

**Leveling the Digital Playing Field? Comparing the Anxiety, Reactions, and Performance, of
Individuals with and without Autism Spectrum Disorder Across Technology-Enabled
Selection Tools**

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Abstract

Job applicants with autism spectrum disorder (ASD) experience disproportionately high levels of unemployment. A key barrier is that applicants with ASD face social communication difficulties and heightened anxiety with traditional selection tools, like live interviews. This study examined key applicant outcomes (applicant anxiety, fairness perceptions, and performance) amongst individuals with and without ASD across three technology-enabled selection tools: video conference interviews (VCIs), asynchronous video interviews (AVIs), and gamified assessments (GAs). Participants ($N = 55$) completed all three assessments at different time points. Results showed no significant group differences in anxiety across assessment types. However, individuals without ASD perceived GAs as less fair than VCIs, whereas those with ASD reported no differences across assessments. Individuals with ASD also performed significantly worse than individuals without ASD in VCIs, but they performed comparably in AVIs and GAs. These findings suggest that organizations wishing to implement inclusive selection practices for individuals with ASD should consider using technology-enabled assessments that limit live social interactions.

Keywords: Autism Spectrum Disorder; Personnel selection; Video-conference interview; Asynchronous video interview; Gamified assessment

Leveling the Digital Playing Field? Comparing the Anxiety, Reactions, and Performance of Individuals with and without Autism Spectrum Disorder Across Technology-Enabled Selection Tools

Job applicants with disabilities often face challenges in securing employment (Bonaccio et al., 2020). This is particularly true for applicants with autism spectrum disorder (ASD), who experience lower employment levels than not only neurotypical individuals but also people with other disabilities (Diener et al., 2020). Traditional live job interviews (whether in-person or via video-conference) are still among the most popular selection tools (Sackett et al., 2022). Live interviews have been described as a key barrier to higher employment levels for individuals with ASD, who find this type of evaluation challenging (Whelpley et al., 2021). This is because such interviews require candidates to harness their interpersonal skills (Powell et al., 2021), manage their anxiety and fears of negative evaluation (Zhang et al., 2022), and manage interviewers' impressions of them through their verbal and non-verbal behaviors (Bourdage et al., 2018). The highly social and high-stakes nature of traditional live interviews is challenging for individuals with ASD who struggle with social skills, experience more anxiety, and engage in behaviors that make them appear more awkward or less approachable (Finn et al., 2023; Lorenz et al., 2016; Whelpley & May, 2023). A way to remove such barriers is to provide applicants with ASD with accommodations to traditional live interviews, for instance by decreasing the time pressure or adding more opportunities for breaks (Burnard et al., 2025; Ezerins et al., 2025). Another option is to replace traditional interviews with technology-enabled selection tools.

Fisher et al. (2024) recently put forward a series of theoretical propositions to improve the reactions of applicants with disabilities to technology-enabled assessment and selection. For instance, they proposed that selection tools that eliminate the need to travel to the assessment

location, limit social interactions with strangers, provide flexibility regarding the time at which the assessment is completed, or reduce the need to disclose any disability early in the hiring process would be viewed positively by applicants with disabilities. Fisher et al. (2024) used asynchronous video interviews (AVIs) and gamified assessments (GAs) as illustrations of tools that could remove such barriers or incorporate such facilitators. Although not explicitly discussed by Fisher and colleagues, video-conference interviews (VCIs) could also be considered. Despite being technology-enabled, they only help remove some barriers. For instance, there is no need to travel, but they still include a live social interaction with one or more interviewer(s) at a preestablished time. There is also preliminary evidence that applicants with and without ASD perform similarly on gamified cognitive ability tests (Willis et al., 2021) but differ when answering AVI questions (Benson et al., 2025). However, these studies have not examined other important applicant outcomes, such as reactions to, or anxiety experienced in, such technology-enabled assessments by individuals with or without ASD. They also focused exclusively on one type of assessment. This gap is practically important for organizations considering implementing a GA or an AVI as an alternative or complement to more traditional selection tools, for instance to accommodate applicants with ASD. To do so, organizations need a comprehensive understanding of how different types of individuals react, behave, and perform in such assessments. As such, a more systematic examination of key outcomes (e.g., anxiety, reactions, performance) for individuals with and without ASD across several assessment methods is necessary.

The present study contributes to the emerging literature on the role of technology-enabled selection and assessment for individuals with disabilities, and particularly with ASD, in several ways. First, it empirically tests key propositions from Fisher et al. (2024) by systematically

comparing the reactions (and particularly fairness perceptions) of individuals with vs. without ASD to three key tools that differ in their potential barriers and facilitators: VCIs, AVIs, and GAs. Second, we examine anxiety because individuals with ASD often report experiencing higher anxiety than those without ASD in traditional in-person interviews (Ezerins et al., 2025), but this pattern has not been studied in technology-enabled selection tools. Third, our work goes beyond recent empirical investigations that have focused on one assessment type (e.g., Benson et al., 2025; Willis et al., 2021) by examining the performance of people with and without ASD across those three types of assessments.¹ Fourth, this research employed a within-subject design with time separation to examine the anxiety, fairness perceptions, and performance of individuals after completing three unique assessments. This is an important methodological contribution because within-subject designs are rare in the applicant reactions literature (Truxillo et al., 2009), and they help control for individual differences, which is important because ASD can be very heterogenous in terms of symptoms or severity (Hirota & King, 2023). Finally, this study contributes to the growing body of research on accessibility and disabilities in the workplace, thus providing additional evidence to help counter concerns employers might have about people with disabilities and help make workplaces more equitable and inclusive (Bonaccio et al., 2020).

Traditional Selection Experiences and Outcomes for Applicants with ASD

The American Psychiatric Association defines ASD as a neurodevelopmental disorder characterized by persistent challenges in two main areas: deficits in social communication and social interaction; and restricted, repetitive patterns of behavior, interests, or activities (VandenBos, 2015). Individuals with ASD represent a non-negligible portion of the population,

¹ We note that our goal is to explore potential differences in these important applicant outcomes between a VCI, an AVI, and a GA for people with and without ASD. Our goal was not to examine whether these assessments are psychometrically equivalent, which represents a distinct research question beyond the scope of the present study.

with estimations around 1-3% in the U.S., Canada, or Europe (Dietz et al., 2020; Public Health Agency of Canada, 2022; Sacco et al., 2022). Importantly, employment levels are lower for ASD than neurotypical individuals. For instance, a U.S. survey found that only 61.42% of adults with ASD were employed (Ohl et al., 2017). This is concerning, as many countries have legislation protecting individuals with disabilities such as ASD against employment discrimination (e.g., the American with Disabilities Act; Hensel, 2017). Research shows that employees with ASD can be efficient, trustworthy, and reliable (Solomon, 2020). For example, employers rate employees with ASD as superior to those without ASD on attention to detail, timely completion of tasks, or work ethics (Scott et al., 2017). Yet, potential employers' concerns regarding job qualifications and suitability for work are a typical barrier for applicants with disabilities (Bonaccio et al., 2020). In the case of individuals with ASD, some employers might worry about their job performance compared to that of individuals without ASD, considering certain ASD-related symptoms such as increased challenges in social communication, perspective-taking, or emotion recognition (Velikonja et al., 2019). Indeed, many employers may hold misplaced beliefs about higher supervision costs or lower productivity (Scott et al., 2017; Solomon, 2020).

