcing these messages; internalization of ageist stereotypes; older adults’ concerns about how ageism may shape others’ judgements and behaviors; the ways in which all of these affect older adults’ health and health behaviors; and being the target of age-based discrimination in interpersonal interactions, institutions, and policies [14-16].

Although the literature is relatively scant, several systematic reviews have found consistent associations between ageism and health [7, 17, 18]. Linkages between ageism and health have been less frequently investigated when compared to the potential health ramifications of other types of discrimination [1]. For example, a PubMed keyword search of literature published since 2000 generated 5.5 times as many articles on racism than ageism and twice as many articles on sexism. Health outcomes that have been linked to ageism include poor mental health and lower overall well-being, impairments in physical and cognitive functioning, a variety of medical conditions and diseases, and premature mortality [7, 17, 18]. While it is probable that relationships between ageism and health are reciprocal, both theoretical [1, 14-16] and empirical [19, 20] research suggest that the effect of ageism on health is more substantial than the converse.

One important but understudied characteristic of ageism is that, like other social and structural disadvantages, it likely affects some segments of the population more than others. Some groups of older adults are posited to experience ageism at higher rates, more frequent and severe forms, and to be at increased risk for adverse health outcomes

linked to ageism. In the US, social, economic, and political disadvantages with implications for health are generally patterned such that they are disproportionately experienced by socially marginalized groups. Commonly identified marginalized sociodemographic groups include women, racial and ethnic minorities, those with less formal education and lower socioeconomic status, and older adults. Other sociodemographic characteristics less consistently associated with disadvantage include marital status, family and household composition, geographic location, religion, and political affiliation, among others. Further, sociodemographic characteristics intersect to differentially shape the lived experiences, advantages, disadvantages, and health outcomes of groups within our population. For example, older African American women may be multiply marginalized, such that they experience ageism, racism, sexism, but also distinct discrimination related to the intersection of these characteristics (e.g., gendered ageism) [21].

This review article seeks to summarize the findings of recent research providing insight on sociodemographic differences and disparities in ageism among US adults ages 50 and older. In this paper we use the terms *differences* and *disparities* to emphasize that differences refer to things that distinguish one group from another, while disparities refer to the persistent, inequitably distribution of disadvantages that disproportionately harm the health and well-being of socially marginalized groups. Given the premise that ageism is a disadvantage that is unlikely to be experienced equally by all older adults, combined with its prevalence and the growing body of evidence implicating ageism in adverse health and other outcomes, identifying groups at increased risk for experiencing ageism and associated harms can inform strategies to promote older adult health. Further, identifying differences and disparities in ageism may advance our understanding and potential for intervening upon mechanisms generating the persistent health disparities documented within the older adult population [22]. Since it has not yet been clearly established which sociodemographic groups experience ageism more than others, this study addresses this gap in the literature.

Methods

We conducted a review of literature on sociodemographic differences and disparities in ageism among older US adults. For the current study, differences and disparities in ageism were conceptualized as including sociodemographic differences in: 1) amount of ageism experienced; and 2) relationships between ageism and health (e.g., moderation analyses indicating that some sociodemographic groups may be more vulnerable to outcomes associated with ageism than others). In line with the limited research on this topic to date, this study emphasizes general patterns of sociodemographic group differences in ageism including identification of the presence/absence of differences and disproportionately affected groups. It does not seek to quantify the magnitude of sociodemographic differences in ageism.

A multiphase, systematic process was used to identify relevant publications between June and August 2022 for inclusion. Figure 1 shows the study search flowchart. The article search occurred in three phases. First, the PubMed database was used to identify published articles assigned the Medical Subject Heading (MESH) term of “ageism” published between 2010 and 2022 in English. This search was further refined by excluding articles assigned

MESH terms denoting various age groups (e.g., adolescents), geographic regions (e.g., Germany), and article types (e.g., qualitative research, review and meta-analysis) not relevant to the current study. Next, keywords related to ageism were used to identify PubMed articles overlooked in the first search phase. Relevant articles may not have been assigned the “ageism” MESH term, either because their subject or terminology diverged from the criteria used for the “ageism” MESH term or because they were not assigned any MESH terms, which is the case for approximately 9% of PubMed articles including newly indexed papers. Key words used were ageism, ageist, age discrimination, self-perceptions of aging, age prejudice, age stereotypes, age identity, and unequal aging, which were applied in conjunction with the same constraints and exclusions used the first search. Finally, additional articles were identified through manual searches of relevant bibliographies.

The list of articles identified for inclusion in the study was narrowed down through two screening phases. In the preliminary screening phase, article titles, abstracts, and easily accessible full-text articles were evaluated for potential inclusion based on the study eligibility criteria. Article eligibility criteria were: 1) published in English; 2) published since 2010; 3) empirical studies utilizing quantitative methods; 4) studies with older adult samples, defined as exclusively or predominantly (>50%) adults ages 50 years and older, or in which data were provided so as to allow for analysis exclusively among older adults; 5) sample sizes of 30 older adults; 6) studies with exclusively or predominantly US samples; and 7) comparison of the amount of ageism and/or nature of the relationship between ageism and health for two or more groups differentiated by sociodemographic characteristic (e.g., age or age group, sex, race, ethnicity, marital status, family and household characteristics, education, income, employment status, place of residence, migration background, language, religion, political affiliation, sexual orientation, and/or gender identity). Articles incompatible with these criteria were excluded immediately. Articles consistent with these criteria or for which it was indeterminate were retained. Full-text versions were obtained of all remaining articles, which were comprehensively screened for eligibility. The most common reasons for excluding articles during the second phase of screening were non-US sample and/or absence of a comparison of ageism by sociodemographic characteristic.

