Journal of Applied Economics and Policy Studies Vol.19 Issue 10 EWA Publishing
Available Online: 15 September 2026 DOI: 10.54254/2977-5701/2026.36824

Does AI expand or restrict labor market access for disabled job seekers in China? A mixed-methods investigation

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Abstract. This paper investigates the impact of AI on the access of disabled job seekers to the labor market, using a mixed-method research design. Based on a survey of 91 disabled job seekers in China, this study carried out a systematic meta-review of correspondence experiments regarding disability employment and examined three Ordinary Least Squares (OLS) models. The results show that the ease of use of the platform is crucial for the successful job search. While the findings seem to indicate a negative association between the use of AI and successful job search, they suggest a selection effect: AI is more likely adopted by the most disadvantaged job seekers, who face more barriers. Nevertheless, the study argues that AI tools offer limited benefits because they are unable to tackle structural issues, including the inaccessibility of platforms, discrimination by employers, and stigma around welfare enterprises. Across the three models, platform ease of use is the only predictor significant in all three, and satisfaction with platform accessibility is significant in two of the three, while education and age are never significant (all $p > 0.10$). Although 78.02% of respondents report having used AI tools, 45.05% received no response to their applications and 40.66% identify inaccurate automated resume screening as a major obstacle. The paper concludes that stable accommodation subsidies, enforced platform accessibility standards, and fairness audits of screening algorithms are preconditions for AI to deliver genuine inclusion gains.

Keywords: artificial intelligence, disability employment, China, labor market discrimination, algorithmic bias

1. Introduction: disability policy, labor market, and AI

Employment discrimination against people with disabilities is a well-understood and widespread phenomenon. Audit experiments routinely show substantial levels of disability hiring discrimination across disparate countries. Field experiments from across Europe and the USA find callback penalties from 15% to 55%, even when signalling equal or greater productivity; China has more than 85 million people with registered disabilities, but they face systematically lower rates of labour force participation and lower wages than non-disabled people despite years of economic reform and tremendous digital transition.

From 1949 to 1979 under a fully planned economy, there were no private Chinese employers to hire disabled workers in China. Employment was state assigned, centralised welfare distribution and collective employment scheme, and the state shouldered both the costs and the responsibility of placement. From the beginning of the market reform in 1979, policies supported welfare enterprises employing disabled workers

appeared. Since 1985, blind massage institutes became the largest employers of the blinded population, and legislation strengthened disabled people's statutory right to work by incorporating employment protection into legislation and regulation. By 1993, there were 57,000 welfare enterprises, employing 840,000 disabled workers in China and after 1994, most of them transformed into fully private enterprises rather than working for state-affiliated organisations. Private enterprises have gained autonomy to register welfare enterprises to receive benefits such as exemption from taxes and other related fees. But such practices caused controversies because some people thought that companies registering as welfare enterprises were not truly employing disabled workers. Throughout its history, the system of disability employment has alternated between being protected by the government, left to the market, or even becoming a subject of controversy [1].

This paper tests the following two working hypotheses regarding AI usage and job search outcome:

H1: AI tool adoption is negatively associated with job-search success among disabled job seekers in China, which is caused by a selection effect whereby those who face the greatest challenges are also the most likely to use AI tools.

H2: Platform accessibility is the main predictor for success and satisfaction with job searching in that enhancing the design of the platform provides bigger improvements of outcomes than enhancing rates of AI utilization.

2. Literature review

Research on disability, employment, and discrimination shows that disabled job seekers face structural, institutional, and technological barriers across labour markets. This section reviews three individual but related areas: 2.1 experimental and audit evidence of discrimination; 2.2 institutional barriers created by labour market quota systems and employer responsibilities; and 2.3 the theoretical frameworks that connect discrimination, platformed labour and AI-based hiring.

2.1. Experimental evidence on disability-based hiring discrimination

Experimental field studies offer perhaps the strongest available evidence that disability significantly reduces job opportunities. Sixty-nine audit and correspondence experiments from 1972 to 2025 found significant penalties for disabled applicants, especially for those with visible disabilities such as wheelchairs [2]. One of these studies sent 1,200 fictitious applications for 600 real job postings in Denmark. Applicants differed only by being a wheelchair user or not. Wheelchair users had a 54.7% lower chance of receiving interview invitations (7.7% vs. 17.7%), suggesting that they would need to submit more than twice as many applications to be considered equally [3]. Similarly, Bjørnshagen and Ugreninov's Norwegian correspondence experiment found a 48% callback penalty for wheelchair users—and this in an egalitarian welfare state, after making sure workplace accessibility had been established—proving that the discrimination is because employers do not prefer disabled applicants to non-disabled ones, not because of physical challenges [4]. UK evidence has further bolstered this conclusion. Antinyan et al. [5] sent 4,004 applications for accounting and finance jobs and found a statistically significant reduction of 15% in callback rates for disabled applicants. What is even more striking is that signals of productivity did not reduce discrimination: in many cases, they actually increased the size of the gap, because only non-disabled applicants experienced an increase in callbacks. These findings suggest that disability discrimination is mainly taste-driven and not a statistical phenomenon. US experiments reinforce this picture [6], with discrimination being the most severe for small private employers—with fewer than 15 employees—for which the *Americans with Disabilities Act* does not apply.

2.2. Institutional constraints: quota systems and accommodation mandates

Even though discrimination exists at the individual employer level, institutional arrangement also determines employment outcomes in relevant ways. Quota policies, accommodation mandate and financial incentives are all widely used policy tools, but they are quite heterogeneous in effectiveness. Chareyron et al. [7] found that quota policies meaningfully expand opportunities only for larger companies. Small and micro enterprises have two different types of uncertainty: uncertain requirements in the workplace adaptation costs and uncertain generosity from government funds on the subsidy level. Because small firms are more exposed to uncertainty, many of them would prefer to pay noncompliance penalty or avoid hiring disabled workers. This feature is very important to the Chinese situation, where welfare enterprise reforms in the 1990s and 2007 provide large incentive uncertainty [8]. Hussain et al. [9] found that highlighting accommodation costs has strongly suppressed hiring probability, and the productivity signal only partly offsets this impact.

2.3. Theoretical frameworks

The literature is grounded in three related theoretical lenses, each of which apply to the AI-disability-employment nexus in interesting ways. (a) Taste-based discrimination [10]: Employers experience a disutility from hiring members of stigmatized populations. For disability cases, disutility could reflect anticipated costs of accommodation or stigma, rather than any real belief about productivity. (b) Statistical discrimination [11, 12]: Here employers use the label disability as a proxy for unobserved productivity, making discriminatory equilibria even when there is no explicit prejudice. An AI screening system that is trained on historical hiring data is capable of replicating exactly those older beliefs. (c) Signaling framework [13]: A disclosure of one's disability is like a signal that cannot simply be made positive with help of institutions for the accommodation transparency.

Arrow and Phelps's statistical discrimination model also fits well to the context of AI hiring platforms: algorithms that are trained on previous callback data will capture historical discrimination patterns, and that will be what survey respondents in this study voiced as their main concern. No study has been done on the use of AI by disabled job seekers in China as users of an AI-enabled hiring platform. The platformed labour literature focuses on disabled workers as data annotators (supply side) [14], but not disabled job seekers as job applicants faced with AI filtering over the recruitment process (demand side). This study fills that gap directly by surveying disabled job seekers about their experiences, their AI use, concerns, and preferences.

3. Data collection methods

Combining quantitative survey analysis with a systematic meta-review of international experimental literature, this paper incorporates both: the quantitative part tests for a relationship between usage of artificial intelligence and employment outcomes; the meta-review offers the causal baseline against which the survey pattern is compared. In what follows, the present paper offers both OLS regression and descriptive statistics.