The difficulty for people with ASD to secure employment can be attributed, at least in part, to barriers they face during the selection process, and particularly with traditional in-person interviews. Issues associated with in-person interviews can take two forms. First, individuals with ASD tend to be evaluated more negatively by interviewers on characteristics like job suitability or likability (Comer et al., 2023). These negative reactions are likely influenced by applicants with ASD behaving in ways that are perceived as awkward, such as reduced eye contact (Finn et al., 2023; McMahon et al., 2021). Indeed, a study found that applicants with ASD received lower performance ratings than neurotypical applicants when evaluated based on

video-recordings of their interviews, but higher ratings when based on written transcripts of those same interviews (Whelpley & May, 2023). Second, applicants with ASD might actually struggle to perform during interviews, especially without accommodation. For example, they experience more interview anxiety than non-ASD individuals, which is largely fueled by fears about how they will be perceived by interviewers, concerns about their performance, or discomfort associated with uncertain expectations (Ezerins et al., 2025). Individuals with ASD also often feel the need to “camouflage” who they are during interviews, which leads to heightened stress and anxiety, as well as reduce applicants’ cognitive resources to provide strong answers (Finn et al., 2023). Taken together, these findings suggest that traditional live interviews represent an important barrier to the employment of applicants with ASD.

Towards more Inclusive Assessment Methods

Although in-person interviews remain a core component of many selection processes, technology-enabled solutions have emerged as either potential replacements for such interviews (e.g., VCIs) or complementary screening tools that organizations can use to evaluate applicant qualifications (e.g., AVIs or GAs). Importantly, technology-enabled selection tools might include elements that make them more adequate for applicants with disabilities, including those with ASD. Fisher et al. (2024) proposed a theoretical overview of the design features of technology-enabled selection tools that could help improve the reactions of applicants with disabilities. Their discussion includes three key design elements: (1) space or time separation, (2) automated administration, and (3) automated evaluation.

Fisher et al. (2024) argue that tools that offer separation from other actors in the process (e.g., hiring managers or other applicants) in both space and time should be generally beneficial for applicants with disabilities. For instance, for applicants with disabilities, being able to

complete an assessment remotely, asynchronously, and at a time of their choosing can eliminate barriers related to transportation and accessibility (e.g., for people with physical disabilities), reduce the need to disclose their disability (which can lead to real or perceived discrimination), or allow them to engage with the assessment when they feel healthiest (e.g., for people with episodic disabilities).

The remote format also reduces the amount social interaction, something that may be particularly appealing to applicants with ASD, given the challenges people with ASD often experience in social contexts (VandenBos, 2015). Indeed, Fisher et al. (2024) propose that technologies that increase separation in time or space can lead to more positive reactions, especially for applicants with disabilities who prefer reduced social interactions. As such, assessment methods that create more separation might be perceived as particularly valuable for applicants with ASD, for instance as a way to reduce heightened anxiety (Finn et al., 2023), concerns over appearance or performance (Ezerins et al., 2025), or expectations to make eye contact (McMahon et al., 2021). Time separation can also help accommodate potential difficulties with processing speed that individuals with ASD might experience, whereas the absence of social interaction can alleviate the need to recognize emotions that exists in live interviews (Velikonja et al., 2019). In contrast, neurotypical applicants often appreciate social interactions permitted by synchronous assessments given that they permit opportunities to manage impressions (Basch, Melchers, et al., 2021)

In addition, Fisher et al. (2024) contend that technology-enabled tools that are administered or evaluated automatically can be a double-edged sword for applicants with disabilities. Some elements might reduce accessibility for some individuals (e.g., assessments with richer media like videos or games might create obstacles for people with visual or hearing

impairments) or force them to disclose their disability to obtain the necessary accommodation (e.g., ask to integrate captions in a video or game). However, the standardization associated with automated administration ensures that applicants with disabilities are treated identically to candidates without disabilities during the assessment. For instance, an automated assessment ensures that applicants with visible disabilities are not subjected to an interviewer's awkward interaction – or worse – illegal questions related to the candidate's disability. Similarly, automated evaluations might be seen as more consistent and less likely to be prone to biased or discriminatory treatment. Applicants with ASD can engage in behaviors that make them appear awkward or less approachable than neurotypical applicants (Finn et al., 2023), leading to lower performance ratings by evaluators (Comer et al., 2023; Whelpley & May, 2023). Thus, applicants with ASD might particularly see value in assessments that involve administration and evaluation automation.

Below we describe the three types of assessments examined in the present study, VCIs, AVIs, and GAs, and emphasize how they differ in terms of the elements discussed by Fisher et al. (2024). We focus on these three assessment types because they are central examples of technology-enabled tools that could benefit applicants with disabilities (Fisher et al., 2024) and have been regularly discussed in recent reviews of the future of selection research (e.g., Potočník et al., 2021; Van Iddekinge et al., 2023). We examine three outcomes (perceived anxiety, fairness reactions, and performance), which are core determinants of applicants' hiring success (McCarthy et al., 2017; Powell et al., 2018). Moreover, although research has compared these outcomes for neurotypical applicants in one or two of those tools (e.g., Benson et al., 2025; Willis et al., 2021), or compared different interview formats (Basch et al., 2020; e.g., Basch, Melchers, et al., 2021), VCIs, AVIs, and GAs have not been directly examined together.

Importantly, ASD can be very heterogeneous in terms of symptoms (e.g., deficits in social behavior or communication, rigidity, reduced affect) and severity (Hirota & King, 2023), such that two individuals with ASD might differ widely in how they perform in (or react to) various assessments. We thus rely on a within-subject design where all participants complete all three assessments, which allows controlling for individual differences, by comparing the reactions and performance of the same participants across assessment situations.