For each article, we abstracted information on the data source, study design, sampling methods, sample characteristics, ageism measure(s) used and types assessed, groups compared (e.g., sociodemographic characteristic(s) serving as a basis for comparison), and a summary of relevant findings. When possible, we included information missing from the articles that was obtained from the authors via email. In most cases, we relied on author-reported statistical test results. When statistical comparisons of interest to the review were not reported and sufficient data were available, we assessed group-based statistical differences ourselves. For the purpose of this review, the threshold for statistical significance was set at $p < .05$ for all analyses. Given the limited research conducted on this topic to date, we did not evaluate study quality or assess potential publication bias but instead summarized key findings.

Results

Characteristics of Included Studies

Twenty-one articles met the criteria for inclusion in this review. The list of included studies and their characteristics are reported in Table 1. Ten studies analyzed data from large social and health research datasets, and most of these utilized dataset-specific recommended techniques for generating estimates that were nationally representative of older adults living in US. Six studies used the Health and Retirement Study (HRS), and two used data from the National Poll on Healthy Aging (NPHA), resulting in duplicate participants across studies. One study each used data from the Panel Study of Income Dynamics (PSID) and the Midlife in the US (MIDUS) study. Eleven studies analyzed data collected from different convenience samples. The majority of included studies (18) were observational survey studies in which participants self-reported their experiences with ageism. The Chopik and Giasson [27] study included both an experimental component and self-report on ageism survey items. The study by Smith and colleagues [43] was solely experimental, and the Wilson and Roscigno [55] study used records of occupational trends as a proxy for workplace ageism.

Study sample sizes ranged from 101 to 61,732, with nine relatively small samples comprised of 100-400 participants, seven moderate-sized samples of approximately 1000-2000, and five large samples exceeding 4000. The mean sample size was 4940 and median was 1416. Nineteen studies included exclusively older adults (ages ≥ 50). Of these, the majority used approximately age 50 as the lower limit of age range, though the youngest participants in five studies were in their 60s. Study upper age limits varied, with some sample ages spanning ten years and others >50 years and included adults over age 100. Across studies, the mean participant age was 66.3, unweighted, or 61.3, weighted by sample size.

Assessment of Ageism

Included studies assessed older adults' experiences with and internalization of ageism using a variety of self-report survey scales and items, some of which are widely used and psychometrically validated [26], and some of which were novel [2, 13] or ageism-specific modifications to existing instruments [42]; a minority of studies used experimental protocols or proxy measures in lieu of [43, 55] or in combination with [27] survey scales (Table 1). The most frequently used ageism measures were Healthcare Stereotype Threat attributed to age [23] (3 studies), the Attitude Toward Own Aging subscale from the Philadelphia Geriatric Center Morale Scale [25] (3 studies), the Everyday Discrimination Scale attributed to age [26] (3 studies), and the Everyday Ageism Scale (2 studies) [13]. Four studies measured ageism with multiple scales and/or strategies. Across studies, amount of ageism was operationalized as either a binary variable indicating any ageism (yes/no) or continuously with scales capturing some combination of ageism frequency, severity, and different examples experienced.

Types of ageism assessed in included studies were classified in four categories: age stereotypes, internalized ageism, concern about ageist stereotypes/discrimination, and age discrimination. Age stereotypes refer to general beliefs, stereotypes, and prejudices related to old age, aging processes, and older adults that participants encounter and were

assessed in three studies. Internalized ageism refers to when older adults believe ageist stereotypes, themselves, and was assessed in 11 studies. Concern about ageist stereotypes/discrimination includes scales tapping into concern and anxiety about how other people's ageist assumptions and stereotypes may shape those people's perceptions, judgment, or behavior when interacting with older adults such as themselves and was assessed in five studies. Age discrimination refers to a self-report of discrimination due to age or age in combination with other reasons and was assessed in nine studies.

Differences and Disparities in Ageism

Of the 21 included studies, five articulated study objectives of identifying sociodemographic differences in amounts of ageism [2, 27, 30, 39, 55], and two articulated objectives of identifying whether sociodemographic characteristics moderated associations between ageism and health outcomes [43, 48] (Table 1). For the remaining studies, we extracted insight on sociodemographic differences in ageism provided as part of background or supplementary information generated in the pursuit of other objectives.

Included studies assessed differences and disparities in ageism experienced by older adults by the sociodemographic characteristics of age, sex, race/ethnicity, marital status, household composition, education, finances, employment, geography, religion, and political affiliation (Tables 1 and 2). All reported differences were statistically significant with $p < .05$, unless indicated otherwise. Information about differences in ageism by age, sex, race/ethnicity, and education was provided in more than half the studies. Other sociodemographic differences were less frequently assessed.

