

2023-07 | March 6, 2023

## Age Discrimination and Age Stereotypes in Job Ads

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Studies suggest that employers discriminate against older workers in hiring, responding less favorably to equally qualified job applicants who are older. Employers may also limit hiring of older workers by including age stereotypes in job ads that signal a preference for younger workers. Evidence from an experimental study shows that older workers are less likely to apply to job advertisements that contain language with ageist stereotypes. The results indicate that this impact is comparable to the direct effects of employer age discrimination in hiring decisions.

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One of the primary ways to reduce age discrimination in hiring is by identifying employers who hire a disproportionately low share of older workers who apply for jobs. However, employers may also discriminate by including age stereotypes in job ads that signal a preference for younger workers, thus discouraging older workers from applying for jobs in the first place. Because older workers often transition to new jobs before retiring, age discrimination in hiring can impede their efforts to continue working. This counteracts policies that encourage people to work longer, which will become increasingly important for maintaining the labor force as the population ages.

In this *Economic Letter*, we describe results from a field experiment showing that job-advertisement language related to ageist stereotypes—even when the language is not blatantly or specifically age-related—substantially reduces the number of applications from older workers. The reduction in hiring of older workers can be roughly as large as the direct effect from discrimination against older applicants.

### Age discrimination in hiring and age stereotypes in job ads

Similar to job discrimination against minorities, women, and other groups, age discrimination in labor markets is illegal. Because many older workers transition to “partial retirement” or “bridge jobs” at the end of their careers (see for example, Johnson, Kawachi, and Lewis 2009), reducing age discrimination in hiring is important for lengthening working lives—a crucial policy goal because the population is aging.

Unfortunately, research indicates that some employers discriminate against older workers in hiring (for example, Neumark, Burn, and Button 2019). This evidence comes from correspondence studies, in which researchers send fake job applications in response to real job ads and measure whether applications from older workers who are otherwise equivalent to younger applicants garner fewer callbacks for job interviews. Under such controlled conditions, a lower rate of callbacks suggests direct discrimination against older job applicants.



In addition to employers' direct age discrimination in hiring decisions, they may also reduce hiring of older workers by discouraging them from applying by including age stereotypes in job ads that signal a preference for younger workers. If fewer older workers apply for jobs, then the shortfall of older hires relative to older job applicants may understate the extent of hiring discrimination. Earlier evidence suggests that employers who directly discriminate against older job applicants are using age-related stereotypes in their job ads, based on machine-learning analysis of the text of the job ads, and age differences in callbacks, from our recent large-scale correspondence study (Burn et al. 2022a). Our more recent evidence examines how older job seekers respond to such ads.

### **Does ageist language in job ads deter older applicants?**

To study how job seekers respond to age stereotypes in job ads, we created a bank of job ads for an administrative assistant, a retail salesperson, and a security guard—jobs used in our original hiring discrimination study (Neumark et al. 2019). In contrast to a correspondence study where the job applicants are fictitious and researchers study the responses made by real employers, in this new study the job ads are fictitious, and we study the responses of real job searchers.

We focus on three age-related stereotypes: communication skills, physical ability, and technological skills. These stereotypes are common in job listing language about the ideal or preferred candidate skills or attributes. They were also correlated with age discrimination as measured in our earlier study. And other research shows that older workers are aware that employers hold these stereotypes (Terrell 2019).

We designed job ads that were similar to those from the earlier correspondence study but used slightly different phrases to capture these age-related stereotypes. We ensured that the ads conveyed only the intended stereotypes. We constructed “control” ads without biased language and “treatment” ads that included the ageist stereotypes. While this *Letter* focuses on ads that include all three stereotypes, our evidence suggests similar results for ads containing only one of the three stereotypes.

The control phrases for technical skills in the job ad for security guards is, “You must write patrol records in journal notebook,” while the treatment phrase is, “You must type patrol entries into a journal application on a computer system.” Similarly, for administrative assistants, the control phrase for technical skills is, “You must produce and distribute documents such as correspondence memos, faxes and forms,” while the treatment phrase is, “You must use accounting software systems like Netsuite, Freshbook, and QuickBooks.” The idea is to express related skills or requirements but with treatment phrases using language related to age stereotypes. We are careful to ensure that the treatment phrases are not blatant. That is, they do not convey job requirements that would appear unusual to a job applicant, nor do they provide an explicit preference to hire a younger worker. Moreover, all phrases used were commonly found in the large set of job ads collected in the correspondence study. Finally, we validated these treatment and control phrases using a survey conducted on



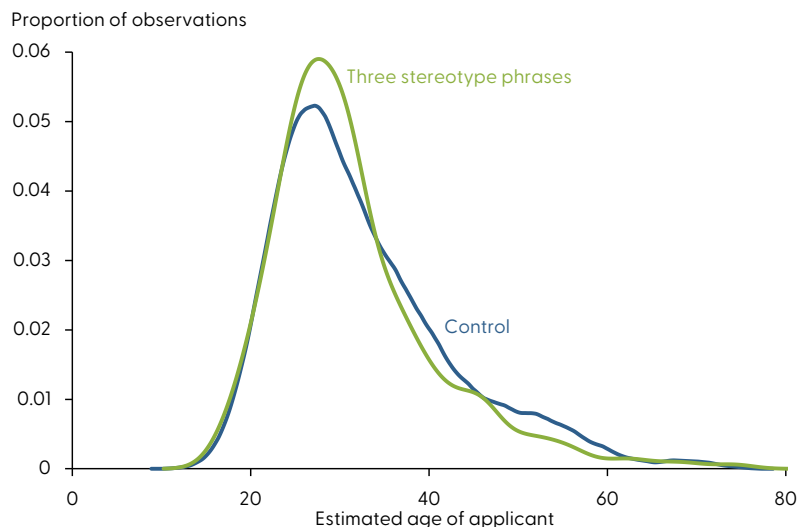
Amazon MTURK (Burn et al. 2023). We found that the control phrases were not perceived as ageist by potential job applicants, while the treatment phrases were.

