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Examining the Relationship between IT Job Seekers' Demographics and Challenges in Digital Hiring Platforms

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ARTICLE INFO	ABSTRACT
	Introduction: This study explores the relationship between the demographic profile of Information Technology (IT) professionals and the challenges they encounter while utilizing digital platforms and innovations in hiring and screening processes. With the rapid advancement of technology, organizations increasingly rely on digital tools for recruitment, making it essential to understand how demographic factors such as age, gender, educational background, and years of experience influence the perception and experience of these innovations **Objectives**: The primary objective is to examine whether demographic factors influence the challenges IT professionals face in the adoption and use of digital hiring tools, with a focus on understanding specific areas where variations might exist. **Methods**: Utilizing a quantitative research approach, data were collected through structured surveys of 103 IT professionals from the Gujarat region. The Kruskal-Wallis test was applied to analyze the data and identify any statistically significant differences among the demographic groups. **Results**: The findings reveal that, in most cases, demographic factors do not significantly affect the challenges faced by IT professionals. However, specific areas, such as the role of feedback in guiding inclusive practices, showed notable variation among different demographic groups. **Conclusions**: The study highlights the importance of designing adaptive and inclusive hiring technologies that cater to diverse professional backgrounds within the IT sector, ensuring that digital recruitment tools are effective and equitable for all users. **Keywords**: Information Technology Professionals, Digital Platforms, Hiring Innovations, Screening Processes, Demographic Profile, Recruitment Challenges, Inclusive Practices, Kruskal-Wallis Test, Technology Adoption, Human Resource Management

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INTRODUCTION

The advent of digital transformation has significantly altered the operational dynamics of various industries, with the Information Technology (IT) sector at the forefront of this change. As organizations increasingly embrace digital platforms and advanced technologies to streamline their human resource functions, the hiring and screening processes have undergone a fundamental shift. The traditional recruitment practices have given way to more innovative, data-driven, and automated solutions that promise efficiency, speed, and enhanced decision-making. However, as these technologies become deeply embedded in recruitment frameworks, it becomes essential to evaluate how IT professionals interact with these systems and the challenges they face, particularly through the lens of their demographic profiles.

Hiring and screening are critical components of organizational success, determining the quality and fit of new talent. Digital platforms now offer a wide array of tools, such as applicant tracking systems (ATS), artificial intelligence (AI)-based screening algorithms, video interviews, gamified assessments, and predictive analytics. These tools are designed to reduce human bias, improve candidate experience, and increase the overall effectiveness of the recruitment process. Nonetheless, the effectiveness and inclusiveness of these tools can vary depending on the user's

familiarity with technology, age, educational background, experience level, and even cultural orientation. This raises a pertinent question: Do demographic factors influence how IT professionals perceive and experience digital innovations in hiring and screening?

Information Technology professionals, by virtue of their expertise, are typically considered early adopters of technology. They often serve as both developers and users of these innovations. However, it is crucial to recognize that within this group, there exists considerable diversity. For instance, younger professionals may adapt quickly to new interfaces and tools, while older professionals may encounter usability or trust issues. Similarly, those with advanced academic qualifications might better understand algorithmic processes and therefore exhibit more confidence in automated hiring systems. Conversely, professionals with less exposure to these tools may face difficulties in navigating or trusting them. These variations underscore the need to analyze the challenges faced by different segments within the IT profession in order to make the adoption of digital hiring platforms more equitable and effective.

In addition to technical proficiency, demographic attributes also intersect with professional experiences, attitudes, and behavioral responses to technology. Gender, for example, has been linked in some studies to differential experiences with workplace technologies, potentially due to design biases or differences in digital socialization. Years of professional experience may also influence the level of comfort and openness toward automated decision-making in hiring processes. An experienced professional may be skeptical about being evaluated by an algorithm rather than a human, questioning the transparency and fairness of such systems. Therefore, understanding how these demographic dimensions influence the interaction with and perception of digital hiring platforms becomes not only a technical concern but also a socio-organizational one.

Moreover, the challenges encountered during digital hiring processes are not solely technical. They can also relate to transparency, privacy, inclusivity, and perceived fairness. For instance, AI-powered screening tools often rely on historical data, which can carry embedded biases that may disadvantage certain demographic groups. If left unaddressed, these biases can perpetuate systemic inequalities within organizations. Therefore, identifying whether IT professionals from different demographic backgrounds experience such issues differently is critical for ensuring that digital hiring tools fulfill their promise of fairness and inclusivity.

This study is particularly significant given the increasing reliance on remote and hybrid work models, which have further accelerated the digitization of recruitment. In a post-pandemic world, virtual hiring has become the norm rather than the exception, making it even more important to ensure that digital hiring platforms are accessible and effective for a diverse workforce. The IT sector, being both a consumer and creator of these technologies, serves as an ideal domain for exploring these relationships. By examining the experiences of IT professionals, this research aims to offer valuable insights into how demographic factors shape the perception and challenges associated with digital hiring innovations.