Disparities in ageism were most consistently reported by *education* and chronological *age*. More ageism was associated with lower levels of education in 64% of the 11 studies assessing this characteristic and older age in 57% of 14 studies. A mix of small, moderate, and large studies reported differences in ageism by education and age, while small studies with less statistical power to detect group-based differences were overrepresented among studies reporting no differences.

Findings regarding ageism differences by *race/ethnicity* were mixed. Of the 12 studies assessing differences by race and/or ethnicity, 42% reported more ageism among racial/ethnic minority groups. Seventeen percent reported more ageism among majority groups, and 75% reported no racial/ethnic differences at all or for some pairwise comparisons. There was not a clear pattern of findings regarding race/ethnicity related to study size.

Sex differences were absent in 71% of the 14 studies with relevant information. Studies reflecting a range of sample sizes reported no sex differences.

Socioeconomic status was assessed in four studies. Low socioeconomic status was associated with more ageism without exception. Differences in ageism by *employment* status were mixed, with no difference in 3 out of 5 studies. Experiences with ageism differed by some, but not all, other employment characteristics examined.

Findings from the few studies examining ageism differences by *other sociodemographic characteristics* suggested possible differences such that more ageism may be reported by those living in rural areas, in the Midwest, with lower religiosity, and who identify politically as Republican and Independent. Ageism was not found to consistently differ by marital status or household composition.

Discussion

This narrative review adds to the scant literature on sociodemographic differences and disparities in ageism among contemporary US adults ages 50 and older. Findings indicated that ageism is not experienced equally by all older adults. Rather, it disproportionately affects some groups and potentially puts them at increased risk for negative health and other outcomes associated with ageism. We found differences in ageism within the older adult population that generally mapped onto chronological age, which was anticipated given that age is a fundamental element embedded in the conceptualization and expressions of ageism in society. We also found that amount of ageism experienced also differed by other sociodemographic characteristics that are not directly related to the definition of ageism, such as education and socioeconomic status. Findings add to the evidence in support of an intersectional approach to examining social determinants of health, in that certain segments within the population are multiply marginalized [21]. Collectively, findings suggest that the patterning of ageism may deviate somewhat from the typical patterning of social and structural disadvantages, which are disproportionately experienced by members of socially marginalized groups. Some socially marginalized groups were generally found to report more ageism (older, less educated, and lower socioeconomic status) while others did not (racial/ethnic minorities, women, not employed).

There are several possible explanations for why we documented trends in the published literature suggesting that ageism may be more commonly experienced by groups with less education and lower socioeconomic status. Groups with more education and wealth may have more knowledge, financial resources, and other advantages at their disposal to disguise appearance-related indicators of aging, cope with aging-related physical changes, and support healthy aging. As a result, these groups may have fewer negative experiences of aging, including both ageism in interpersonal interactions and reinforcement of internalized ageist beliefs and attitudes. These may result in lower report of ageism. In addition, these same advantages may enable some older adults with more education and wealth, particularly those at the younger end of the older adult age range, to not self-identify as older adults and not find ageist beliefs and stereotypes self-relevant [56-58]. These individuals may report lower levels of ageism either because they do not experience it or because they do not attribute age-based discrimination they experience to their age. Alternatively, or perhaps in combination, older adults with less education and lower socioeconomic status may be more likely to look and/or act stereotypically older. This may result in them experiencing more ageism in interpersonal interactions, since appearance is an important determinant of others' perceptions of age. Older adults with lower education levels and socioeconomic status are more likely to experience harsher living and working conditions, have greater exposure to chronic sources of stress, and engage in unhealthy behaviors such as smoking across the life course, all of which contribute to premature aging in appearance and physical deterioration.

The mixed findings regarding differences in ageism by race/ethnicity were unanticipated. Numerous social and structural disadvantages, (e.g., other forms of discrimination, residence in resource-poor communities, poverty, poor access to quality healthcare) are patterned by race in the US. Racial and ethnic minority groups experience more disadvantages of many kinds and greater social marginalization when compared to their non-Hispanic White counterparts, who benefit from affiliation with dominant racial/ethnic group possessing disproportionate political, economic, and social advantages [59]. For this reason, we had anticipated that ageism, as an example of a socially-constructed disadvantage, would also be more commonly experienced by racial and ethnic minority groups. It is plausible that the mixed findings reflected methodological issues across and within studies. The racial and ethnic categories used in the included studies were inconsistent, which made summarizing and synthesizing findings across studies challenging. In addition, many studies combined the data of distinct racial and ethnic groups together for analysis (e.g., non-White and Other categories). This approach inhibited detection of potential differences between those groups and may have biased the results of the racial/ethnic group comparisons that were conducted, particularly increasing the risk that differences in ageism were underestimated or concealed. Indicative of this, the two studies that included comparisons between more than three racial/ethnic groups [2, 39] reported that among those racial and ethnic minority groups often grouped together in other studies, some reported more ageism (Asian American and Hispanic) while others reported less (Black).