Below, we present an overview of these three assessment types, and we emphasize what barriers and facilitators can be associated with each assessment for applicants with ASD. We also describe how each assessment type could lead to differences in anxiety, reactions, or performance for applicants with and without ASD.

Video-Conference Interviews (VCIs)

Most studies that describe the difficulties experienced by applicants with ASD in selection refer to traditional in-person interviews (Finn et al., 2023; McMahon et al., 2021). Because we focus exclusively on technology-enabled selection tools in the present research, VCIs can be considered instead. Indeed, VCIs mimic many features of in-person interviews, such as a live interaction led by one or more interviewers. Although VCIs are perceived as slightly less fair, involving lower social presence or eye contact quality (Basch, Melchers, et al., 2021), less job-related (Sears et al., 2013), and more anxiety-inducing (Melchers et al., 2021) than in-person interviews, they are still perceived as very familiar and rated favorably by applicants in general (Zibarras et al., 2025). That said, research has yet to explore how applicants with ASD react to, or perform in, VCIs. Moreover, VCIs have been compared to AVIs in terms of fairness perceptions (Basch et al., 2020) and general applicant satisfaction (Griswold et al., 2022), but

less often examined in terms of anxiety or performance. Importantly, those modalities have not been compared for interviewees with and without ASD.

Practically, VCIs are completed remotely (i.e., space separation), but they do not offer time separation. Moreover, VCIs still involve a live interaction between the applicant and one or more interviewers. The assessment delivery might thus not always be fully standardized (e.g., different questions or probes could be asked), and assessment is generally not automated. As such VCIs still include many barriers for applicants with disabilities (Fisher et al., 2024). For applicants with ASD, the ability to interview remotely from a familiar and controlled environment, as well as the lower social presence and need for eye contact, should be facilitators. For instance, completing the VCI from home might reduce some of the uncertainty around expectations that can be associated with completing an interview in an unfamiliar environment (Ezerins et al., 2025). That said, having to complete a live interaction with, and be evaluated by, human interviewer(s) might still involve concerns around appearing awkward or worries about under-performing, which represent a source of anxiety for applicants with ASD (Ezerins et al., 2025). That social interaction can also create pressure to engage in “camouflaging” (Finn et al., 2023), which could make applicants with ASD view the VCI as less fair. Facing these difficulties when completing a VCI should result in more anxiety, more negative fairness reactions, and lower performance for applicants with ASD, as compared to neurotypical applicants.

Asynchronous Video Interviews (AVIs)

AVIs are one-way interviews where applicants video-record their answers to a pre-determined set of interview questions on a web platform, which can later be assessed by human evaluators or automatically evaluated by Artificial Intelligence (Lukacik et al., 2022). In contrast to VCIs, which have been used in selection for over 20 years, AVIs have only emerged as an

alternative tool in the last decade (Brenner et al., 2016) and have increased in popularity with the Covid-19 pandemic (Dunlop et al., 2022). In general, AVIs are associated with more negative reactions, and are perceived as less fair, lower on social presence, and as offering fewer opportunities to perform or manage impressions than VCIs or in-person interviews (Basch et al., 2020; Griswold et al., 2022; Zibarras et al., 2025). Yet, AVIs are very customizable tools, which can be designed to ask questions in a text or video format. They also provide applicants with more or less preparation time, response time, and opportunities to record multiple response attempts (Lukacik et al., 2022). Such design choices can impact applicant reactions in general (Tilston et al., 2024) as well as fairness/justice perceptions specifically (Lukacik & Bourdage, 2025). However, they have more modest effects on anxiety or performance (e.g., Basch, Brenner, et al., 2021; Lukacik & Bourdage, 2025; Salimian Rizi & Roulin, 2024).

AVIs include most of the facilitators and/or remove most of the barriers in a way that Fisher et al. (2024) proposed to be beneficial for applicants with disabilities: They afford both space and time separation and do not involve any live interaction (i.e., can be completed remotely when and where applicants want; Brenner et al., 2016); they are fully standardized (i.e., all applicants are asked the same questions in the same order and format; Lukacik et al., 2022); and they can – although not always do – include automated assessments of responses (e.g., Liff et al., 2024). In terms of applicants with ASD specifically, the absence of a live interaction is likely to reduce concerns over appearance or performance, as well as reduce pressures to conceal their true self, and thus help reduce anxiety (Finn et al., 2023). AVIs designed to include more preparation time, text-based questions, and re-recording options might be particularly beneficial (Burnard et al., 2025; Fisher et al., 2024), and thus lead to more positive fairness reactions. Moreover, AVI raters seem to be largely forgiving of applicants not making eye contact

(especially vertical deviations; Basch & Melchers, 2025). Overall, AVIs represent a technology-enabled selection tool that should help reduce the anxiety, improve the fairness reactions, and facilitate the performance of applicants with ASD, thereby also helping to attenuate performance and reaction differences between applicants with and without ASD.

Gamified Assessments (GAs)

In selection, organizations can try to make assessments more engaging by gamifying an existing assessment via adding game elements (e.g., points, stories, avatars, leaderboards) or creating a new standalone game-based assessment for the sole purpose of assessing a specific trait or skill (Landers et al., 2021). Applicants in general report moderate favorability ratings for GAs or game-based assessments (Zibarras et al., 2025). GAs offer the advantage of building from an existing (i.e., psychometrically sound) assessment, for example a situational judgment test (Georgiou et al., 2019; Nikolaou et al., 2019), and add game elements to increase applicants' engagement and motivation. Yet, evidence is mixed. Some studies suggest that gamifying an existing assessment can improve applicant reactions (Georgiou & Nikolaou, 2020), whereas others only found mild improvements in reactions (Landers & Collmus, 2022; Ohlms et al., 2024). More promising findings have been reported for some game-based assessments (e.g., Barends et al., 2022; Landers et al., 2021). Moreover, reactions also depend on the type of game (with simulations or role-playing viewed more positively than action problem-solving games), as well as individuals' experience with video games, or gender (Ellison et al., 2020; Gkorezis et al., 2021; Ohlms & Melchers, 2025).