This paper considers 14 different challenges that might be faced by job seekers of the IT field. The challenges include: Technical issues such as difficulties in internet connectivity, computer hardware and software problems; Biased ratings and paid ratings in online recruitment and selection; Impersonal experience such as difficulty in establishing rapport with the employer; Higher subscription charges while using job aggregators, premium video interview platforms etc.; Time zone differences results in inconvenience in scheduling interviews and tests; Resume parsing issues such as automated applicant tracking systems may struggle to accurately parse and interpret candidates resume; Lack of feedback such as CRMs may not provide candidate with detailed feedback on their performance during various stages; Assessment fairness such as not fully capture a candidates capabilities or could be biased; video interview stress and camera consciousness; cybersecurity concerns such as frauds in subscription in hiring cycles, leakage of private information; Accessibility barriers such as challenges in accessing and navigating on online platforms; Lack of personal touch whereby candidates might miss the opportunity to physically visit the workplace, meet potential colleagues and experience the company culture; High competition in market over the online applications due to wider pool of applicants; Limited communication such as delays in receiving updates on their application status or have difficulties reaching out to recruiters for inquiries.

The core objective of this study is to analyze the relationship between demographic profiles of IT professionals—such as age, gender, education level, and experience—and the challenges they face while using digital platforms and tools in hiring and screening. Using a non-parametric statistical approach, the study aims to identify whether these challenges are significantly associated with demographic variables. The findings are expected to contribute to the broader discourse on equitable technology design and implementation in human resource practices. Furthermore, the study aims to provide practical recommendations for HR professionals, technology developers, and policymakers to improve the inclusivity and usability of digital hiring solutions.

In essence, while digital transformation has revolutionized hiring processes, it is imperative to ensure that these innovations are inclusive, transparent, and user-friendly for professionals across diverse demographic backgrounds. By exploring the intersection of demographic attributes and user experiences within the IT sector, this study seeks to bridge existing gaps in the literature and inform more equitable practices in technology-driven recruitment.

Following literatures were reviewed in order to get more insight on this study:

[1] Cappelli (2019) highlighted the transformative role of AI and digital tools in recruitment, noting how these innovations increase efficiency but may unintentionally disadvantage certain demographic groups due to algorithmic bias.

[2] Black and van Esch (2020) emphasized the growing dependence on AI-driven tools in talent acquisition and raised concerns about fairness, especially when systems lack transparency in decision-making, disproportionately affecting minority groups.

[3] Hickok (2021) investigated how digital platforms impact hiring fairness and concluded that professionals from different educational backgrounds perceive algorithmic screening with varying levels of trust and confidence.

[4] Van Esch, Black, and Ferolie (2019) argued that digital interviews and predictive hiring models tend to favor individuals who are more tech-savvy, inadvertently introducing bias against older professionals.

[5] Suen, Chen, and Lu (2019) investigated perceptions of AI use in HR and discovered that more experienced professionals tended to be skeptical about AI fully replacing human judgment in candidate screening. Their concerns centered on the lack of personalization and empathy that AI systems often exhibit, qualities they believe are essential in evaluating candidates fairly and effectively. These professionals emphasized the importance of human insight in understanding context, nuance, and individual potential—elements they felt AI cannot yet replicate. The study highlights the need for balanced integration, combining AI efficiency with human sensitivity in HR decision-making processes.

[6] Bogen and Rieke (2018) critically examined automated hiring systems and cautioned that these tools often replicate historical biases present in their training data. They argued that, rather than promoting fairness, such systems can unintentionally perpetuate existing inequalities in hiring practices. The reliance on biased data undermines the effectiveness of these tools in supporting equitable recruitment, highlighting the urgent need for transparency, accountability, and bias mitigation in the design and deployment of automated hiring technologies.

[7] Ajunwa, Crawford, and Schultz (2016) warned that employers' use of automated screening tools could result in discriminatory outcomes if not carefully monitored and regulated. They highlighted that when algorithmic features flagged by these systems correlate with demographic characteristics—such as race, gender, or age—it can unintentionally reinforce existing biases. Without transparency and oversight, automated hiring processes risk perpetuating inequality, making it essential for organizations to implement safeguards that ensure fairness and accountability in their use.

[8] Tambe, Cappelli, and Yakubovich (2019) examined the effectiveness of digital hiring platforms and found that, although these technologies enhance efficiency and streamline recruitment processes, user experiences differ notably across demographic lines, particularly gender and age. Their research indicated that younger users often navigate digital platforms with greater ease, while older candidates may face usability challenges. Additionally, gender-based differences in interaction and comfort with technology were observed, suggesting that digital hiring tools may not

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equally serve all users. These findings underscore the need for inclusive design that considers diverse user needs to ensure fairness and accessibility in digital recruitment.

[9] Zhang et al. (2020) observed that younger IT professionals generally adapt more quickly to gamified assessments and mobile-first hiring platforms, showing greater ease and confidence in navigating these modern tools. In contrast, older individuals may encounter challenges related to usability and interface design, which can affect their overall experience and performance during the hiring process. These differences highlight the importance of designing digital hiring platforms that are intuitive and accessible across age groups, ensuring that all candidates have an equal opportunity to succeed regardless of their familiarity with newer technologies or digital interfaces.