Alternatively, the mixed findings for race/ethnicity, as well as the general absence of differences in ageism by sex, may be due to variations in how different racial and ethnic groups and men and women respond to ageism survey items (the predominant strategy for collecting ageism data in included studies), perceive ageism, and/or experience ageism. For example, stigmatized groups have been shown to avoid acknowledging and reporting discrimination; researchers argue that this may be motivated by internal factors, such as preserving self-esteem and perceived control, or external reasons, such as avoiding associated social costs [60]. Alternatively, people that have experienced racism and/or sexism throughout lives may be more habituated to discrimination or more likely to attribute discrimination to their race/ethnicity or sex rather than their age [2]. Either of these circumstances would cause racial and ethnic minorities and women to underestimate self-reported experiences with ageism. Finally, experiences of ageism may be qualitatively different for members of different racial/ethnic groups and/or for men and women. Researchers have explored the notion of gendered ageism [21, 61], with a particular emphasis on how age and gender ideologies intersect to uniquely influence older women's experiences and social status. Women experience more ageism related to their appearance than men [21] and may be more likely to internalize ageist beliefs and values related to youthful beauty given lifelong socialization and social rewards linked to female appearance. Men, on the other hand, may be more affected by ageism when their capacity to perform key social and cultural roles is insulted, restricted, or altered, as role fulfillment has been identified as a central tenet of males' identities [62].

Recent systematic reviews of ageism research [17, 63] have identified several issues that may account, in part, for the modest number and quality of studies providing insight on the patterning of ageism within the older adult population. These include a lack of consensus

on the best way to measure ageism and a dearth of high quality, validated measures that capture the many different types of ageism that older adults may experience. Consistent with this, documenting sociodemographic differences and disparities in ageism was not an identified research objective for the majority of the studies included in this review. These conditions made quantifying the magnitude of group-based differences in ageism across studies problematic. Therefore, we elected focus on the qualitative nature of group-based differences (e.g., presence/absence and direction of sociodemographic differences), which were posited to be more consistently detected across studies with diverse designs, measurement instruments, and objectives. Given the limited research in this area, we also opted to evaluate literature published over a longer timeframe (2010-2022) than what is typically used in review articles covering timely topics. While this means that our review covered a time period during which practices, policies, and awareness of ageism have changed, it provides a larger literature upon which to generate robust findings. This timeframe also coincided with an increase in the amount of published ageism research in PubMed beginning in 2010 and continuing to today.

Implications for Intervention and Future Research

This review summarizes current research knowledge on differences and disparities in ageism within the older US adult population, which is a necessary prerequisite for developing targeted interventions to reduce ageism for those most affected. Further, given that ageism is both common and associated with a variety of negative health outcomes, efforts to combat ageism focused on sociodemographic groups identified as disproportionately affected have potential to both improve health and diminish health disparities within the older adult population. Rigorous, population-level research is needed to confirm the general findings produced in this review and quantify the magnitude of sociodemographic differences in ageism. This would benefit from attention to several issues hindering current research identified in this review including the lack of: investigating group-based differences in ageism as a research objective; widely used, validated, comprehensive ageism survey instruments; and consistent and distinct sociodemographic categories (especially for race and ethnicity). Other strategies that could be advantageous for building on this line of research include longitudinal study designs for further investigation of causality, methodology for investigating the consequences of sociocultural and structurally embedded ageism, research assessing the generalizability of mechanisms linking ageism and health identified in experimental research, and studies investigating whether objective indicators of ageism match self-report.

Limitations

First, despite our systematic and extensive process, we may have overlooked relevant articles. We also did not review research reported in books or the grey literature. Second, given the few studies that adopted examining sociodemographic differences and disparities in ageism as an objective, the nature of data provided by some studies incorporated into this review is subject to critique. We also did not perform study quality assessments, weight findings by study sample size, or conduct a meta-analysis, as these activities are premature given the current state of the literature. Finally, the majority of included studies used measures of self-reported ageism that may be affected by social desirability, inaccurate

recall, and other factors, thereby resulting in biased estimates of ageism. If self-report biases differentially affect some sociodemographic groups more than others, this could prevent accurate detection of differences.

Conclusions

The presence of sociodemographic differences and disparities in ageism across studies included in this narrative review support the growing body of evidence that disadvantages are unevenly distributed within society. This review found suggestive evidence of disparities in ageism within the older US adult population patterned by age, education, and socioeconomic status, mixed findings related to race and ethnicity, and no differences in ageism by sex. It also identified other potential associations between sociodemographic characteristics and ageism warranting further study.