Like AVIs, GAs include many elements Fisher et al. (2024) listed as facilitators and/or remove key barriers for applicants with disabilities: They include time and space separation without any social interaction, standardized administration, and automated evaluation. While

there is limited research on the use of GAs with applicants with ASD, there is preliminary evidence that individuals with and without ASD performed similarly on two different gamified cognitive ability tests (Willis et al., 2021). GA elements, such as progress bars, have been identified as motivating for applicants with ASD, as well as a way to improve fairness perception and reduce anxiety (Burnard et al., 2025). Moreover, research in other fields (e.g., clinical psychology) has demonstrated the value of gamified interventions to help individuals with ASD improve their social interaction and communication skills (e.g., Camargo et al., 2019; Wang et al., 2025). Therefore, GAs can be another technology-enabled selection tool that should lead to reducing the anxiety, more positive fairness reactions, and improving the performance of applicants with ASD relative to applicants without ASD.

Taken together, building on the propositions by Fisher et al. (2024) and the literature describe above, we hypothesize that:

H1: Individuals with ASD will experience more anxiety than those without ASD after completing VCIs, but this difference will be smaller in AVIs and GAs.

H2: Individuals with ASD will perceive VCIs as less fair than those without ASD, but this difference will be smaller in AVIs and GAs.

H3: Individuals with ASD will receive lower performance scores than those without ASD in VCIs, but this difference will be smaller in AVIs and GAs.

Methods

Sample

The final sample was composed of 55 U.S. or Canadian individuals (28 with ASD, 27 without), after excluding 4 participants based on quality checks (see below). They participated in

a three-phase study, where they completed a VCI, an AVI, and a GA. The sample size was determined by an a-priori power analysis using G*Power (Faul et al., 2009), which suggested a minimum sample size of 38 for a 2 (ASD vs. non-ASD) x 3 (VCI vs. AVI vs. GA) repeated measures ANOVA, using $\alpha = 0.05$, power = 0.80, and medium effect size ($f = 0.25$). The effect size was a somewhat conservative estimate, based on the findings of Whelpley and May (2023), who reported a medium effect ($\eta_p^2 = .09$, equivalent to $f = .31$) for the difference in interview performance ratings for ASD vs. non-ASD participants and large effect ($\eta_p^2 = .33$, equivalent to $f = .70$) for the interaction between ASD status and interview modality (i.e., videos vs. transcripts) – see detailed calculations in our Online Supplement A.²

We initially recruited participants with ASD with the help of a local Autism association as well as accessibility services at two local universities, but difficulties securing enough participants led us to complement recruitment via Prolific (using internal screeners and then confirming self-reported ASD status with participants).³ Similarly, recruitment of the non-ASD participants started with university students (using a psychology research participation pool), which was complemented via Prolific. In total, the final sample included 5 participants (4 with ASD, 1 without ASD) recruited from the Autism association, 8 participants (2 with ASD, 6 without ASD) from universities, and 42 participants (22 with ASD, 20 without ASD) from Prolific. The sample included 30 men, 21 women, and 4 who selected “other,” with 27 White, 13 Asian, and 13 Black participants (and 5 participants who identified with other races).

Participants’ mean age was 30.33 ($SD = 8.49$) and 35 participants were university-educated. On

² The online supplement and anonymous data are available in our OSF folder: https://osf.io/f47ug/overview?view_only=76885508eb3d485bb749286e26cc836c

³ Although we did not directly ask ASD or non-ASD individuals to disclose other potential disabilities, we specified the following eligibility criteria in our informed consent form: Participants should *not* have any other physical or primary sensory disabilities (vision or hearing), or any psychiatric diagnoses which can impact daily functioning levels.

average, participants had 9.36 ($SD = 8.25$) years of work experience, and they had completed 8.25 ($SD = 10.35$) VCIs, 1.76 ($SD = 6.82$) AVIs, and 0.60 ($SD = 1.61$) GAs prior to the study.⁴

Procedure

We relied on a within-subject design, where all participants completed all three assessments: a VCI, an AVI, and a GA, with a week in between each assessment. Before completing the first assessment, participants read a job description for an Assistant Store Manager position (see Online Supplement B). We chose that position and designed the job description so that it would appear relevant, relatively familiar, and attractive to most participants. Moreover, because this position did not require university degrees or specialized work experience, it ensured participants would view themselves as qualified for the role, which would help motivate them to perform on the various assessments. Given the administrative difficulties associated with scheduling live VCIs with participants (and high proportion of “no shows”), all participants completed their VCI first. One week later, participants completed either the AVI or the GA, and finally the other assessment another week later.⁵ All three assessments were designed to assess the same five competencies: teamwork, integrity, adaptability, resilience, and decision making. This is consistent with recommendations from Arthur and Villado (2008), who cautioned that to effectively and safely examine multiple selection methods, one should strive to keep the constructs assessed constant. We first identified five competencies in the GA that we believed could be also effectively assessed in interviews. We then selected interview questions related to these competencies from the interview literature, ensuring they were relevant

⁴ There was no significant difference in gender composition, age, university education, or experience with VCIs, AVIs, or GAs between participants with and without ASD. However, participants without ASD had more work experience than those with ASD ($M = 12.22$, $SD = 9.97$ vs. $M = 6.61$, $SD = 4.92$, $t(53) = 2.66$, $p = .01$).

⁵ The AVI-GA order was meant to be randomized, although, because of technological or administrative issues, only 12 participants completed the GA before the AVI. The order did not differ between ASD and non-ASD participants.

for the assistant manager job, and thus ensuring that performance scores could be generated across all three of the assessment types.

VCIs were all conducted by one of the authors using Zoom and included five questions (one per competency) with two situational and three past behavior description questions (see Online Supplement C). VCIs were not recorded and all responses were evaluated by the interviewer using behaviorally anchored rating scales (BARS), with the interviewer being blind to the ASD status of the participant. The interviewer focused only on the BARS to evaluate performance and did not explicitly rate non-verbal behaviors such as body positioning, facial expressions, eye contact (or lack thereof), or paraverbal behaviors such as communication disfluencies (unless it directly influenced the content or clarity of the response). Further, five participants (four with ASD, one without) requested to keep their camera off during the VCI. The AVIs included a different set of five questions, which were designed to assess the same competencies as the VCI ones (see Online Supplement D). Each AVI question allowed unlimited preparation time and up to five minutes of response time. Participants were allowed to re-record their responses up to two times (and select/submit their best one). AVI video responses were later rated by three trained research assistants. All interview questions and BARS were taken from past video-interview research (e.g., Roulin et al., 2023; Salimian Rizi & Roulin, 2024) examining the competencies used in the present study. We adapted slightly the questions or BARS when necessary, for instance to make the context of situational questions more relevant for the Assistant Store Manager position or by adding rating anchors to the BARS when they were missing in the original ones (e.g., if anchors were only provided for levels 1, 3, and 5 in the original study we added anchors for levels 2 and 4).