One might wonder whether some of the phrases used in the treatment job ads would simply discourage older workers from applying because they reference skills that older workers may be less likely to have. This is unlikely; for example, the software referenced in technical skills for administrative assistants is quite old. In addition, results from our prior research indicate that employers who used such phrasing in their job ads discriminated against older applicants (Burn et al. 2022a). Finally, as we describe below, we find evidence that such language discouraged workers as young as 40 from applying.

We posted 18 job ads, with 6 ads per occupation, in 14 cities over a period of about 16 months beginning in January 2021. We staggered the timing for the posting and deletion of ads so they would not overlap with each other on the online job board we used. We estimated the age of applicants based on information provided on their resumes, relying most heavily on the year of high school graduation. We were able to verify that applicants did not manipulate this date or other age-related information in response to whether or not the job ad included language related to age stereotypes.

Figure 1 presents raw data comparing the age distributions of job applicants in response to the control job ads and to the ads with stereotyped language. The figure shows that there were fewer applicants between the ages of 40 and 60, but more applicants below age 40, for the job ads that contained the ageist phrases. It is hard to detect the differences above age 60 because few applicants were in that age range, but the data also indicate fewer applicants slightly over age 60 in response to the stereotyped job-ad language. Overall, Figure 1 suggests that ageist language discouraged job applications from older individuals.

**Figure 1**  
Age distribution of applicants by job ad type



Source: Burn et al. (2022b), Figure 9.

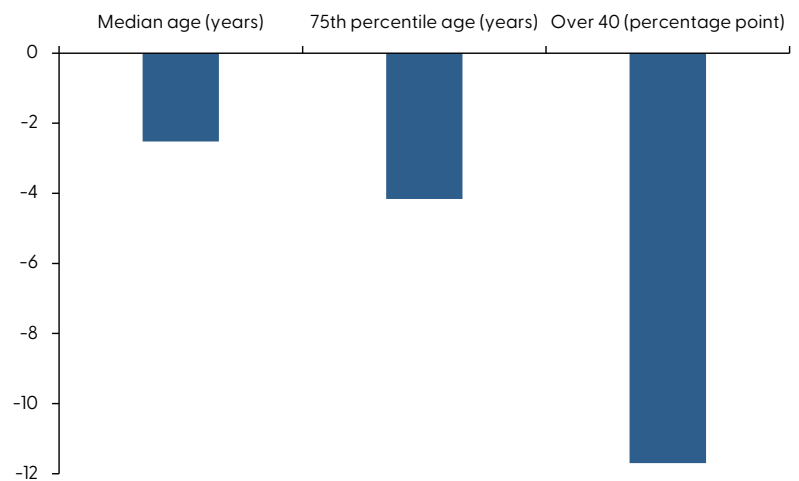
More definitive evidence comes from statistical models that estimate age differences in the composition of job applicants while accounting for other factors that also affect job applications, such as the city or month in which the ad was posted or the unemployment rate when the ad was posted. We find striking and consistent evidence that the ad language related to ageist stereotypes discouraged older workers from applying for jobs. For these ads, job applicants were 2.5 years younger on average than the applicants responding to the control ads. In distributions of all



applicants ranked from youngest to oldest, Figure 2 shows the median age for the ads with ageist language was also 2.5 years younger. The age distribution showed the 75th percentile—meaning only one-fourth of the distribution was older—was 4.2 years younger for the ad with ageist language. The share of applicants over 40 was lower by 11.7 percentage points for the ads with ageist language. All of these estimates are statistically reliable based on the conventional 5% significance criteria. Moreover, we confirmed that these effects come from reductions in applications from older workers and not from increases in applications from younger workers.

One interesting result is that we found some evidence, albeit less statistically precise, that the effect of age-related stereotypes in job ads is weaker when the local unemployment rate is higher. This may occur because job applicants are more constrained to apply for any job ad that appears when labor market conditions are weaker.

**Figure 2**  
Effects of stereotyped ad phrases on ages of job applicants



Source: Burn et al. (2022b), Table 5. Estimated effects are statistically significant at the 5% level.

## Conclusions and implications

Our research suggests that employers may discriminate against older workers not only through hiring decisions but also by using subtle age-related stereotypes in job-ad language to discourage older workers from applying.

We can be more specific in quantifying these two channels of discrimination by comparing our estimated effect of discouraging older workers from applying for jobs to the direct effect of the hiring discrimination identified in our earlier study (Neumark et al. 2019). Our calculations require some assumptions, such as that the difference in callback rates in the correspondence study translates into the same difference in hiring rates. Nonetheless, it is striking that both types of employer behavior are estimated to reduce the hiring rate of workers over age 40 from about 20% to about 15%—a 5 percentage point or 25% reduction in the hiring rate.

If discouragement of applications from older job seekers can have as deleterious an impact on the hiring of older workers as can direct age discrimination in hiring, then policymakers might consider focusing some oversight on language in job ads. Using language that explicitly deters older workers from applying is already illegal under the Age Discrimination in Employment Act. But the subtler usage of ageist language that we study

suggests that such cases may not be flagged as explicitly illegal but can still have pernicious effects on older workers in the labor market and possibly result in age discrimination.

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