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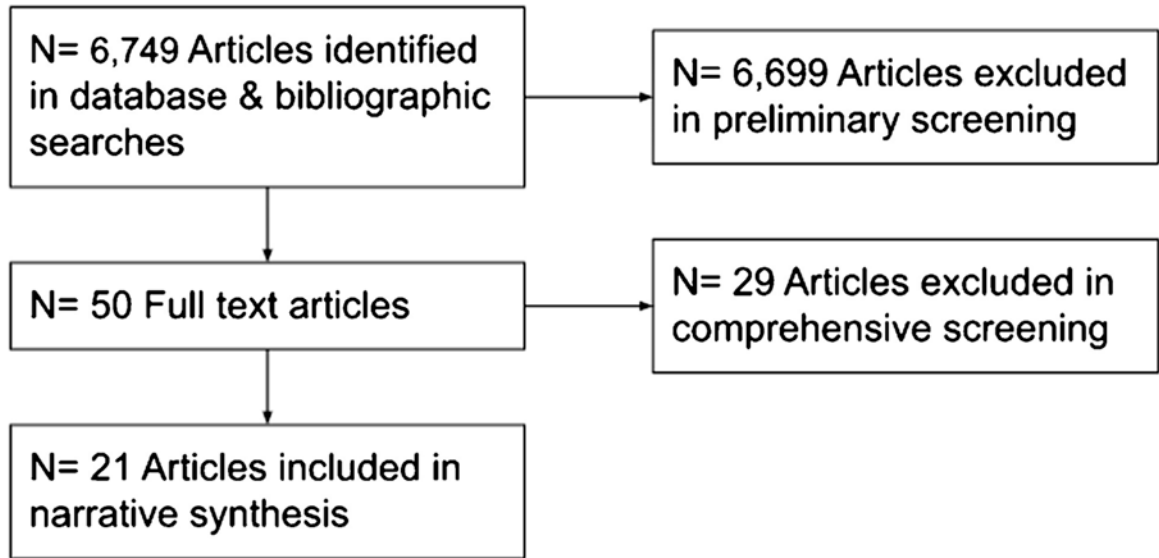


Figure 1. Flowchart of literature search and screening

Search criteria: Quantitative studies published in English between 2010 and 2022 providing insight on sociodemographic differences and disparities in ageism among US adults ages 50+. Database searches were conducted in PubMed with the “ageism” MESH term and keywords of ageism, ageist, age discrimination, self-perceptions of aging, age prejudice, age stereotypes, age identity, and unequal aging.

Table 1.

Articles assessing differences and disparities in ageism

Reference	Data source & study design	Sampling methods & sample characteristics	Ageism measure & types assessed	Groups compared	Main findings on differences/ disparities*
Abdou et al. [23]	HRS special module Data collected: 2012 Observational self-report survey study	Random subsample from nationally representative sample N=1479 Ages: 50, mean 65.9	Healthcare stereotype threat attributed to age Concern about ageist stereotypes	Age, in years	Older age associated with greater odds of reporting any age-related healthcare stereotype threat
Allen et al. [13]	NPHA Data collected: 2019 Observational self-report survey study	Nationally representative household sample N=2012 Ages: 50-80, mean 60.4	Everyday Ageism Scale Age stereotypes Age discrimination Internalized ageism	Age group of 50-64 v. 65-80	More ageism reported by 65-80 age group (v. 50-64)
Allen et al. [2]	NPHA Data collected: 2019 Observational self-report survey study	Nationally representative household sample N=2035 Ages: 50-80, mean 62.6	Everyday Ageism Scale [13] Age stereotypes Age discrimination Internalized ageism	Objective of identifying sociodemographic differences in ageism Age group of 50-64 v. 65-80; sex: race/ethnicity (Hispanic, non-Hispanic Black, non-Hispanic White, Other/Multiracial); marital status (married/partnered v. not); education (HS, some college, BA/BS); annual household income (<\$60k v. \$60k); employment status (employed v. not); metro area; region (West, Midwest, South, Northeast)	More ageism reported by 65-80 age group adults (v. non-Hispanic White and Hispanic education and lower income, not employed, and living in rural areas and in the Midwest (v. Northeast) No differences by sex, marital status, and other pairwise race/ethnic, higher education, and region comparisons
Choi et al. [24]	HRS Data collected: 2016 Observational self-report survey study	Nationally representative sample N=5914 Ages: 50-98, mean 76.4	1 Attitude Toward Own Aging subscale from Philadelphia Geriatric Center Morale Scale [25] 2 Everyday Discrimination Scale attributed to age (or age & other reasons) [26] Internalized ageism Age discrimination	Sex	No sex differences in amount of reported internalized ageism or report of any age-based discrimination.
Chopik & Giasson [27]	Project Implicit Demo Site Data collected: 2002-2015 Experimental study	Convenience sample, predominantly US (77%) N=61,732 older adults	1 Implicit Preference for Young People Compared to Old People (Implicit Association Test [28])	Objective of identifying sociodemographic differences in ageism Age, in years	Within the older adult portion of the sample (ages 50), implicit ageism trended up and both explicit ageism and acknowledgement