While our study was not designed to determine the psychometric equivalence of the three assessments, we designed two evaluation studies to demonstrate that the five pairs of interview questions assessed the same competencies: The first study used five large language models and the second relied on eleven graduate students in industrial and organizational psychology. In both cases, the tasks involved (a) pairing the ten interview questions (presented in a randomized order), (b) labelling the competency assessed by each pair, and (c) providing a brief definition for each competency. We report the findings of these evaluation studies in Online Supplements E-F. Results were fully aligned with the way the questions were paired and labelled in our study for three competencies (teamwork, adaptability, and decision making). Labelling was consistent, but questions pairing was not always identical, for the other two competencies (i.e., integrity and resilience questions paired together). However, because all analyses for the hypotheses below are conducted at the assessment level and not at the competency level (e.g., VCI or AVI performance as a composite), these small discrepancies do not influence our findings or conclusions.

The GA relied on the Owiwi platform, a gamified situational judgment test, which asks the participant to select a “hero” to lead a team of explorers across several islands. It includes several gamification elements to create engagement: storytelling narration, fantasy with the choice of an avatar, progress via a map, scenario with decisions to make, etc. Owiwi is designed to assess up to a dozen competencies (or social skills), by adding game/scenario components for each of them. We only included components associated with our five competencies (see Online Supplement G for illustrations of the GA content and Owiwi’s definitions of the five competencies). The Owiwi GA has been validated in prior research, demonstrating convergent validity (e.g., between the GA-score for resilience and a self-report resilience scale), criterion-related validity (for job performance and GPA), as well as more positive reactions in the GA than

the non-gamified situational judgment test (Georgiou et al., 2019; Georgiou & Nikolaou, 2020; Nikolaou et al., 2019).

After each assessment, participants completed measures of anxiety and reactions (i.e., perceived fairness), as well as two measures included for exploratory purposes (perceived ease of use and social presence), and quality checks. Participants were compensated with \$10 (or course credits for students) for completing each assessment and the associated measures. We include all our materials (job description, VCI and AVI interview questions, BARS used to evaluate interview answers, GA illustrations, and full list of items for the measures used) in our Online Supplement.

Measures

Anxiety

The level of anxiety experienced by participants in the three assessments was measured with revised versions of the MASI (McCarthy & Goffin, 2004). Items were adapted to capture state (and not trait) anxiety (as is often done with this scale; e.g., Salimian Rizzi & Roulin, 2024). Items were also adapted to reflect the assessment type (e.g., “I became so apprehensive in the [interview/gamified assessment] that I was unable to express my thoughts clearly”). The measures demonstrated excellent reliability ($\alpha = .94$ for VCIs, $.96$ for AVIs, and $.95$ for GAs). All measures were based on 1 (Strongly Disagree) to 5 (Strongly Agree) Likert scales.

Perceived Fairness

We measured fairness perceptions with 9 items from the Selection Procedure Justice Scale (SPJS; Bauer et al., 2001), focusing on elements relevant to our assessments and study, namely job relatedness, opportunity to perform, and propriety of questions. Items were adapted

to the assessment type (e.g., “I could really show my skills and abilities through this [interview/gamified assessment]”), and the measures demonstrated good reliability ($\alpha = .75$ for VCIs, $.77$ for AVIs, and $.84$ for GAs).

Assessment Performance

For VCIs, the interviewer evaluated participants’ performance for each question assessing a unique competency, using BARS with scores ranging from 1 to 5 (see Online Supplement C). The average score across all five questions ($\alpha = .93$) was used as our VCI performance measure. For AVIs, three trained research assistants independently watched and evaluated participants’ video-recorded responses on similar 1 to 5 BARS (see Online Supplement D). Inter-rater consistency was good for all five questions, with ICCs (2,3) ranging from $.78$ to $.92$, thus scores were averaged across the raters and then across all questions ($\alpha = .86$) to obtain our AVI performance measure. For GAs, we obtained performance scores for each competency from the Owiwi platform, with each competency assessed based on multiple-choice responses to five scenarios. GA scores from Owiwi range from 0-100 and they have been normed with responses from over 150,000 job applicants across Europe, the United Kingdom, and Latin America. For this study, each competency was re-scored (i.e., $[\text{Score from Owiwi}/25] + 1$) to be comparable to interview performance, and then scores were averaged across all competencies to generate one GA performance score.

Exploratory Outcome Variables

We also included measures of perceived ease of use and perceived social presence for exploratory purposes. We included these variables because they have been previously examined as relevant outcomes for technology-enabled selection tools (e.g., Basch & Melchers, 2021a;

Salimian Rizi & Roulin, 2024). For perceived ease of use, we combined six items measuring perceived ease of use and usefulness from Basch and Melchers (2021b). Again, items were adapted to the assessment type (e.g., “I found it easy to complete the [video interview/gamified assessment]”), and the measures demonstrated good reliability (α s = .85 for VCIs, .86 for AVIs, and .85 for GAs). For perceived social presence, we adapted five items from Gefen and Straub (1997) to the assessment type (e.g., “There was a sense of human contact in this [interview/gamified assessment]”), and the measures demonstrated good reliability (α s = .86 for VCIs, .98 for AVIs, and .94 for GAs).

Quality Checks

After each assessment, participants were asked “I completed the [VCI/AVI/GA] as seriously as I would if I was applying for a real job”, using a 1 (Strongly Disagree) to 5 (Strongly Agree) scale. Means were high across assessments: $M = 4.46$, $SD = .77$ for VCIs, $M = 4.37$, $SD = .77$ for AVIs, and $M = 4.51$, $SD = .78$ for GAs. We also embedded a total of twelve attention check items (bogus statements like “The primary color of the clear daytime sky is green”) rated on the same 1 to 5 Likert scale throughout the measures described above, leading to the exclusion of 4 participants from analyses. We also computed an average score, which demonstrated that participants were very attentive ($M = 1.12$, $SD = .25$).

Results

Hypotheses Testing

Table 1 includes descriptive statistics and correlations among all study variables. We conducted ANOVAs for each key outcome to examine our hypotheses (see Table 2). For the level of anxiety experienced during the assessment, we found no main effect of ASD status, $F(1, 49)$

$= 0.41, p = .53, \eta_p^2 = .01$, no main effect of assessment type, $F(2, 49) = 1.94, p = .15, \eta_p^2 = .04$, and no interaction, $F(2, 49) = 0.65, p = .53, \eta_p^2 = .01$. Contrary to H1, both participants with and without ASD experienced moderate levels of anxiety across assessments (M s ranging from 2.58 to 2.99).