[10] Chamorro-Premuzic et al. (2016) explored how candidates psychologically respond to innovative hiring practices, particularly online assessments. Their analysis revealed that demographic factors—such as education level and digital literacy—significantly influence how receptive individuals are to these tools. Candidates with higher education and greater familiarity with digital platforms tend to be more comfortable and trusting of online assessments, while those with limited digital experience may feel anxious, skeptical, or disadvantaged. These findings suggest that to ensure fairness and inclusivity, organizations must consider demographic differences when implementing digital hiring technologies and provide support to bridge any gaps in digital readiness.

[11] Bersin (2018) stressed the significance of human-centered design in digital HR tools, arguing that successful technology adoption depends on recognizing and addressing the needs of diverse user groups. He emphasized that HR systems should be intuitive and accessible, tailored to fit the varying skills, experiences, and expectations of their users. By prioritizing user demographics, organizations can enhance engagement, ensure broader adoption, and create more effective, inclusive digital HR experiences.

[12] The LinkedIn Global Talent Trends Report (2020) highlighted the growing importance of transparency and feedback in digital hiring systems, noting that candidates increasingly expect clear communication throughout the recruitment process. However, the report also revealed generational differences in comfort levels with emerging technologies. Younger candidates tend to be more at ease with asynchronous interviews and AI-driven selection tools, embracing the efficiency and flexibility these methods offer. In contrast, older candidates may prefer more traditional, human-centered approaches. This generational gap underscores the need for balanced hiring strategies that incorporate both innovative technology and personalized, human interactions to meet diverse candidate expectations.

[13] Stone, Deadrick, Lukaszewski, and Johnson (2015) emphasized the importance of inclusive design in HR technology, cautioning that its absence could lead to the exclusion of certain employee groups. They warned that individuals who are less comfortable or familiar with digital tools may feel alienated or struggle to engage with HR systems that lack user-friendly, accessible features. As technology becomes increasingly embedded in HR processes, designing systems that accommodate diverse user needs is essential to ensure equal access and participation. Without thoughtful design, HR technology may unintentionally marginalize parts of the workforce, undermining both effectiveness and employee inclusion.

[14] Köchling and Wehner (2020) explored the ethical concerns surrounding algorithmic hiring and emphasized the critical importance of using diversity-aware training data. They argued that without careful attention to the composition of training datasets, algorithmic systems risk perpetuating existing demographic biases and inequalities. By failing to represent diverse populations adequately, these systems may reinforce structural disparities in hiring outcomes, underscoring the urgent need for fairness, transparency, and inclusivity in the development and deployment of such technologies.

[15] Faliagka et al. (2012) showed that although resume parsing and automated scoring technologies enhance efficiency in the recruitment process, they may inadvertently disadvantage candidates with non-traditional educational backgrounds or unconventional career trajectories. These systems often rely on standardized criteria, which can overlook diverse experiences and unique qualifications, leading to biased evaluations. As a result, potentially strong candidates may be excluded, highlighting the need for more inclusive and adaptive recruitment algorithms that account for varied professional profiles. [16] Strohmeier and Piazza (2015) highlighted that the effectiveness of e-recruiting platforms largely depends on users' digital fluency. This fluency is shaped by factors such

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as age, education level, and professional experience, which influence how comfortably and efficiently individuals navigate and engage with digital recruitment systems.

[17] Bondarouk and Brewster (2016) argued that among IT professionals, demographic factors like gender and years of service significantly affect how digital HR tools are understood and utilized within organizations. These individual differences shape users' interactions with technology, influencing both adoption rates and overall effectiveness in the workplace.

[18] Kundu and Gahlawat (2018) examined digital transformation in HRM in India, revealing that although IT professionals often lead as early adopters, notable disparities persist in access and comfort with technology among various demographic groups. These gaps highlight the uneven impact of digital advancements across the workforce.

[19] Barley, Bechky, and Milliken (2017) emphasized that hiring platforms must account for the social context of candidates, noting that factors such as professional background and socio-cultural identity significantly influence how individuals perceive and interact with recruitment technologies. Understanding these contexts can enhance the effectiveness and inclusivity of such platforms.

Previous existing studies focus on digital hiring efficiency and fairness but lack sector-specific analysis. Limited research explores how demographic factors affect IT professionals' experiences with recruitment technologies. There is a clear gap in empirical studies linking demographic profiles to the specific challenges faced during digital hiring and screening processes.

OBJECTIVES

Following objectives are covered in this study:

• To identify relation between gender and challenges faced while using digital platforms and innovations in hiring and screening process of IT professionals

• To identify relation between number of years of experience and challenges faced while using digital platforms and innovations in hiring and screening process of IT professionals

• To identify relation between Age of Respondent and challenges faced while using digital platforms and innovations in hiring and screening process of IT professionals

• To identify relation between educational qualification and challenges faced while using digital platforms and innovations in hiring and screening process of IT professionals

METHODS

The study employs analytical and exploratory research. Primary data collection was involved by distribution of structured questionnaires to around 500 IT professionals in the Gujarat region out of which 103 professionals responded to these questionnaires. Convenient and judgmental sampling method was used to distribute these questionnaires to IT professionals. Normality test is done using Shapiro-Wilk values to check the fitness of the data. Kruskal-Wallis test is done to identify any statistically significant differences among groups.