3.1. Profile of respondents

Figure 1 shows age distribution of disabled respondents who responded to the survey. The largest number of respondents are within the 25–34 age group, a third of those participating in total (32.97%) followed by the 35–44 age group, 24.18%. At the opposite end of the age distribution, participants of age 55 and older represent the smallest share at only 1.10%, whilst those of age younger than 18 represent 6.59%. Together, therefore, the younger and middle-aged respondents (18–44) clearly form the larger part of the sample.

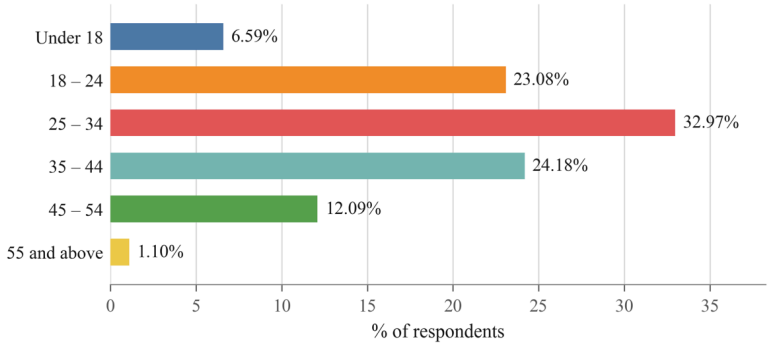

Figure 1. Age distribution of survey respondents

Regarding educational attainment, seen from Figure 2, bachelor graduates make up the largest group, at 34.07%; followed by senior high school graduates with a total share of 29.67%. Most respondents hold intermediate or higher qualifications. Of particular note is that 41.76% of all respondents have reached the undergraduate level or above, which is a high level of educational attainment in this sample. At the lowest end, fractions with very low-level qualifications are trivial: the combined primary school and unclassified group accounts for only 1.10%.

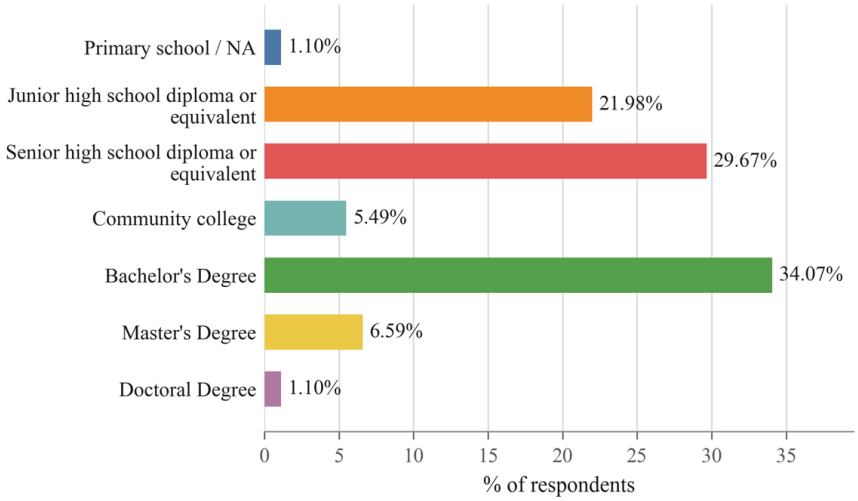

Figure 2. Education attainment of survey respondents

With regard to the distribution of the disability categories of the survey respondents, it is quite apparent that the visually impaired are the overwhelming majority of the respondents (83.52%), as shown in Figure 3. The rest of the respondents are ambulatory physically impaired participants (7.69%), respondents reporting multiple disabilities (6.59%), hearing impaired (1.10%), and intellectually disabled (1.10%). No respondents were obtained for the groups of non-ambulatory physically impaired, speech-impaired, or mental disorders; a limitation of snowball sampling within visually impaired community networks.

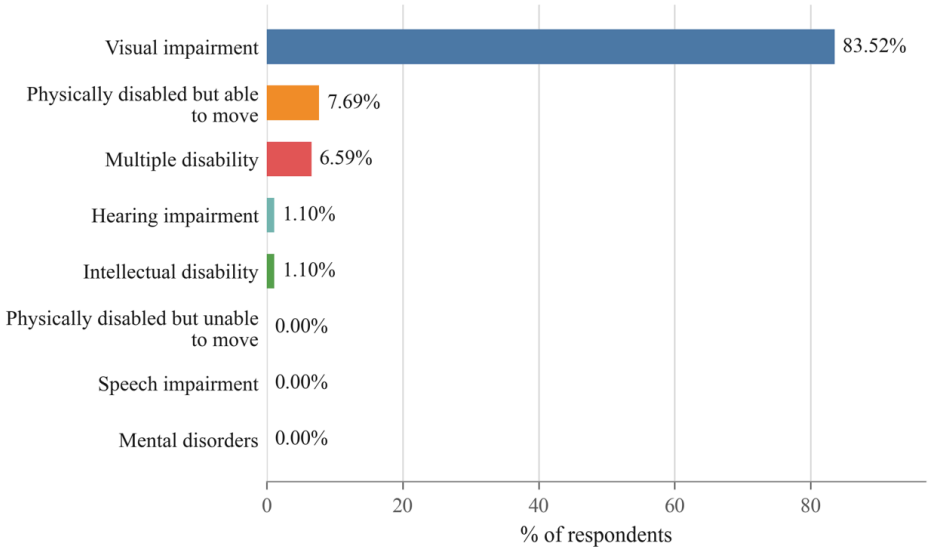

Figure 3. Categories of disabled respondents

Among all of the respondents, full-time work was the most desired category (61.54%), followed by accessibility-friendly positions with reasonable employer accommodation (48.35%) and then part-time (41.76%). Figure 4 shows that remote work was sought by 39.56% of respondents, followed by freelance or project-based work (25.27%) and flexible-hours jobs (13.19%); internships (9.89%) and temporary project work (7.69%) were the least sought. This reveals a widespread demand for stable, inclusive employment opportunities with suitable workplace flexibility among disabled job seekers. As displayed in Figure 5, health-related jobs were the most popular career choice, preferred by 58.24% of respondents and followed closely by information technology at 50.55%. Logistics (6.59%) and agriculture (4.40%) attracted the least interest—implying that many respondents are drawn towards healthcare and IT sectors for future employment.