In terms of perceived fairness, we found no main effect of ASD status, $F(1, 49) = 3.67, p = .061, \eta_p^2 = .07$, a significant main effect of assessment type, $F(2, 49) = 3.78, p = .026, \eta_p^2 = .07$, and a significant interaction, $F(2, 49) = 3.65, p = .030, \eta_p^2 = .07$. As illustrated in Figure 1, participants with and without ASD found both the VCI and AVI to be similarly fair, but participants with ASD ($M = 3.60, SD = 0.70$) found the GA fairer than those without ASD ($M = 3.03, SD = 0.69, p = .005$). Overall, these results provide partial support for H2.

Finally, in terms of assessment performance, the results showed a significant main effect of ASD status, $F(1, 47) = 7.47, p = .009, \eta_p^2 = .14$, no main effect of assessment type, $F(2, 47) = 2.99, p = .055, \eta_p^2 = .06$, and a significant ASD status x assessment type interaction, $F(2, 47) = 10.25, p < .001, \eta_p^2 = .18$. As illustrated in Figure 2, participants with ASD ($M = 2.70, SD = 1.14$) scored lower than those without ASD ($M = 3.84, SD = 0.84, p < .001$) in the VCI, but there was no difference in performance in the AVI ($M = 3.20, SD = 0.79$ vs. $M = 3.23, SD = 0.79, p = .90$) or the GA ($M = 3.54, SD = 0.37$ vs. $M = 3.51, SD = 0.37, p = .99$). These results support H3.

Because the three assessments were not equivalent in their approach to assess performance, we aimed to confirm the results described above by conducting separate ANOVAs per assessment (with bias-corrected 95% confidence intervals using 1000 bootstraps reported in brackets below). We found a significant difference between the ASD and non-ASD groups for VCIs, $F(1, 47) = 15.85, p < .001$, with individuals with ASD ($M = 2.70 [2.27; 3.11], SD = 1.14$), scoring lower than those without ASD ($M = 3.84 [3.54; 4.13], SD = .84$), non-overlapping CIs,

and a large effect size ($\eta_p^2 = .25$). In contrast, there were no differences for AVIs, $F(1, 47) = 0.02$, $p = .90$, $\eta_p^2 = .00$, with individuals with ASD ($M = 3.20$ [2.88; 3.52], $SD = .79$) scoring similarly to those without ASD ($M = 3.22$ [2.88; 3.54], $SD = .79$). This was also the case for GAs, $F(1, 47) = 0.00$, $p = .97$, $\eta_p^2 = .00$, again with virtually identical scores for individuals with ASD ($M = 3.54$ [3.42; 3.68], $SD = .31$) and without ASD ($M = 3.54$ [3.39; 3.68], $SD = .37$). These findings are thus aligned with those presented above and reinforce the support for H3.

Exploratory Analyses

To better understand the experience of individuals with and without ASD across assessment types, we explored two additional outcomes: perceived ease of use and social presence. For the perceived ease of use of the assessment, we found no main effect of ASD status, $F(1, 49) = 0.31$, $p = .58$, $\eta_p^2 = .01$, no main effect of assessment type, $F(2, 49) = 1.99$, $p = .14$, $\eta_p^2 = .04$, and no interaction, $F(2, 49) = 0.93$, $p = .40$, $\eta_p^2 = .02$. Overall, participants with and without ASD perceived all assessments to be relatively easy to use (M s ranging from 3.60 to 4.06).

In terms of perceived social presence, we found a significant main effect of ASD status, $F(1, 49) = 6.48$, $p = .014$, $\eta_p^2 = .12$, a significant main effect of assessment type, $F(2, 49) = 65.98$, $p < .001$, $\eta_p^2 = .57$, and a significant interaction, $F(2, 49) = 10.32$, $p < .001$, $\eta_p^2 = .17$. As illustrated in Figure 3, both participants with and without ASD found the VCI to be similarly high in social presence ($M = 3.72$, $SD = 0.85$ vs. $M = 3.88$, $SD = 0.74$, $p = .48$). However, participants with ASD ($M = 2.73$, $SD = 1.33$) experienced more social presence in the AVI than those without ASD ($M = 1.63$, $SD = 0.87$, $p = .001$). The same pattern was observed for the GA, although the difference was smaller ($M = 3.07$, $SD = 1.06$ vs. $M = 2.26$, $SD = 1.12$, $p = .011$).

Following the suggestion of an anonymous reviewer, we examined how often participants chose to submit a re-recorded attempt (instead of their initial attempt) when answering AVI questions. Overall, 74.5% of participants never submitted a re-recorded attempt, 12.7% submitted one re-recorded attempt, and 9.1% submitted two (and nobody submitted three or more). Moreover, results of a *t*-test showed that individuals with ASD ($M = 0.48$, $SD = 0.75$) used the re-recording option slightly more often than those without ASD ($M = 0.15$, $SD = 0.46$), $t(51) = 1.90$, p (two-tailed) = .053, Cohen's $d = 0.52$ (see Online Supplement I for more detail).

For the sake of transparency, we also included correlations between performance at the competency level across assessments in our Online Supplement J. These results showed three interesting patterns: (1) correlations between the same competency across assessment types were generally small and non-significant (with some rare exceptions, e.g., $r = .30$ between the VCI and GA for integrity); (2) correlations between different competencies were very strong within both VCIs (r s ranging from .61 to .81) and AVIs (r s ranging from .32 to .70); but (3) they were much smaller within GAs (r s ranging from -.09 to .28). This suggests that performance in VCIs and AVIs might have been more assessment-specific (but failed to capture competency-specific qualifications), and that the three assessments are not equivalent alternatives to evaluate specific competencies.⁶

Discussion

Main Findings and Theoretical Implications

⁶ Encouraged by a Reviewer, we tested, in an exploratory manner, whether anxiety acted as a mediator between ASD status and performance on the three assessments. Results showing that the indirect effects are non-significant are reported in Supplement K of the Supplementary Materials. Thus, while prior work has emphasized the role of anxiety as an explanation for the lower performance of individuals with ASD in traditional in-person interviews (Ezerins et al., 2025), these exploratory analyses suggest that it might not be the case in VCIs (or other technology-enabled tools).