Reference	Data source & study design	Sampling methods & sample characteristics	Ageism measure & types assessed	Groups compared	Main findings on differences/disparities*
Grasson et al. [30]	combined with observational self-reported survey data	(8.8% of sample) Ages: ages 50	<p>2 Explicit Preference for Young People Compared to Old People [29]</p> <p>3 Acknowledgement of own ageist prejudices</p> <p>Internalized ageism</p>	Objective of identifying sociodemographic differences in ageism	of ageist prejudices trended down with increasing age ⁷
Halpin et al. [31]	HRS Data collected: 2010/2012 Observational self-report survey study	National sample, not weighted to be nationally representative N=13,623 Ages: 50-101, mean 67.4	<p>1 Everyday Discrimination Scale due to age (or age & other reasons) [26]</p> <p>2 Attitude Toward Own Aging subscale from Philadelphia Geriatric Center Morale Scale [25]</p> <p>Age discrimination Internalized ageism</p>	Age groups (50s, 60s, 70s, 80); sex; race (White v. non-White); marital status (married v. not); education (< 12 years v. >12 years); household wealth quintiles; employment status (working v. not)	Older age groups more likely (v. 50s age group) to attribute any discrimination to age in unadjusted and adjusted models Older age groups, men, not being married, less education, and less wealth (2 of 4 lower quintiles) associated with attributing any discrimination to age in models adjusting for sociodemographics, health, and psychological characteristics; race and employment status were not Association between reporting any age discrimination and internalized ageism moderated by age group, such that younger age groups reporting any age discrimination were more likely to report high levels of internalized ageism
Hooker et al. [33]	Emory University Senior Mentoring Program data Data collected: 2013-2014 Observational self-report survey (evaluation) study	Purposive sample of program enrollees in Georgia N=101 Ages: 64-99, mean 77.6	Concerns/anxiety about ageism-based scenarios subscale (modified) from Age-Based Rejection Sensitivity Questionnaire [32] Concern about discrimination	Age, in years; sex; race (White v. non-White); marital status (single, married, divorced/separated, widowed); household composition (lives with family, alone, other); education (<HS, HS, Associates degree, BA/BS, Graduate degree); employment status (FT, PT, unemployed, retired); religion (Christian, Jewish, other, none); religiosity (service attendance frequency)	Higher levels of concern/anxiety over ageism associated with being non-White and lower religiosity in models adjusting for sociodemographics and previous scores of concern and experiences with ageism. Age, sex, marital status, household composition, education, work status, and religion were not
Maxfield et al. [34]	HRS Data collected: 2008 Observational self-report survey study	Nationally representative sample N=4,467 Ages: 51-96, mean 69.5	Everyday Discrimination Scale due to age (or age & other reasons) [26] Age discrimination	Age, in years; age groups (51-64, 65-79, 80); sex; race (Black, White, Other); education (< HS v. >HS); household wealth quintiles	Report of any age discrimination was associated with older age and less education and wealth before and after adjusting for sociodemographics, health factors, and self-perceptions of aging. It was not associated with sex or race.
Maxfield et al. [34]	Data collected: 2020 Observational self-report survey study	Convenience sample, predominantly US (77%) N=1878 Ages: 50, mean 63.1	Age-based healthcare stereotype threat Concern about ageism stereotypes	Age, in years; sex; race (White v. all others); ethnicity (Hispanic v. not)	Those reporting any age-based healthcare stereotype threat were more likely to be older and female. No differences by race or ethnicity

Reference	Data source & study design	Sampling methods & sample characteristics	Ageism measure & types assessed	Groups compared	Main findings on differences/disparities*
McConatha et al. [35]	Data collected: 2018-2019 Observational self-report survey study	Convenience sample from mid-sized university in Pennsylvania N=117 Ages: 50-79, mean 59.6	1 Workplace age discrimination scale [36] 2 Workplace generational inclusiveness subscale from Workplace Intergenerational Climate Scale [37] 3 Negative aging meta-stereotypes scale [38] Age discrimination Age stereotypes	Faculty v. administration/staff	Mean scores on all three ageism measures did not vary by job type (faculty v. administration/staff)
Menkin et al. [39]	Worth the Walk program data Data collected: Observational self-report survey (evaluation) study	Purposive sample of hypertensive program enrollees in California N=229 Ages 60-96, mean 73.9	Expectations Regarding Aging [40] Internalized ageism	Objective of identifying sociodemographic differences in ageism Age, in years; sex; race/ethnicity (African American, Hispanic, Korean, Chinese); education (8 th grade, 9-12 th , some college)	Chinese participants reported the lowest age expectations, followed by Korean, Hispanic, and African American; all pairwise differences were significant except Chinese v. Korean in unadjusted models. Pattern remained consistent after adjusting for sociodemographics, social and health variables, except African American v. Hispanic no longer differed. Being male and less education were associated with lower age expectations but age was not in adjusted models.
Phibbs & Hooker [41]	HRS special module Data collected: 2012 Observational self-report survey study	Nationally representative community residing sample N=1416 Ages: 50-102, mean 65.7	Age-based healthcare stereotype threat Concern about ageist stereotypes	Sex; race (White, Black, Other); ethnicity (Hispanic v. not); education (<HS, HS, some college/BA/BS, graduate/professional degree)	Rates of any ageism stereotype threat did not differ by sex, race, or ethnicity. Rates differed by education, such that those more educated were more likely to report ageism stereotype threat
Sabik et al. [42]	Data collected: 2008 Observational self-report survey study	Convenience sample of University of Michigan alumnae, predominantly US N=244 Ages: early 60s, mean 63.4	Perceptions of age discrimination Age discrimination	Race (European American v. African American)	Perceptions of age-based discrimination scores did not differ by race
Smith et al. [43]	Experimental study	Convenience sample from Massachusetts N=166 Ages: 56-90, mean 70.6	Stereotyped written passage on age-related declines in memory read before memory test Concern about ageist stereotypes	Objective of identifying whether sociodemographics moderated ageism-health association Age, in years; education, in years; employment status (employed v. retired)	Being retired was associated with more memory errors following priming with age stereotypes, while being employed was associated with fewer. Buffering effect of more education eliminated when age-discrimination priming was present. Age did not modify association between ageism and errors