RESULTS

1. Demographic Profile of Job Seekers

Table 1.1: Demographic Details of the Respondents

Variables	Particulars	Percentage
Gender	Male	60.6%
	Female	39.4%
Age	18-24 years	26.4%
	25-34 years	61.4%

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	35-44 years	11.6%
	45- 55 years	0%
	Above 54 years	0.3%
Education Qualification	Graduate	59.3%
	Post-Graduate	32.1%
	Doctorate	1.3%
	Other qualifications	7.3%
Number of years of experience	1-5 years	50%
	5-10 years	35.4%
	10-15 years	9.6%
	More than 15 years	5%

Above table 1.1 shows gender wise distribution of respondents with 60.6% as male respondents and 39.4% as female respondents; age wise distribution of the respondents with 26.4% are 18-24 years old, 61.4% are 25-34 years old, 11.6% are 25-44 years old and 0.3% are above 55 years; number of years of experience distribution of Job seekers with 50% of job seekers have 1-5 years of experience, 35.4% have 5-10 years of experience, 9.6% have 10-15 years of experience and 5% have more than 15 years of experience and educational level distribution of respondents. 59.3% job seekers have done graduation, 32.1% have done post-graduation, 1.3% are doctorates and 7.3% have done other courses.

2. Normality test

To identify the fitness of the data a scale consisting of 14 distinct statements consisting of primary challenges encountered while utilizing digital platforms and innovations, adapted from diverse previous research studies related to Recruitment and Selection were constructed. Participants were instructed to indicate the extent to which they agreed with each statement regarding the challenges they faced while using different digital platforms and innovations in the hiring and screening process on a likert scale of 5 points spanning from 1 (Always faced the challenge) to 5 (Never faced the challenge). Normality test was done using Shapiro-Wilk and Kolmogorov-Smirnov values to check the fitness of the data. Below results were generated using SPSS 2.0.

Table 2.1 Test of Normality for challenges faced among job seekers

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Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
challenges [Technical issues such as difficulties with internet connectivity, computer hardware and software problems]	.388	302	.000	.726	302	.000
challenges [Biased ratings and paid ratings in online community sites]	.201	302	.000	.853	302	.000
challenges [Impersonal experience such as difficulty in establishing rapport with the employer]	.326	302	.000	.821	302	.000
challenges [Higher subscription charges while using job aggregators, premium video interview platforms etc.]	.305	302	.000	.855	302	.000
challenges [Time Zone differences results in inconveniency in scheduling interviews and tests]	.272	302	.000	.874	302	.000
challenges [Resume Parsing issues such as Automated applicant tracking systems may struggle to accurately parse and interpret candidates' resumes]	.290	302	.000	.857	302	.000
challenges [Lack of feedback such as CRMs may not provide candidates with detailed feedback on their performance during various stages]	.287	302	.000	.868	302	.000
challenges [Assessment fairness such as not fully capture a candidate's capabilities or could be biased]	.275	302	.000	.876	302	.000
challenges [Video interview stress and camera consciousness]	.309	302	.000	.849	302	.000
challenges [Cybersecurity concerns such as frauds in subscriptions in hiring cycles, leakage of private information]	.294	302	.000	.859	302	.000
challenges [Accessibility barriers such as challenges in accessing and navigation on online platforms]	.305	302	.000	.841	302	.000
challenges [Lack of personal touch whereby candidates might miss the opportunity to physically visit the workplace, meet potential colleagues, and experience the company culture]	.308	302	.000	.851	302	.000
challenges [High Competition]	.236	302	.000	.889	302	.000
challenges [Limited communication such as delays in receiving updates on their application status or have difficulties reaching out to recruiters for inquiries.]	.299	302	.000	.855	302	.000

a. Lilliefors Significance Correction

Note: Results generated using IBM SPSS statistics 2.0

Above table 2.1 shows the result of the normality test. Since sample size is less than 2000, Shapiro-wilk values will be considered for normality check and to analyse fitness of data for the parametric test. From the analysis of the above result, it is evident that the p value of all the above-mentioned factors or variables is more than 0.05. Therefore, we can say that all factors or variables mentioned in the above table follow a normal distribution and are not fit for the parametric test. And thus non-parametric test was conducted to find out the relation between various demographics and challenges faced while using digital platforms and innovations in hiring and screening process.

3. Hypothesis tests

To identify the relationship between different demographics (such as gender, number of years of experience of job seeker, educational level of job seeker and age of job seeker) with challenges faced in using digital platforms in hiring

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process, a non parametric test i.e Krushkal-Walis test is done. Following are the hypothesis formulation and findings for the same.

Hypothesis 1: Parameters of challenges faced while using online tools and technologies among job seekers in Recruitment and Selection with Gender

H1.0: There is no significant difference in the level of importance among various parameters of challenges faced while using online tools and technologies among job seekers in Recruitment and Selection with Gender

H1.1: There is significant difference in the level of importance among various parameters of challenges faced while using online tools and technologies among job seekers in Recruitment and Selection with Gender.