This research aimed to achieve several goals. Specifically, we aimed to (1) empirically examine theoretical propositions about the potential barriers and facilitators associated with technology-enabled assessment and selection tools for applicants with disabilities (Fisher et al., 2024); (2) contribute novel insights to the emerging literature on the experience of individuals with ASD during assessments (e.g., Benson et al., 2025; Willis et al., 2021) by examining multiple applicant outcomes across multiple assessment tools; and (3) do so using a within-subject design so that the same individuals complete each assessment. We thus explored whether individuals with or without ASD would differ in their anxiety, reactions to (e.g., perceived fairness), and performance on three popular tools: VCIs, AVIs, and GAs. Those assessments were chosen because they differ in terms of key elements described by Fisher et al. (2024), namely time or space separation, automated administration and automated evaluation, with AVIs (e.g., Lukacik et al., 2022) and GAs (e.g., Landers et al., 2021) including more of those elements than VCIs (e.g., Basch, Melchers, et al., 2021).

Our results were not consistent with our hypothesis for assessment anxiety. Indeed, we found that both individuals with and without ASD experienced moderate levels of anxiety across all three assessments (M s = 2.58 to 2.99). An explanation could be that participants were less anxious because of the low-stakes nature of the study. However, the means observed in our studies for VCIs (i.e., 2.99 for applicants with ASD and 2.70 for those without ASD) and AVIs (i.e., 2.95 and 2.81, respectively) are higher than those observed in past mock VCIs studies (e.g., M = 2.22 in Melchers et al., 2021) and very similar to those observed in a recent large-scale field study with real applicants completing AVIs for jobs (M = 2.89; McCarthy et al., 2021). Overall, these results contribute to a better understanding of the antecedents of interview anxiety in technology-enabled interviews, as well as the role played by applicant individual differences

(here, ASD), thus answering recent calls for more research in that area (Constantin et al., 2021). The mean anxiety levels for the GA in our study (i.e., 2.58 for applicants with ASD and 2.63 for those without ASD) were also similar to those observed in game-based assessment research ($M = 2.82$ in Landers et al., 2021). More generally, research on GAs (like the Owiwi tool used in the present study) has largely focused on performance antecedents or applicant reactions (Georgiou et al., 2019; Georgiou & Nikolaou, 2020; Gkorezis et al., 2021; Nikolaou et al., 2019), but has overlooked anxiety. Similarly, the emerging research on GAs for applicants with (vs. without) ASD has been limited to examining performance (Willis et al., 2021), but not anxiety. Therefore, our findings contribute to the burgeoning research on GAs in selection, and particularly for individuals with ASD.

In terms of applicant reactions, our findings shed some light on how individuals with and without ASD differently perceive technology-enabled assessments, especially in terms of fairness and social presence. Namely, neurotypical individuals perceived VCIs to be more fair and higher on social presence, with AVIs being viewed as particularly low on social presence and GAs as less fair – consistent with prior work (e.g., Basch et al., 2020; Zibarras et al., 2025). In contrast, individuals with ASD perceived the three types of assessments as similarly fair. Moreover, while they viewed AVIs and GAs as lower on social presence than VCIs, the differences were much less dramatic than for their neurotypical counterparts. Exploratory analyses also showed that individuals with ASD were slightly more likely than those without ASD to use the re-recording option in their AVI, perhaps contributing to their more positive reactions to this technology-enabled option. These findings provide direct evidence for Fisher et al.'s (2024) predictions, and thus provide initial empirical support for the suggestion that technology-enabled tools that

include elements such as separation of time and space, automated administration or automated evaluation, are perceived positively by applicants with disabilities (or at least those with ASD).

Our findings for assessment performance were consistent with Fisher et al.'s (2024) general predictions. Individuals without ASD performed better than those with ASD in the VCI, consistent with earlier work showing that interviews involving a social interaction with one or more interviewers can be difficult for applicants with ASD (Comer et al., 2023; Finn et al., 2023; Whelpley & May, 2023). However, the differences were not present in the AVI or GA. These findings empirically support the idea that asynchronous selection tools can help eliminate barriers like live social interactions to level the playing field for applicants with ASD. This is also consistent with the types of modification suggestions made by individuals with ASD themselves (Burnard et al., 2025). Thus, asynchronous selection tools could represent an effective yet relatively inexpensive form of accommodation (Bonaccio et al., 2020), although (as we discuss below) replacing a synchronous tool with its asynchronous counterpart also requires ensuring the equivalence of assessment methods. Taken together, our findings showcase that selection tools such as AVIs and GAs have the potential to be valuable alternatives, or complements, to VCIs (and arguably also in-person interviews). They help individuals with ASD achieve levels of performance that are equivalent to those without ASD, thus potentially eliminating barriers or sources of bias (Ezerins et al., 2025; Whelpley & May, 2023), without resulting in more anxiety or lower applicant reactions (especially in terms of fairness).

Finally, we note that the within-subject design and the fact that participants completed actual interviews or games are strengths of our study. These design choices facilitate the examination of multiple assessment types. Indeed, most recent empirical comparisons of applicant reactions or behaviors across technology-enabled selection methods have relied on

between-subjects comparisons (e.g., Melchers et al., 2021; Ohlms et al., 2024; Suen et al., 2019) and/or scenarios where individuals review descriptions of an assessment and are asked to imagine having completed it (e.g., Basch et al., 2020; Köchling & Wehner, 2023; Ohlms & Melchers, 2025). In addition to providing methodological rigor, a within-person design is particularly useful when recruiting participants with disabilities given that recruitment of the large sample sizes required by between-subjects designs may be challenging (Fisher et al., 2023).

Practical Implications

The findings from our study have valuable implications for both hiring organizations and job applicants, especially those with ASD. For organizations, our results provide preliminary evidence that different types of technology-enabled selection tools can lead to different outcomes for applicants with ASD. Consistent with prior work about in-person interviews (e.g., Finn et al., 2023; Whelpley & May, 2023) our findings demonstrate that VCIs can be associated with more negative reactions and lower performance (although no more anxiety) for individuals with ASD. Alternatively, AVIs and GAs might help level the playing field in terms of performance, and lead to more positive reactions. That said, these results come with three important caveats.

First, we found very limited evidence of convergent validity in terms of performance scores for the five competencies evaluated across the three assessments. This means that using one tool in lieu of another might not result in equivalence of competencies tested, and thus arguably cannot be used to accommodate some applicants while at the same time ensuring a fair and valid selection process. Therefore, unless organizations can develop and validate different selection tools (e.g., a VCI and an AVI or GA) that demonstrate equivalence, they should use the same tool for all applicants. That said, it is important to note that concerns around construct validity (i.e., convergent/discriminant validity) have been reported with other selection methods

too, for instance in traditional face-to-face interviews (e.g., Melchers et al., 2009; Van Iddekinge et al., 2004) or assessment centers (Lance, 2008). More generally, we encourage organizations to conduct internal validation studies and demonstrate that alternative assessments are psychometrically equivalent (e.g., provide evidence of construct and convergent validity) before offering applicants the option to choose among tools as a form of accommodation.