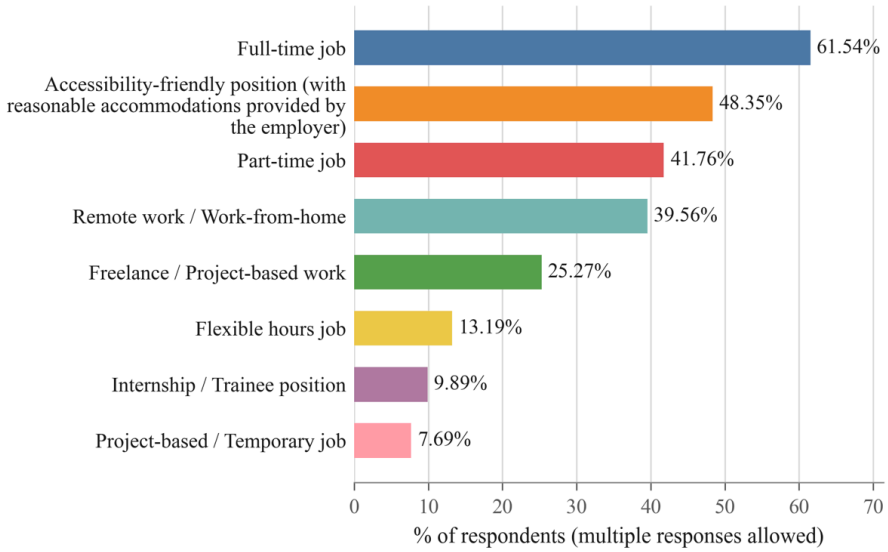

Figure 4. Types of jobs desired by disabled job-seekers

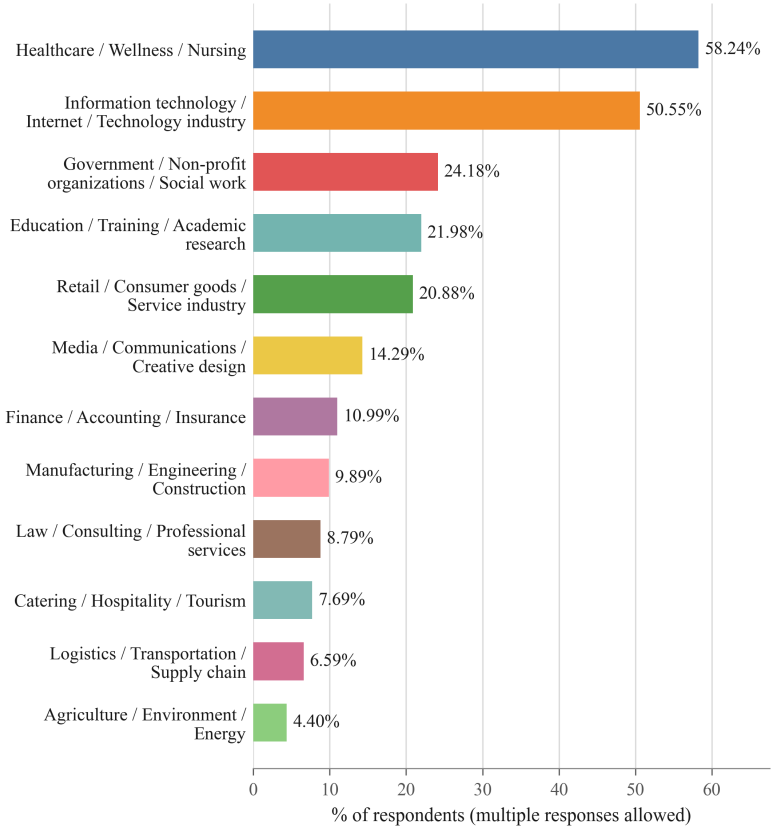

Figure 5. Employment industries desired by disabled respondents

3.2. Online job-seeking experience and outcomes

Similar to their non-disabled counterparts, disabled job-seekers also take advantage of different channels when searching for a job. Job search websites online was the most popular way to apply for jobs, chosen by 64.84% of participants, followed by employee referral networks (57.14%), in-person job fairs or industry trade shows (37.36%), and recruitment events in their university (31.87%). As the data in Figure 6 reveal, online job search and personal networks are still the predominant channels taken up by disabled job-seekers.

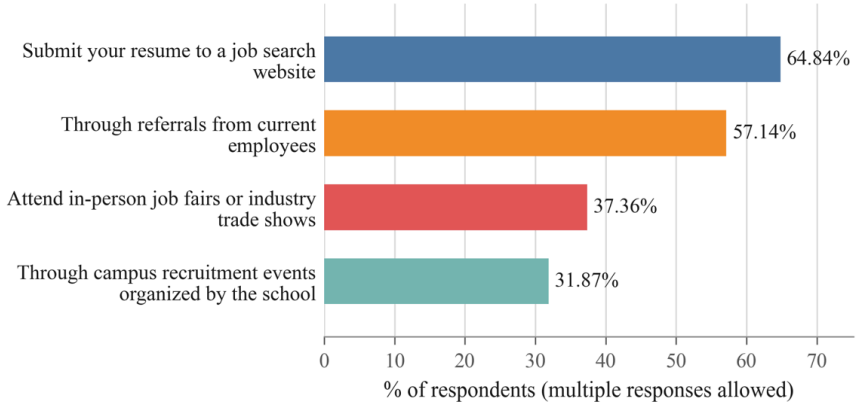

Figure 6. Job-seeking channels used by disabled job-seekers

Figure 7 shows that among the specific platforms, disability-specific websites were the most commonly used platform, accessed by 62.64% of participants, followed close by social network platforms such as WeChat, Weibo, Douyin, with 61.54%. Local classified websites (58.com) were used by 40.66% of participants, job recruitment apps by 31.87%, and company websites by 28.57%. Students used LinkedIn at a rate of 13.19%, whereas government websites for job vacancies were the least frequently used link (2.20%).

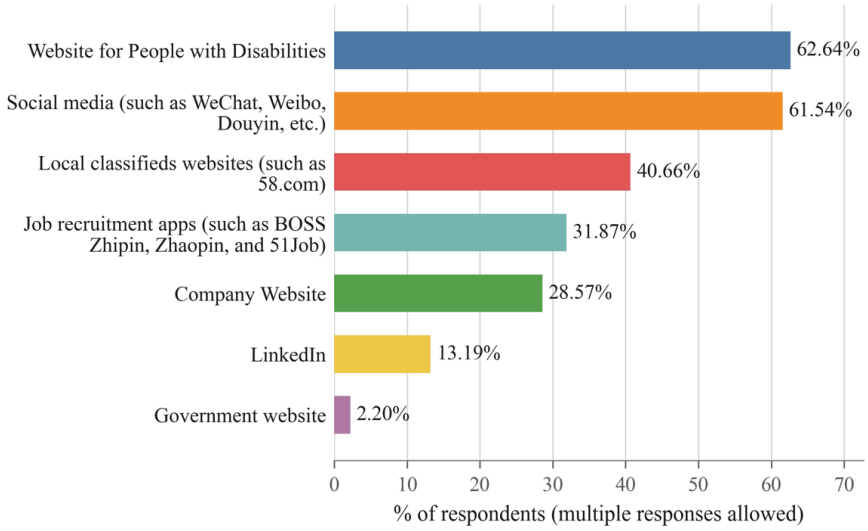

Figure 7. Online job-search platforms used by disabled job-seekers

When participants were asked how difficult they found using online job-search platforms, presented in Figure 8, the largest proportion of participants (32.97%) thought they had a neutral experience. Those who found online job-search platforms difficult or very difficult accounted for 39.56% of the sample, somewhat more than those who said job-search platforms were easy to use. This shows that digital job-search tools create a real barrier for many disabled people—and that online platform design requires more thought and attention.

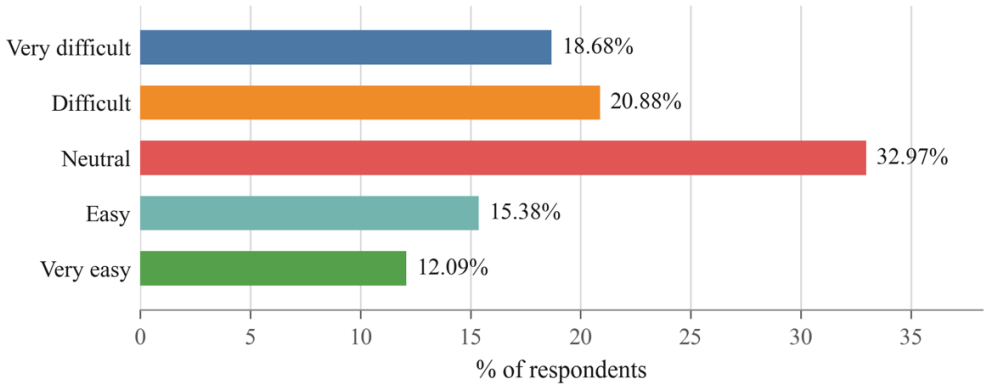

Figure 8. Respondents' perception of difficulties in using online job-search platforms

Among the major issues encountered in online applications, as shown in Figure 9, difficulty in reading and navigating the job search websites was identified as the major problem, mentioned by 50.55% of respondents. Untrue or unclear information about the jobs was a close runner-up at 47.25%, followed by no response from employer at 45.05% and wrong filtering by automated job applicants' resume screening machine at 40.66%.