Reference	Data source & study design	Sampling methods & sample characteristics	Ageism measure & types assessed	Groups compared	Main findings on differences/ disparities*
Steward & Hasche [44]	HRS Data collected: 2016 Observational self-report survey study	Nationally representative community residing sample N=4561 Ages: 50, mean 67.7	Self-perceptions of aging (adapted from Attitude Toward Own Aging subscale from Philadelphia Geriatric Center Morale Scale [25] and Berlin Aging Study [45]) Internalized ageism	Age, in years; sex; race (African American v. White); ethnicity (Hispanic v. not); education (<HS v. HS)	Less positive self-perceptions of aging correlated with older age, being White (v. African American), and less education. Perceptions did not differ by sex or Hispanic ethnicity. In models adjusting for sociodemographics and other health-related factors, less positive self-perceptions of aging were associated with older age, male, White, non-Hispanic, and less education
Steward et al. [46]	Data collected: 2019-2021 Observational self-report survey study	Convenience sample from US Mountain West N=165 Ages: 50, mean 68.2	Internalized positive and negative age stereotype subscales from the Self-Stereotypes of Aging Scale [47] Internalized ageism	Age, in years; sex; race (White v. non-White); education (BA/BS, professional/graduate degree); employment (working v. not)	Internalized positive and negative age stereotypes subscales not correlated with age, sex, race, education, or employment. Also not associated in models adjusting for other social and health factors
Syme & Cohn [48]	Observational self-report survey study	Convenience sample with US IP addresses N=972 Ages: 50-83, mean 56.6	Aging sexual stigma (single item from Aging Sexual Knowledge and Attitudes Scale [49]) Internalized ageism	Objective of identifying whether sociodemographics moderated ageism-health association Age group (50-59 v. 60); sex	Associations between aging sexual stigma and both sexual activity and intimacy did not differ by sex or age group in analyses adjusting for sociodemographics, health, and partnership variables
Templeton et al. [50]	Observational self-report survey study	Convenience sample of female US physicians N=155 Ages: 60-87, mean 70.4	Age-based discrimination and age-based verbal abuse or bullying Age discrimination	Career stage (early, mid, late)	Report of any and frequent age-based discrimination highest among late career physicians, followed by early career, with mid-career physicians least likely to report this. ⁷ Report of any and frequent age-based verbal abuse and bullying highest among early career physicians, followed by late career, with mid-career physicians least likely to report this. ⁷
Vale et al. [51]	Observational self-report survey study	Convenience sample of younger and older US adults N=335 (older adult n=171, 51%) Older adult ages: 60-80	Ambivalent Ageism Scale [52] Internalized ageism	Sex; race (White v. non-White); education (HS, some college, BA/BS, graduate/professional degree); state (Ohio v. not); political affiliation (Democrat, Independent, Republican, other)	More ageism reported by non-White, less educated, not from Ohio, and Republican or Independent. Ageism did not differ by sex
Weiss & Weiss [53]	MIDUS Data collected: 2004-2009 Observational self-report survey study	Subsample of nationally representative community residing sample N=389 Ages: 61-86, mean 70.8	Essentialist beliefs about cognitive aging (3 items from Personality in Intellectual Aging Contexts Scale [54]) Internalized ageism	Age, in years; sex; level of education; subjective social status (MacArthur ladder)	Higher ageism scores were correlated with lower levels of education and social status. Ageism was not correlated with age or sex. Social status moderated the association between ageism and cortisol/stress reactivity, such that low social status was associated with increased reactivity while high social status was not, both before and after accounting for demographic, health, and other covariates.
Wilson et al. [55]	PSID Data collected: 2009-2015	Nationally representative sample of older workers	Occupational downward mobility among those 55 as proxy for age-based discrimination within employment	Objective of identifying sociodemographic differences in ageism	Among older workers, African Americans have higher rates of downward mobility from 4 different privileged occupations than Whites.

Reference	Data source & study design	Sampling methods & sample characteristics	Ageism measure & types assessed	Groups compared	Main findings on differences/ disparities*
	Observational study of employment data	N=1908 Ages: 55-67, mean 60	Age discrimination	Sex; race (White v. African American); privileged occupational categories (managers, professionals, blue collar supervisors, skilled/technical)	Odds of within sex downward mobility from each privileged occupation category higher in African American males than African American females. [‡] Odds of within sex downward mobility highest among African American managers, followed by professionals, skilled/technical, and blue collar supervisors. [‡]

Notes: BA/BS = bachelors of arts or sciences degree, FT = full time, HRS = Health and Retirement Study, HS = high school, MIDUS = Midlife in the US study, NPHA = National Poll on Healthy Aging, PSID = Panel Study on Income Dynamics, PT = part time

* All reported differences were statistically significant with $p < .05$, unless accompanied by † symbol.