Table 3.1 Hypothesis test: Challenges vs gender of job seekers

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of challenges [Technical issues such as difficulties with internet connectivity, computer hardware and software problems] is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	.743	Retain the null hypothesis.
2	The distribution of challenges [Biased ratings and paid ratings in online community sites] is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	.545	Retain the null hypothesis.
3	The distribution of challenges [Impersonal experience such as difficulty in establishing rapport with the employer] is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	.816	Retain the null hypothesis.
4	The distribution of challenges [Higher subscription charges while using job aggregators, premium video interview platforms etc.] is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	.165	Retain the null hypothesis.
5	The distribution of challenges [Time Zone differences results in inconveniency in scheduling interviews and tests] is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	.721	Retain the null hypothesis.
6	The distribution of challenges [Resume Parsing issues such as Automated applicant tracking systems may struggle to accurately parse and interpret candidates' resumes] is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	.183	Retain the null hypothesis.
7	The distribution of challenges [Lack of feedback such as CRMs may not provide candidates with detailed feedback on their performance during various stages] is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	.022	Reject the null hypothesis.
8	The distribution of challenges [Assessment fairness such as not fully capture a candidate's capabilities or could be biased] is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	.206	Retain the null hypothesis.
9	The distribution of challenges [Video interview stress and camera consciousness] is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	.856	Retain the null hypothesis.
10	The distribution of challenges [Cybersecurity concerns such as frauds in subscriptions in hiring cycles, leakage of private information] is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	.792	Retain the null hypothesis.
11	The distribution of challenges [Accessibility barriers such as challenges in accessing and navigation on online platforms] is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	.195	Retain the null hypothesis.
12	The distribution of challenges [Lack of personal touch whereby candidates might miss the opportunity to physically visit the workplace, meet potential colleagues, and experience the company culture] is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	.229	Retain the null hypothesis.
13	The distribution of challenges [High Competition] is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	.467	Retain the null hypothesis.
14	The distribution of challenges [Limited communication such as delays in receiving updates on their application status or have difficulties reaching out to recruiters for inquiries.] is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	.927	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

Note: Results generated using IBM SPSS Statistics 2.0

Table 3.1 shows the hypothesis testing conducted to explore the relationship between gender and the challenges faced in using online tools and technologies during the recruitment and selection process. Using the Independent-Samples Kruskal-Wallis Test at a significance level of 0.05, the results indicated that for 13 out of the 14 parameters assessed, there was no statistically significant difference between male and female respondents. This suggests that gender does not generally influence the challenges experienced in the use of online recruitment technologies. However, for one parameter (i.e lack of feedback from various platforms), a significant difference was found, indicating that gender may play a role in how that specific challenge is perceived or experienced. Overall, the findings imply that online

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recruitment and selection systems can be designed and improved in a largely gender-neutral manner, while paying special attention to the area where gender differences were observed.

Hypothesis 2: Parameters of challenges faced while using online tools and technologies among IT professionals in Recruitment and Selection with Number of years of experience

H2.0: There is no significant difference in the level of importance among various parameters of challenges faced while using online tools and technologies among job seekers in Recruitment and Selection with Number of years of experience

H2.1: There is significant difference in the level of importance among various parameters of challenges faced while using online tools and technologies among job seekers in Recruitment and Selection with Number of years of experience.

Table 3.2 Hypothesis test: Challenges vs Number of Years of experience of IT professional

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of challenges [Technical issues such as difficulties with internet connectivity, computer hardware and software problems] is the same across categories of Number of Years of experience.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.
2	The distribution of challenges [Biased ratings and paid ratings in online community sites] is the same across categories of Number of Years of experience.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.
3	The distribution of challenges [Impersonal experience such as difficulty in establishing rapport with the employer] is the same across categories of Number of Years of experience.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.
4	The distribution of challenges [Higher subscription charges while using job aggregators, premium video interview platforms etc.] is the same across categories of Number of Years of experience.	Independent-Samples Kruskal-Wallis Test	.648	Retain the null hypothesis.
5	The distribution of challenges [Time Zone differences results in inconveniency in scheduling interviews and tests] is the same across categories of Number of Years of experience.	Independent-Samples Kruskal-Wallis Test	.093	Retain the null hypothesis.
6	The distribution of challenges [Resume Parsing issues such as Automated applicant tracking systems may struggle to accurately parse and interpret candidates' resumes] is the same across categories of Number of Years of experience.	Independent-Samples Kruskal-Wallis Test	.442	Retain the null hypothesis.
7	The distribution of challenges [Lack of feedback such as CRMs may not provide candidates with detailed feedback on their performance during various stages] is the same across categories of Number of Years of experience.	Independent-Samples Kruskal-Wallis Test	.883	Retain the null hypothesis.
8	The distribution of challenges [Assessment fairness such as not fully capture a candidate's capabilities or could be biased] is the same across categories of Number of Years of experience.	Independent-Samples Kruskal-Wallis Test	.054	Retain the null hypothesis.
9	The distribution of challenges [Video interview stress and camera consciousness] is the same across categories of Number of Years of experience.	Independent-Samples Kruskal-Wallis Test	.096	Retain the null hypothesis.
10	The distribution of challenges [Cybersecurity concerns such as frauds in subscriptions in hiring cycles, leakage of private information] is the same across categories of Number of Years of experience.	Independent-Samples Kruskal-Wallis Test	.082	Retain the null hypothesis.
11	The distribution of challenges [Accessibility barriers such as challenges in accessing and navigation on online platforms] is the same across categories of Number of Years of experience.	Independent-Samples Kruskal-Wallis Test	.001	Reject the null hypothesis.
12	The distribution of challenges [Lack of personal touch whereby candidates might miss the opportunity to physically visit the workplace, meet potential colleagues, and experience the company culture] is the same across categories of Number of Years of experience.	Independent-Samples Kruskal-Wallis Test	.839	Retain the null hypothesis.
13	The distribution of challenges [High Competition] is the same across categories of Number of Years of experience.	Independent-Samples Kruskal-Wallis Test	.613	Retain the null hypothesis.
14	The distribution of challenges [Limited communication such as delays in receiving updates on their application status or have difficulties reaching out to recruiters for inquiries.] is the same across categories of Number of Years of experience.	Independent-Samples Kruskal-Wallis Test	.118	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