Untimely communication from employers was mentioned by 29.67% of respondents, with the least mentioned reason being technical problems in platform sites (16.48%).

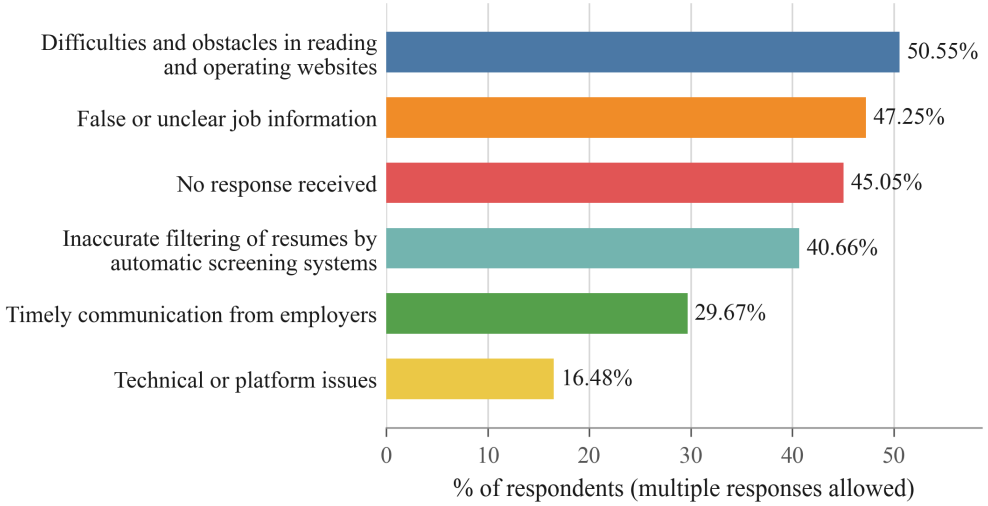

Figure 9. Difficulties encountered in using online job-searching platforms

Figure 10 displays that satisfaction with built-in accessibility features across major recruitment websites tends towards neutrality at 47.25%, and the negative combination exceeds the positive combination. Only 9.89% of people were satisfied with accessibility features available on the platform sites, and only 6.59% reported being extremely satisfied. This picture demonstrates a very clear and consistent deficit of accessibility: recruitment sites do not offer platforms that are accessible for disabled people.

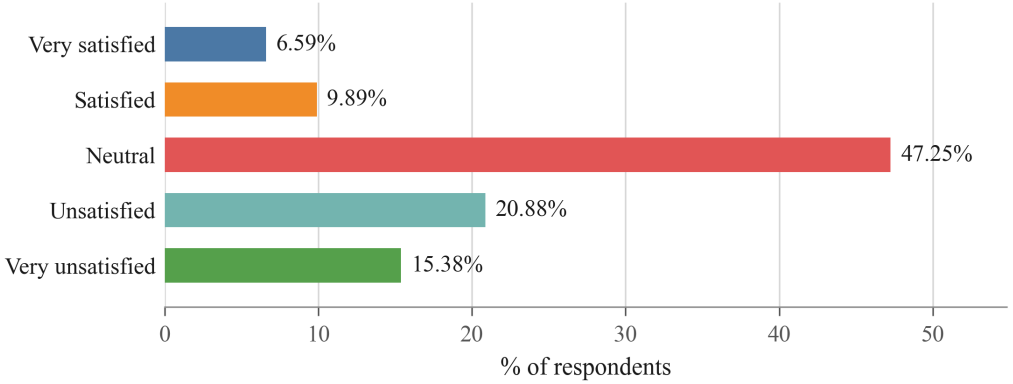

Figure 10. Satisfaction with built-in accessibility features across major recruitment websites

Similar pictures emerge when assessing how well online job openings match respondents' disability interests. Neutral assessments were again most frequent at 38.20%, while well-matched assessments (34.83%) outstripped poorly matched ones (26.97%). Only 12.36% thought the opportunities were very highly appropriate (Figure 11). On desired platform improvements, shown in Figure 12, adding dedicated disability-focussed job tags was the most popular suggested upgrade, chosen by 72.53% of respondents. Added enhanced applicant feedback choices were next (58.24%), and upgraded search filter precision were next

(47.25%). Strengthened data protection for optional disability profile disclosure were the least desired upgrade, with 30.77% of respondents voting for this.

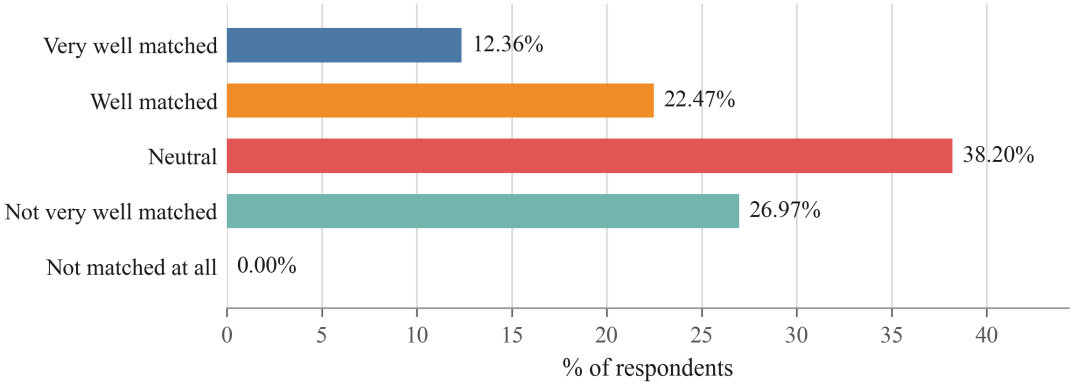

Figure 11. How well online job openings match respondents' disability interests

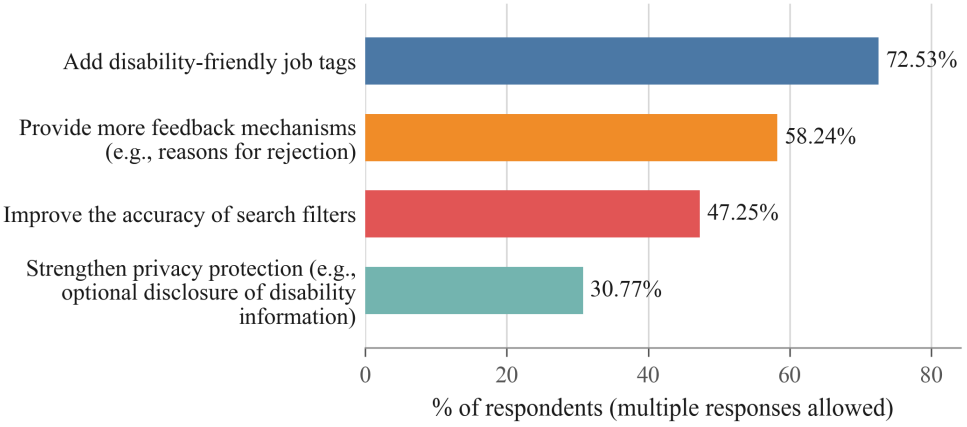

Figure 12. Desired improvements of job search outcomes

3.3. AI usage and job seeking

Concerning prior use of AI tools—such as chatbots and intelligent virtual assistants—the overwhelming majority of participants who were disabled in previous surveys (78.02%) said that they had used such tools in their daily lives or working environments and only 21.98% reported having no prior experience, presented in Figure 13. Regarding different use cases of AI, Figure 14 shows that support to daily living activities including navigation guidance and object recognition was the most frequently chosen use case for participants, selected by 25.27% of those responding. Information retrieval came second at 17.58%, content organization and professional writing support at 16.48% and customer service through AI assistant at 10.99%; entertainment-oriented AI use was the least used at 4.40%.