[‡] Statistical differences not assessed.

Table 2.

Evidence of sociodemographic differences and disparities in ageism

Sociodemographic characteristic	Differences	
	% ^a (n)	Group experiencing more ageism or more vulnerable to negative effects associated with ageism* Sample size ^b : <i>Small/Moderate/Large</i>
Age	14 studies assessed More ageism 57% (8) Older age 14% (2) Younger age 43% (6) No differences	Older age/age group [2, 13, 23, 27 [†] (implicit ageism), 30 (amount), 33, 34, 44] Younger age/age group [27 [†] (explicit ageism & acknowledgement), 30 (moderation)] No difference [31, 39, 43, 46, 48, 53]
Sex	14 studies assessed More ageism 7% (1) Women 29% (4) Men 71% (10) No differences	Women [34] Men [30, 39, 44 (adjusted model), 55 [†]] No difference [2, 24, 31, 33, 41, 44 (correlation), 46, 48, 51, 53]
Race/ethnicity	12 studies assessed More ageism 42% (5) racial/ethnic minority group 17% (2) racial/ethnic majority group 75% (9) No differences	Racial/ethnic minority group <ul style="list-style-type: none"> • Non-White [31, 51] • African American [55] • Hispanic (v. Non-Hispanic Black) [2] • Chinese/Korean American (v. African American) [39] • Hispanic (v. African American) [39 (unadjusted model)] Racial/ethnic majority group <ul style="list-style-type: none"> • Non-Hispanic White (v. Non-Hispanic Black) [2] • White [44] • Non-Hispanic [44 (adjusted model)] No difference <ul style="list-style-type: none"> • Non-Hispanic White v. Hispanic [2] • Other/Multiracial v. Non-Hispanic White, Non-Hispanic Black, Hispanic [2] • Chinese v. Korean American [39] • Hispanic v. African American [39 (adjusted model)] • Race: [30, 33, 34, 41, 42, 46] • Hispanic ethnicity: [34, 41, 44 (correlation)]
Marital status & household composition	3 studies assessed <ul style="list-style-type: none"> • 3 marital status • 1 household composition More ageism 33% (1) not married 67% (2) no difference by marital status	Not married [30] No difference by marital status [2, 31] No difference by household composition <ul style="list-style-type: none"> • Living with others v. alone [31]

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Sociodemographic characteristic	Differences	
	100% (1) no difference by household composition	
Education	11 studies assessed More ageism 64% (7) less education 18% (2) more education 18% (2) no difference	Less education [2, 30, 33, 39, 44, 51, 53] More education [41, 43] No difference [31, 46]
Socioeconomic status	4 studies assessed More ageism 100% (4) lower socioeconomic status	Lower socioeconomic status <ul style="list-style-type: none"> • <\$60k annual household income (v. \$60k) [2] • Household wealth in 2 quintiles (v. highest quintile) [30] • Less wealth [33] • Subjective social status [53]
Employment	8 studies assessed <ul style="list-style-type: none"> • 5 employment status • 3 employment characteristics More ageism 40% (2) not employed 60% (3) no difference by employment status 67% (2) some employment characteristics 33% (1) no difference by employment characteristics	Not employed [2, 43] No difference by employment status [30, 31, 46] Employment characteristics <ul style="list-style-type: none"> • Early and late career (v. midcareer) [50[†]] • Managers, professionals, skilled technical (v. blue collar supervisors) [55[†]] No difference by employment characteristics <ul style="list-style-type: none"> • Faculty v. administration/staff [36]
Geography	2 studies assessed <ul style="list-style-type: none"> • 1 urbanicity • 1 state • 1 region More ageism 100% (1) rural 100% (1) not from Ohio (v. Ohio) 100% (1) Midwest (v. Northeast) 100% (1) no differences between other regions	Rural (v. metro) [2] Not from Ohio (v. Ohio) [51] Midwest Region (v. Northeast) [2] No regional difference <ul style="list-style-type: none"> • Pairwise comparisons of Midwest, West, South, Northeast, with the exception of Midwest v. Northeast [2]
Religion	1 study assessed <ul style="list-style-type: none"> • religiosity • religion More ageism: 100% (1) lower religiosity 100% (1) no difference by religion	Lower religiosity [31] No difference by religion [31]
Political affiliation	1 study assessed More ageism: 100% (1) Republicans & Independents	Republican or Independent (v. Demographic or other) [51]

^aPercentile sums may not equal 100 because some studies used multiple strategies generating divergent findings to assess ageism differences for a single sociodemographic characteristic (e.g., examining associations with multiple ageism measures, crude differences, adjusted associations, moderation analyses).

* All reported differences were statistically significant with $p < .05$, unless accompanied by † symbol.

[†]Statistical differences not assessed.

^bSample size classification: small = 101-400; moderate ~1000-2000; large >4000.

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