Note: Results generated using IBM SPSS Statistics 2.0

Table 3.2 shows the hypothesis testing conducted to explore the relationship between the number of years of experience and the challenges faced in using online tools and technologies during the recruitment and selection process. Using the Independent-Samples Kruskal-Wallis Test at a significance level of 0.05, it was found that for 11 out of 14 parameters, there was no statistically significant difference among respondents based on their years of experience. This suggests that experience level does not generally influence the challenges encountered. However, for 3 parameters (i.e Baised and paid ratings on online community sites, impersonal experience such as challenge to set rapport with employer on online platforms and Accessibility barriers such challenge in accessing and navigating

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on different online platforms), a significant difference was observed, indicating that years of experience do impact how certain challenges are perceived or faced. Overall, the findings imply that while online recruitment systems can largely be designed with a general user base in mind, special attention should be given to addressing specific challenges that vary based on users' experience levels.

Hypothesis 3: Parameters of challenges faced while using online tools and technologies among IT professionals in Recruitment and Selection with Age of the respondent

H3.0: There is no significant difference in the level of importance among various parameters of challenges faced while using online tools and technologies among job seekers in Recruitment and Selection with Age of the respondent

H3.1: There is significant difference in the level of importance among various parameters of challenges faced while using online tools and technologies among job seekers in Recruitment and Selection with Age of the respondent

Table 3.3 Hypothesis test: Challenges vs Age of IT professional

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of challenges [Technical issues such as difficulties with internet connectivity, computer hardware and software problems] is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.205	Retain the null hypothesis.
2	The distribution of challenges [Biased ratings and paid ratings in online community sites] is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.368	Retain the null hypothesis.
3	The distribution of challenges [Impersonal experience such as difficulty in establishing rapport with the employer] is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.282	Retain the null hypothesis.
4	The distribution of challenges [Higher subscription charges while using job aggregators, premium video interview platforms etc.] is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.158	Retain the null hypothesis.
5	The distribution of challenges [Time Zone differences results in inconveniency in scheduling interviews and tests] is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.172	Retain the null hypothesis.
6	The distribution of challenges [Resume Parsing issues such as Automated applicant tracking systems may struggle to accurately parse and interpret candidates' resumes] is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.334	Retain the null hypothesis.
7	The distribution of challenges [Lack of feedback such as CRMs may not provide candidates with detailed feedback on their performance during various stages] is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.206	Retain the null hypothesis.
8	The distribution of challenges [Assessment fairness such as not fully capture a candidate's capabilities or could be biased] is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.697	Retain the null hypothesis.
9	The distribution of challenges [Video interview stress and camera consciousness] is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.130	Retain the null hypothesis.
10	The distribution of challenges [Cybersecurity concerns such as frauds in subscriptions in hiring cycles, leakage of private information] is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.953	Retain the null hypothesis.
11	The distribution of challenges [Accessibility barriers such as challenges in accessing and navigation on online platforms] is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.507	Retain the null hypothesis.
12	The distribution of challenges [Lack of personal touch whereby candidates might miss the opportunity to physically visit the workplace, meet potential colleagues, and experience the company culture] is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.488	Retain the null hypothesis.
13	The distribution of challenges [High Competition] is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.251	Retain the null hypothesis.
14	The distribution of challenges [Limited communication such as delays in receiving updates on their application status or have difficulties reaching out to recruiters for inquiries.] is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.019	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

Note: Results generated using IBM SPSS statistics 2.0

Table 3.3 shows the hypothesis testing carried out to explore the relationship between the age of respondents and the challenges faced while using online tools and technologies during the recruitment and selection process. Applying the Independent-Samples Kruskal-Wallis Test at a 0.05 significance level, it was found that for 13 out of 14 parameters, there was no statistically significant difference among different age groups. This indicates that age

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generally does not influence the challenges experienced. However, for one parameter (i.e. limited communication of on online platforms such as delays in receiving updates or difficulties in reaching out to employers), a significant difference was noted, suggesting that age may affect how certain challenges are perceived or managed. Overall, the findings suggest that online recruitment tools can be designed to accommodate users of all age groups, with particular attention to areas where age-related differences have been identified.