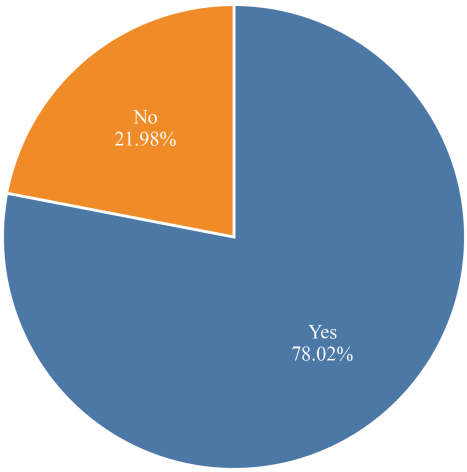

Figure 13. Usage of AI tools in daily life or work

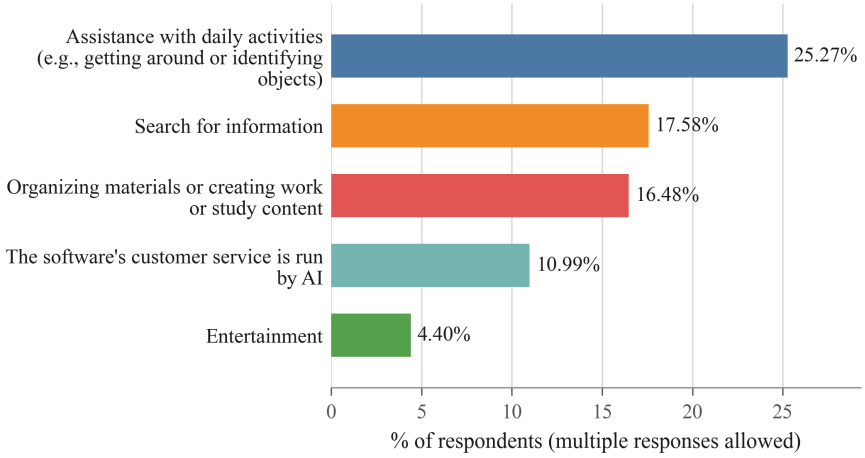

Figure 14. Different use of AI tools among disabled respondents

Of all the AI-supported support features most desired by disabled job seekers, shown in Figure 15, automated identification of companies that have access environments first was chosen by 78.02% of respondents. Matching jobs suitable for ability (beyond the plain text of resume screening) was the second most desired feature (at 64.84%), assistance with communicating job accommodation needs with employers next (41.76%), and customized support to prepare job interviews the least (32.97%). The greatest value from AI support during job search job seekers reported were services for drafting or optimizing their resume, chosen by 64.84% of respondents, providing job assistance on accessibility features (such as speech-to-text and screen reader access) next (59.34%) and mock interview guides that provide tailored feedback next (45.05%); while Intelligent job matching suggestions (34.07%), vocational skills guidance (23.08%) and applications tracking (15.38%) interested job seekers were the least (Figure 16).

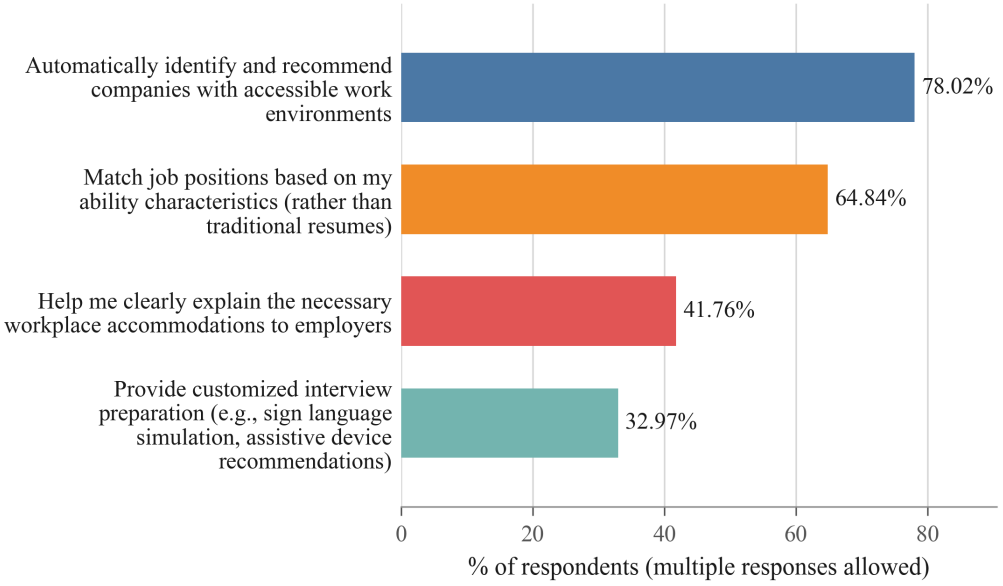

Figure 15. AI-supported support features desired by disabled job seekers

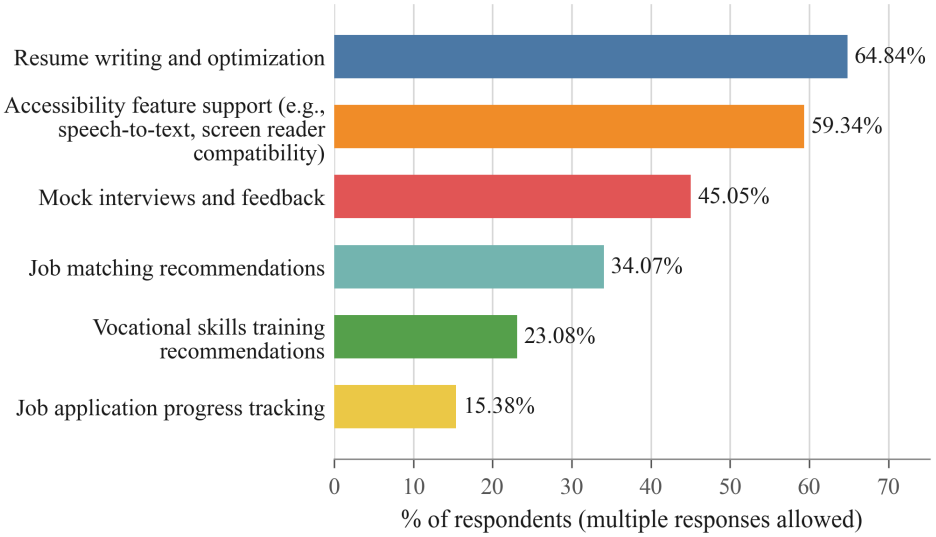

Figure 16. Value of AI-supported job search process

Respondents' perceptions of the long term implications of AI for career were broadly neutral or positive. As can be seen from Figure 17, almost neutral perceptions were the most prevalent (37.36% of respondents had them), while the combined positive perceptions accounted for 38.46% of respondents (24.18% reported a positive effect and 14.29% a slightly positive effect). Only 6.59% were expecting negative implications for career, and 17.58% were expecting no real effects at all. So on the whole, respondents have a rather optimistic outlook on AI, and feel only relatively little anxiety of being displaced by technology.

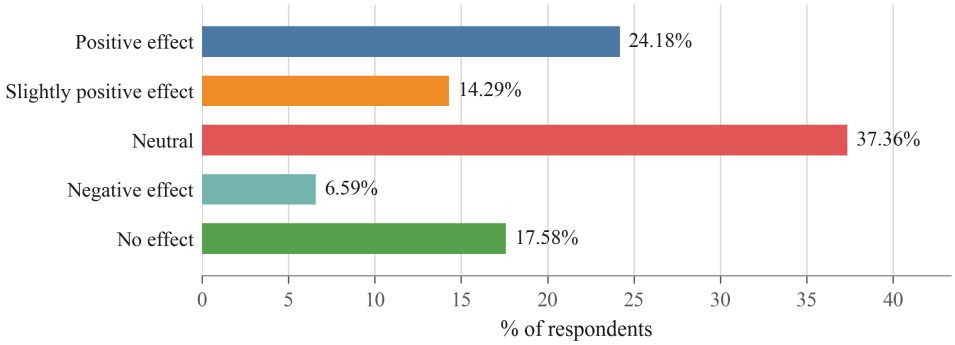

Figure 17. Respondents' perceptions of the long-term implications of AI for career

Of course, optimism coexists with serious concern. Indeed, when asked about potential risks associated with AI in recruitment, excessive standardization that ignores individual uniqueness was the biggest worry, reported by 61.54% of respondents, presented in Figure 18. Algorithmic screening bias came in next at 51.65%, almost tied with removing judgement from people and making recruitment impersonal, reported by 50.55%. An accessibility gaplessness of AI technologies risks widening the digital divide gap (reported by 39.56%) and personal data privacy risks (38.46%).

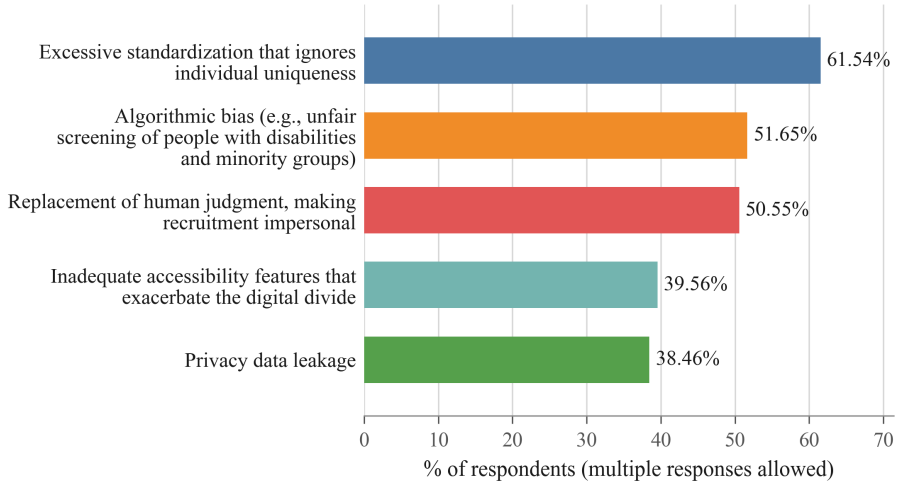

Figure 18. Respondents' perceptions of potential risks associated with AI in recruitment

As a response to these concerns, the survey probed respondents about the functional features that they desired most in future AI job-search tools in Figure 19. Highly personalized service specific to their background, skills and work needs was overwhelmingly the preferred feature, with 83.52% of respondents selecting it. Inclusive design with native support for different types of accessibility modes followed at 65.93%, then transparent logics of personal recommendations, 49.45%. Being seamlessly interoperable with employer HR functions for updated real-time recruitment status was chosen by 43.96%, whereas a built-in mental health support function to ease the anxiety for job searching was the least desired.

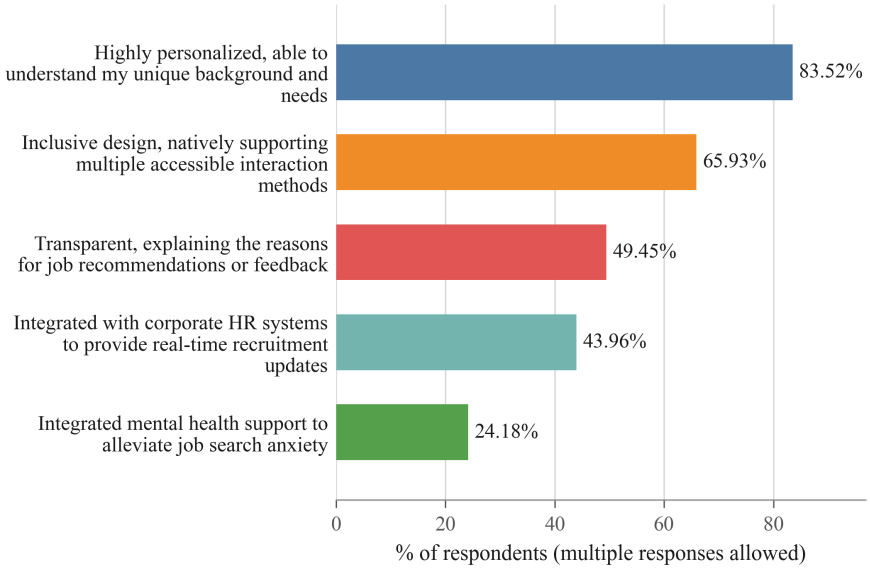

Figure 19. Platform functional features desired in future AI job-search tools

Finally, when respondents were asked whether they would be willing to avail themselves of a specialized AI job-search assistance system, the response was overwhelmingly positive: 73.63% were totally willing to use the type of AI job-search assistance system, as shown in Figure 20. An additional 21.98% were willing to use it. Just 2.20% were low in willingness and 2.20% were totally unwilling. Summed up, the figures illustrate consistent demand for good-quality AI job-search assistance for disabled job seekers.

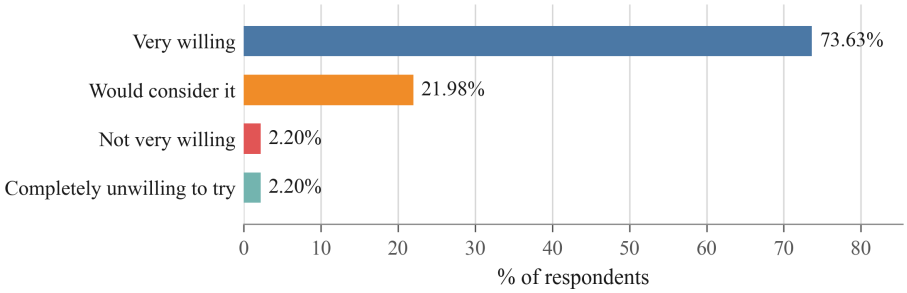

Figure 20. Respondents' willingness to avail of a specialized assistance system

4. Regression modeling, data analysis and findings

This section reports the results of OLS regression models using data from 91 respondents collected via the survey. The three outcome variables are: job-search success (Q21, reverse-coded, so higher scores reflect greater success), overall satisfaction with the online job-search experience (Q22), and satisfaction with quality of job match (Q26, reverse coded). All three models share five independent variables: use of AI tools (binary), ease of use of the platform (Q18, 1–5), satisfaction with accessibility of the platform (Q20, reverse-coded), education and age. Model 1 adds weekly hours spent job searching, and Model 2 adds job-match quality (Q26, reverse-coded); Model 3 uses the five shared variables only. Because two respondents left Q26 unanswered,

listwise deletion reduces Models 2 and 3 to $N = 89$. All ordinal scales are treated as continuous in OLS estimation.