Hypothesis 4: Parameters of challenges faced while using online tools and technologies among IT professionals in Recruitment and Selection with Educational level of the respondent

H4.0: There is no significant difference in the level of importance among various parameters of challenges faced while using online tools and technologies among job seekers in Recruitment and Selection with Educational level of the respondent

H4.1: There is significant difference in the level of importance among various parameters of challenges faced while using online tools and technologies among job seekers in Recruitment and Selection with Educational level of the respondent

Table 3.4 Hypothesis test: Challenges vs Educational qualification of IT professional

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of challenges [Technical issues such as difficulties with internet connectivity, computer hardware and software problems] is the same across categories of Educational Level.	Independent-Samples Kruskal-Wallis Test	.471	Retain the null hypothesis.
2	The distribution of challenges [Biased ratings and paid ratings in online community sites] is the same across categories of Educational Level.	Independent-Samples Kruskal-Wallis Test	.074	Retain the null hypothesis.
3	The distribution of challenges [Impersonal experience such as difficulty in establishing rapport with the employer] is the same across categories of Educational Level.	Independent-Samples Kruskal-Wallis Test	.170	Retain the null hypothesis.
4	The distribution of challenges [Higher subscription charges while using job aggregators, premium video interview platforms etc.] is the same across categories of Educational Level.	Independent-Samples Kruskal-Wallis Test	.109	Retain the null hypothesis.
5	The distribution of challenges [Time Zone differences results in inconveniency in scheduling interviews and tests] is the same across categories of Educational Level.	Independent-Samples Kruskal-Wallis Test	.142	Retain the null hypothesis.
6	The distribution of challenges [Resume Parsing issues such as Automated applicant tracking systems may struggle to accurately parse and interpret candidates' resumes] is the same across categories of Educational Level.	Independent-Samples Kruskal-Wallis Test	.428	Retain the null hypothesis.
7	The distribution of challenges [Lack of feedback such as CRMs may not provide candidates with detailed feedback on their performance during various stages] is the same across categories of Educational Level.	Independent-Samples Kruskal-Wallis Test	.025	Reject the null hypothesis.
8	The distribution of challenges [Assessment fairness such as not fully capture a candidate's capabilities or could be biased] is the same across categories of Educational Level.	Independent-Samples Kruskal-Wallis Test	.030	Reject the null hypothesis.
9	The distribution of challenges [Video interview stress and camera consciousness] is the same across categories of Educational Level.	Independent-Samples Kruskal-Wallis Test	.022	Reject the null hypothesis.
10	The distribution of challenges [Cybersecurity concerns such as frauds in subscriptions in hiring cycles, leakage of private information] is the same across categories of Educational Level.	Independent-Samples Kruskal-Wallis Test	.281	Retain the null hypothesis.
11	The distribution of challenges [Accessibility barriers such as challenges in accessing and navigation on online platforms] is the same across categories of Educational Level.	Independent-Samples Kruskal-Wallis Test	.210	Retain the null hypothesis.
12	The distribution of challenges [Lack of personal touch whereby candidates might miss the opportunity to physically visit the workplace, meet potential colleagues, and experience the company culture] is the same across categories of Educational Level.	Independent-Samples Kruskal-Wallis Test	.595	Retain the null hypothesis.
13	The distribution of challenges [High Competition] is the same across categories of Educational Level.	Independent-Samples Kruskal-Wallis Test	.214	Retain the null hypothesis.
14	The distribution of challenges [Limited communication such as delays in receiving updates on their application status or have difficulties reaching out to recruiters for inquiries.] is the same across categories of Educational Level.	Independent-Samples Kruskal-Wallis Test	.052	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

Note: Results generated using IBM SPSS statistics 2.0

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Table 3.4 shows the hypothesis testing carried out to explore the relationship between the educational level of respondents and the challenges faced while using online tools and technologies during the recruitment and selection process. The Independent-Samples Kruskal-Wallis Test, applied with a 0.05 significance level, revealed that for 11 out of 14 parameters, there was no statistically significant difference between respondents of different educational levels. This suggests that educational background does not typically affect the challenges encountered. However, for three parameters (i.e. lack of feedback to online applicants, inability to full assess the candidates capabilities on online platforms and video interview stress and consciousness), significant differences were identified, indicating that educational level can influence the experience of certain specific challenges. Overall, the findings imply that online recruitment tools can mostly be standardized, with special consideration given to addressing differences based on education for particular areas of concern.