4.1. Finding 1: AI adoption is high but does not independently predict better outcomes

Some 78.02% of disabled respondents had already been using AI tools, yet AI usage is negatively associated with job-search success, both in bivariate analysis and multivariate analysis. In OLS Model 1 ($N = 91$, $R^2 = 0.254$, $F(6,84) = 4.77$, $p < 0.001$), being an AI user was related to a statistically significant reduction in the success score ($\beta = -0.583$, $SE = 0.206$, $t = -2.835$, $p = 0.006$). This finding is reiterated non-parametrically by the Mann-Whitney U test ($U = 444$, $p = 0.006$; Cohen's $d = -0.80$, a large effect). AI users have a mean score for success of 1.79 versus a score of 2.45 for non-users (scores range from 1 to 4, where 4 = very successful). Yet, this counterintuitive pattern does not mean that AI leads to worse outcomes; rather, almost certainly, it is selection bias—disabled job seekers facing the largest structural barrier are most motivated to use AI tools, yet those barriers—particularly inaccessibility of the platform—remain the binding constraint to outcomes regardless of tool use. Consistent with this explanation, both platform ease of use ($\beta = 0.161$, $p = 0.017$) and platform accessibility satisfaction ($\beta = 0.219$, $p = 0.007$) are positive and significant correlates of success in Model 1, whereas education, age, and intensity of searches are not significant correlates (all $p > 0.40$). Spearman correlations do also: $\rho = 0.270$ ($p = 0.010$) for platform ease, and $\rho = 0.343$ ($p = 0.001$) for accessibility satisfaction.

Together, these findings confirm that the key bottleneck is not whether disabled job seekers will use AI, but whether the platforms on which that AI exists are accessible from the start.

4.2. Finding 2: algorithmic bias reproduces discrimination through automated screening

Inaccurate automated resume screening was reported as an impediment to the job-search process by 40.66% of respondents (Q19), and algorithmic bias in screening by 51.65% of respondents (Q33). In OLS Model 2 (predicting overall satisfaction, $N = 89$, $R^2 = 0.363$, $F(6,82) = 7.78$, $p < 0.001$), platform ease of use is overwhelming the strongest predictor ($\beta = 0.456$, $SE = 0.080$, $t = 5.68$, $p < 0.001$); AI use had a borderline negative relationship ($\beta = -0.463$, $p = 0.052$). A chi-square test of AI use with the success category confirmed that outcomes were significantly more dispersed among AI use and non-use categories ($\chi^2(3) = 10.31$, $p = 0.016$). Taken together, these patterns are consistent with Arrow and Phelps's statistical discrimination model applied to algorithms: AI trained on historical callback data encodes the past preferences of employers, including those related to disability discrimination, and reproduces them at scale. A Mann–Whitney comparison of satisfaction between AI users ($M = 2.68$) and non-users ($M = 3.30$) is significant ($U = 491$, $p = 0.027$, Cohen's $d = -0.59$, a medium-to-large effect). The survey cannot causally identify algorithmic discrimination as the mechanism but is a convergent pattern that is robust and compatible with the international correspondence experiment literature [5, 6, 15].

4.3. Finding 3: structural inequality overshadows technological benefits

Although most are willing to adopt AI job-search tools (near-universal; 95.60% very willing to adopt or open to considering, Q37), overall success of job search is still low: the sample mean for the reversed 4-point success scale is 1.93 ($SD = 0.87$) (i.e., outcomes are clustered around the unsuccessful end). Some 45.05% of respondents received no response to their applications (Q19), and only 21.98% were at least somewhat satisfied with the overall quality of their job search (Q22). OLS Model 3 (predicting job-match quality, $N = 89$, $R^2 = 0.193$, $F(5,83) = 3.97$, $p = 0.003$) reproduces that platform ease of use ($\beta = 0.260$, $p = 0.001$) and platform accessibility satisfaction ($\beta = 0.201$, $p = 0.033$) are still the only significant predictors.

Explanatory power is concentrated in one structural variable, platform accessibility. This is a substantive result: it implies that increasing the technological accessibility of hiring platforms would lead to larger gains in outcomes than any compositional change in who uses them or how much. Table 1 summarises all three models. This pattern of high AI adoption, coupled with persistently low outcomes, is consistent with the institutional constraint literature [7, 9, 16]: given unstable accommodation subsidies, accessible platform standards, and regulatory accountability, technology adoption alone cannot overcome employer discrimination and China's legacy of welfare firms.

Table 1. OLS regression results: predictors of job-search outcomes ($N = 89–91$)

Predictor	Model 1: Job-Search Success *β (SE)*	Model 2: Overall Satisfaction *β (SE)*	Model 3: Job-Match Quality *β (SE)*
AI user (vs. non-user)	−0.583*** (0.206)	−0.463* (0.234)	−0.372 (0.241)
Platform ease of use	0.161** (0.066)	0.456**** (0.080)	0.260*** (0.079)
Accessibility satisfaction	0.219*** (0.079)	−0.113 (0.092)	0.201** (0.093)
Education	−0.034 (0.062)	−0.113 (0.072)	0.008 (0.075)
Age	−0.039 (0.076)	0.015 (0.086)	0.003 (0.089)
Weekly job-search hours	−0.077 (0.111)	—	—
Job-match quality	—	−0.001 (0.105)	—
N	91	89	89
R^2 / Adj. R^2	0.254 / 0.201	0.363 / 0.316	0.193 / 0.144

Note: ****, ***, ** and * indicate statistical significance at the 0.1%, 1%, 5% and 10% levels respectively. Standard errors in parentheses. Em dashes indicate predictors not included in that model. Models 2 and 3 use listwise deletion on Q26, which two respondents left unanswered. Dependent variables reverse-coded so higher values indicate better result.

The findings from this survey can be connected to the theoretical discussion that occurs above through four analytic moves.

4.4. Taste-based vs. statistical discrimination

Following Becker [10], employers build direct discrimination independently of any productivity assessment. The survey evidence is consistent with taste-based discrimination as the dominant cause. Most tellingly, 45.05% of the respondents report receiving no response whatsoever to their application, which speaks to employers' avoidance and not, strictly speaking, skill-competition screening. International field experiments confirm this view: Antinyan et al. [5] found productivity-enhancing signals do not mitigate the disability callback penalty and, in some cases, enlarge the gap, which means employers are not updating on productivity signals in the manner predicted by statistical discrimination theory. The regressions offer another dimension. Education has no significant effect on success in any of the three models (all $p > 0.10$), but structural access variables are dominant. If discrimination were primarily statistical, then education should at least partially offset the disability penalty; the absence of any such offset favours a taste interpretation. AI-assisted applications reduce some informational barriers at the margin, but without enforcement policies that directly penalize employers' discriminatory behaviour, technology side improvements cannot close a gap that at its roots is employer preference not informational asymmetry. Consistent with this interpretation, Liao et al. [17] find that disability-related wage gaps in China persist even after controlling for productivity differences,

suggesting that taste-based factors operate not only at the hiring gate but throughout the employment relationship.

4.5. Algorithmic statistical discrimination

Arrow [11] and Phelps [12] described how group labels act as a proxy for unobserved productivity, producing discriminatory equilibria without explicit discrimination. Modern AI hiring mechanisms simply scale this up: automated résumé screening systems trained on historical callback data encode past employer preference including that for disability exclusions and apply it to new applicants in a uniform way [18, 19]. The survey findings fit this model exactly. Inaccurate automated screening is identified as a major barrier by 40.66% of respondents, and algorithmic bias is a concern for 51.65%. Importantly for the present argument, negative associations between AI use and both success and satisfaction in the regression are precisely what a selection-plus-algorithmic-discrimination story predicts: the more job seekers who actively participate in AI and online recruitment channels, the more they are motivated job seekers and also the more they are screened by AI systems that systematically disadvantage them. Concerns respondents expressed regarding over-standardization (61.54%) reflects an intuitive grasp of this mechanism.

4.6. From welfare enterprise to AI-mediated hiring

China's change from state-assigned employment via welfare enterprise to marketised hiring creates a type of path dependency in institutions that continues to affect both employer behaviour and applicant strategy. The welfare enterprise model created a durable connection of disability and welfare dependency that echoes in employer cultures long after the original regulatory regime was changed away from. Employers who made sense of a disabled applicant on this basis were unlikely to respond differently to AI-assisted application content absent a fundamental alteration of institutional context. The regression results speak to this: lack of significance of education across all three models ($p > 0.10$ throughout) goes directly against a human capital story in which investments in skills generate returns and is far more congruent with a path-dependency story where disability status itself constitutes an overriding categorical signal that crowds out individual merit.

Even though the Spearman correlation between job-match quality and satisfaction is significant and modest ($\rho = 0.210$, $p = 0.049$), job-match quality being significant only implies that (unfortunately) if such platforms do surface jobs relevant to an individual, job satisfaction might improve—but this is not the norm. The analysis will examine if policy-complementary AI features are genuine structural paths toward inclusion or remain aspirational tools whose promise are limited by the path-dependent institutional context in which they work.

5. Implications, evaluation and critical review

5.1. Policy implications and recommendations

These findings also have relevance for three different groups of actors. For policymakers, they convey that stable, predictable accommodation subsidies for small and micro-enterprise employers are important for easing employer risk aversion with respect to disabled applicants and that enforcement of current accessibility legislation for digital recruitment platforms needs to be greatly strengthened, and transparent penalties imposed for violators. For platform designers, the evidence very strongly supports an inclusion-first platform redesign philosophy: disability-supportive job tags, better applicant feedback loops and improved accessibility compatibility need to be considered minimum standards, because platform ease of use is the primary

determinant of job-search success in all three regression models. For developers of AI and HR technology, this study recommends investing in ability-based job-matching features beyond being keyword detectors in résumés, adding transparency in recommendations, and conducting algorithmic audits before market deployment that spot-check specific instances of disability bias in the screening process.

5.2. Generalizability and broader significance

This work theorized selection effects of AI adoption, algorithmic tendency toward statistical discrimination, and path dependence of institutional design. They apply wherever AI-assisted recruitment systems are in place in settings with historical exclusion of the employment of people with disabilities. The finding that platform accessibility, and not adoption of AI, is the binding constraint on outcomes is widely applicable: it suggests that countries such as India, Brazil, and across Southeast Asia, in which recruitment is rapidly digitized but platforms have weak accessibility standards, will encounter the same dynamics as uncovered here [20, 21]. The welfare enterprise legacy is only China-specific, and the broader finding uncovered here matches the international experimental literature reviewed above. Future comparative work across national boundaries would test whether finding platform accessibility replicates for different disability rights settings and labour market structures.

5.3. Methodological strengths

This study has several methodological strengths that contribute to the validity of its findings. The mixed-methods design means the quantitative findings can be probed with an established causal "baseline". Taking OLS regression models that have similar results across the dependent variables also provides convergent evidence for the central finding that platform accessibility predominates over AI adoption as a predictor of outcomes. The study also directly addresses a real gap in the literature: no other published work has done direct interviews with disabled job seekers in China as users of AI-enabled recruitment platforms, so this study also represents an original empirical contribution.

5.4. Limitations and potential sources of bias

Three important limitations are worth mentioning. First, the sample is heavily biased to respondents who are visually impaired (83.52%), recruited through snowball sampling from visually impaired community networks. The results do not generalize easily to other disabilities, especially for others where disability platform accessibility barriers and AI use cases may be considerably different. Second, the survey depends entirely on self-reported retrospective data, which introduces recall bias and social desirability bias, especially for difficult questions (such as job-search outcomes, disclosure of disability). No objective callback tracking feature means that the outcome variable success mixes together different types of non-response. Third, the cross-sectional design is incapable of making a causal inference: the negative association between adoption of AI and success is interpreted as a selection effect; it cannot be validated with longitudinal data or experimental data. AI tools can also be genuinely counter-productive in some contexts (as opposed to simply selected by those who were already relatively disadvantaged).

5.5. Suggestions for future research

Three directions would hugely advance understanding well beyond the scope of this paper. First, an experimental simulation of an AI recruitment platform would provide causal evidence of algorithmic discrimination that the experimental design of this paper cannot yield. Second, employer side surveys targeting the HR managers and product teams of AI platforms would enable direct measurement of the extent to which

platform owners are aware of or are cognisant of, and responsive to, their accessibility and fairness responsibilities. Third, a cohort of disabled job seekers tracked over some period of time would enable measurement of AI adoptions, platform experiences and outcome trajectories all co-varying in time.

6. Conclusion

This study examined whether AI expands or restricts labor market access for disabled job seekers in China, combining a survey of 91 disabled job seekers with a systematic meta-review of international correspondence experiments and three OLS regression models. Three main findings emerge. First, AI adoption is high (78.02%) but does not independently predict better outcomes: AI users report lower job-search success than non-users, a pattern most plausibly explained by a selection effect whereby the most disadvantaged job seekers are also the most likely to turn to AI tools. Second, platform ease of use is the only predictor that is significant in all three models, and satisfaction with platform accessibility is significant in two of them, whereas education and age are never significant (all $p > 0.10$); platform accessibility, rather than AI adoption, is therefore the binding constraint on outcomes. These two results are consistent with H1 and H2. Third, the concerns voiced by respondents, with 40.66% identifying inaccurate automated resume screening as a major obstacle and 51.65% worrying about algorithmic screening bias, fit the statistical discrimination model applied to algorithms, under which AI systems trained on historical hiring data reproduce past discriminatory patterns at scale.

Taken together, these results indicate that AI has genuine potential to support disabled job seekers in China, yet existing AI-driven hiring platforms largely recreate existing discriminatory patterns through algorithmic bias and platform exclusion. The central message is supported by evidence from several approaches and is grounded in well-established economic theory: the result that platform accessibility is a binding constraint on the outcomes of disabled job seekers is robust across all three regression models and coheres with both the literature on statistical discrimination and the institutional path-dependence argument developed in this analysis. This study therefore concludes that structural policy change is a precondition for AI to deliver genuine inclusion gains. Such change consists of quota reform with a stable form of accommodation allowance for small and micro-enterprises, enforcement of platform accessibility requirements, and mandatory fairness audits to detect and remove discriminatory screening patterns before AI systems are deployed. The main value of the study lies in providing an empirical foundation for a relatively underexplored intersection and in identifying the specific structural reforms and design amendments needed to turn AI's possibilities into real inclusion gains.

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