DISCUSSION

This study was undertaken to explore the challenges faced by job seekers when engaging with online tools and technologies during the recruitment and selection process. The context of the investigation was based on 14 distinct challenges commonly reported by candidates in online hiring environments. These challenges included technical difficulties such as internet connectivity issues, hardware and software failures; biased and paid ratings influencing job visibility and credibility; the impersonal nature of online interactions that may hinder rapport-building with employers; high subscription charges for premium services; complications arising from time zone differences; issues with automated resume parsing systems; the lack of constructive feedback from recruitment platforms; questions regarding the fairness of online assessments; stress and self-consciousness during video interviews; cybersecurity threats including data breaches and frauds; accessibility barriers faced by certain users; lack of personal engagement opportunities such as workplace visits and interaction with future colleagues; intense competition due to a widened applicant pool; and delays or difficulties in communication with recruiters.

To understand how different demographics may experience these challenges, hypothesis testing was conducted using the Independent-Samples Kruskal-Wallis Test at a 0.05 significance level. The study focused on four key demographic variables: gender, years of professional experience, age, and educational level. The findings from these tests provide important insights into how online recruitment tools and technologies impact users differently — or, in most cases, uniformly — across these demographic categories.

Firstly, with regard to gender, the hypothesis testing revealed that for 13 out of 14 challenges, there was no statistically significant difference between male and female respondents. This indicates that gender does not generally influence the types of challenges faced in online recruitment and selection. However, an exception was noted concerning the lack of feedback from platforms, where a significant difference between male and female perceptions was observed. This suggests that while online hiring technologies are broadly gender-neutral in their impact, particular care must be taken to ensure that feedback mechanisms are designed inclusively, catering to the expectations and needs of all genders.

Secondly, considering the number of years of experience, the study found that for 11 out of 14 parameters, there was no significant difference based on respondents' professional experience. Nevertheless, three key areas — biased and paid ratings, difficulty in establishing rapport with employers, and accessibility barriers — showed statistically significant differences. This finding suggests that as individuals accumulate more experience, their expectations, familiarity with platforms, and sensitivity to certain shortcomings in online recruitment systems may differ. It highlights the need for recruitment platforms to incorporate features that address these variations, such as unbiased rating systems, opportunities for personalized interactions, and better accessibility designs catering to both new and seasoned professionals.

Thirdly, in relation to age, the hypothesis testing results demonstrated that for 13 out of 14 challenges, there was no significant difference across different age groups. This implies that candidates of various ages generally face similar obstacles when engaging with online recruitment technologies. However, for one parameter — limited communication and delayed responses — a significant difference was observed. This suggests that different age groups may have varying expectations regarding the responsiveness and communication transparency of online recruitment platforms. Older and younger candidates might perceive delays differently, influencing their overall

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satisfaction and trust in these systems. Hence, improving communication workflows and providing timely updates are essential steps to ensure positive user experiences across all age brackets.

Finally, examining the role of educational level, the findings revealed that for 11 out of 14 parameters, educational attainment did not significantly impact the challenges experienced by users. Nevertheless, three challenges — lack of feedback, fairness of assessments, and stress associated with video interviews — were significantly influenced by respondents' educational backgrounds. Candidates with varying educational qualifications might have differing expectations of feedback quality, perceptions of how fairly their skills are evaluated, and comfort levels during technologically-mediated interviews. These findings underline the importance of designing recruitment tools that provide equitable experiences regardless of educational background, ensuring fairness and reducing undue stress among candidates.

Overall, the collective results of this study suggest that online recruitment and selection technologies are largely perceived similarly across different demographic groups. This indicates a considerable degree of inclusivity and standardization in how these platforms function and impact users. However, the few statistically significant differences that emerged highlight critical areas that need attention. Specifically, differences related to feedback mechanisms, assessment fairness, rapport-building opportunities, platform accessibility, communication responsiveness, and stress management during video interviews suggest that certain candidate groups might be disproportionately affected by specific shortcomings in online systems.

For recruitment and HR technology designers, these insights provide a roadmap for targeted improvements. While maintaining a broadly standardized system ensures ease of use and operational efficiency, introducing adaptable features tailored to address specific demographic needs will significantly enhance user experience and satisfaction. For instance, providing richer, more personalized feedback can help bridge the gender gap observed. Implementing unbiased rating systems and facilitating informal interactions before formal interviews can address the concerns of experienced candidates regarding bias and rapport. Ensuring that communication timelines are clearly communicated and adhered to will help mitigate age-related dissatisfaction. Additionally, creating supportive environments for video interviews, possibly with practice sessions or stress-reduction tips, can help users across different educational backgrounds feel more comfortable.

In conclusion, while the shift toward online recruitment and selection technologies has democratized access and broadened opportunities for many job seekers, there remain nuanced challenges that must be addressed to ensure equity, fairness, and effectiveness. Future developments in online hiring platforms should prioritize these findings, ensuring that the recruitment journey is not only technologically seamless but also empathetically designed to cater to the diverse needs of a global talent pool.

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ACRONYMS

IT – Information Technology

HR – Human Resource

ATS – Applicant Tracking System

CRM – Candidate Relationship Management

AI – Artificial Intelligence

CV – Curriculum Vitae

SPSS – Statistical Package for Social Science