Second, applicants without ASD, while not penalized in terms of performance or anxiety, did report more negative reactions to AVIs and GAs than VCIs (in terms of perceived fairness and – especially – social presence). These findings are generally consistent with past research (e.g., Griswold et al., 2022). Thus, replacing an existing VCI by an AVI (or GA) for the entire applicant pool, for instance, would benefit applicants with ASD but could come at the cost of slightly more negative reactions from neurotypical applicants. We would argue that this is an acceptable trade-off if organizations are truly invested in leveling the playing field for neurodivergent applicants. That said, more research is needed before organizations are encouraged to use AVIs or GAs as a viable alternative to VCIs.

Third, the relative value of GAs, AVIs, or VCIs might also depend on the specific social skills required for the job. The skills examined in the present study (e.g., integrity, resilience, or decision making) are arguably best assessed by asking applicants to describe past work experiences or how they would tackle a hypothetical problem at work (e.g., in a VCI or AVI), or by placing them in a scenario where they need to make decisions (e.g., in a gamified SJT). However, social skills like communication or persuasion could be best assessed in a live interview, by examining not only applicants' responses, but also their delivery, or their ability to address follow-up questions. That said, organizations should be reminded that such live interactions are exactly what can create barriers for individuals with ASD in the first place (Finn

et al., 2023; McMahon et al., 2021), which is why alternatives like AVIs or GAs have been explored (e.g., Benson et al., 2025; Willis et al., 2021).

For applicants with ASD, our findings suggest that technology-enabled selection tools might represent opportunities to help overcome barriers associated with traditional interviews, which have put them at a systematic disadvantage to secure employment (Finn et al., 2023; Scott et al., 2017; Solomon, 2020). Applicants with ASD might thus inquire if other forms of assessments, and particularly AVIs or GAs, are available as a form of accommodation as part of their application process. That said, not all organizations might be able to offer multiple assessment alternatives, and we also encourage employers to explore other ways to deal with existing barriers for applicants with ASD. For example, virtual interview training designed specifically for applicants with ASD has shown promise in improving self-confidence, non-verbal competence, and interview performance (Kumazaki et al., 2022). As such, organizations could provide such preparation resources to applicants.

Limitations and Future Research Directions

This research includes limitations that need to be acknowledged and are associated with valuable directions for future research. First, although we relied on a within-subject design (i.e., participants completing all three assessments), which ensured sufficient statistical power, our sample remained generally small. This is typical of research with specific populations, such as people with ASD (e.g., Finn et al., 2023; Whelpley & May, 2023). Replicating our findings with a larger sample would help increase generalizability and we recommend that researchers use the partnered research approach to help recruitment efforts (Fisher et al., 2023). Second, our results are based on individuals completing mock assessments. Although they were attentive and took the tasks seriously, it would be important to replicate our findings using samples of real job

applicants completing VCIs, AVIs, or GAs, in a high-stakes selection context. We also need to emphasize that we took precautions so that the VCIs and AVIs were conducted and/or evaluated in a standardized way, in an attempt to isolate the effect of assessment type on the performance of individuals with and without ASD. However, interviews conducted in organizations (especially VCIs) might not always include such precautions, and might be also prone to interviewer bias, which could accentuate the effects observed in our study.

Third, we were unable to fully randomize the order of the assessments completed by participants (i.e., most started with the VCI for administrative reasons). It is possible that the lower performance of participants with ASD in the VCIs could have been accentuated by their positioning as the first assessment. However, such an order effect was not observed for people without ASD, who performed the best in VCIs. In addition, all participants completed all three assessments, which examined the core competencies with different questions/in different ways, and took place with a week in between assessments, thus limiting the risk of practice effect. Also, such practice effects would have been consistent for participants with and without ASD. Overall, we remain confident that this design limitation likely had a limited impact on our findings.

Fourth, it is also important to emphasize the lack of convergent validity observed in our study. Indeed, scores at the competency level (e.g., teamwork, integrity) generally failed to correlate across assessment types, and assessment should demonstrate equivalence in order to be used as alternative tools, for instance as a form of accommodation (Maneethai & Johnson, 2024). Similarly, our research did not explore potential differences in construct or criterion-related validity for those tools between applicants with and without ASD. These extensions all represent valuable avenues for future research.

Fifth, we relied on an AVI designed to align with the key elements described by Fisher et al. (2024), such as using text-based questions, providing unlimited preparation time and ample response time, as well as the opportunity to re-record responses. Yet, AVIs can be designed in more restrictive ways (Lukacik et al., 2022), organizations vary in how they use them in practice (Dunlop et al., 2022), and design choices can impact applicants' experiences or reactions (Tilston et al., 2024). Therefore, it would be important to examine whether our results differ with AVIs designed with more restrictions (e.g., short preparation or response time) or using video-based questions. The VCIs were rated live by the interviewer, which is the typical approach used in practice (Basch, Melchers, et al., 2021). Yet, research could examine if our findings (e.g., differences in performance ratings) replicate if VCIs are recorded and rated at a later time, like we did for the AVIs. We also note that a small number of participants (mostly with ASD) chose to keep their camera off during the VCI. While we can only speculate as to why they chose this option or how it impacted their interview experience, this strategy could have been a way to limit appearing awkward to the interviewer (e.g., Finn et al., 2023), and it could have helped alleviate their anxiety or improve their performance (e.g., Whelpley & May, 2023). Yet, more research is needed to explore the exact cause and benefits of such a strategy. Similarly, we relied on one specific gamified situational judgment test (by Owiwi; Georgiou et al., 2019), and future research can explore other types of GAs or gamed-based assessments. For instance, we found no differences in perceived ease of use or anxiety across our three assessments. Yet, applicants could have different perceptions about other GAs or interview questions (e.g., find them to be easier or harder than the ones used in our study). Alternatively, research could explore other types of assessments, such as leaderless group discussions done live in person vs. live online through a

written chat platform (with applicants with ASD possibly performing better when typing than speaking).

Finally, our research was focused on individuals with ASD. However, more research is needed to explore the reactions or performance of individuals with various types of disabilities (Bonaccio et al., 2020; Fisher et al., 2024). For example, studies could examine differences across technology-enabled selection tools for individuals with attention deficit hyperactivity disorder, social anxiety, post-traumatic stress disorder, or visual and hearing impairments. Because each disability can interact differently with specific assessment elements (e.g., having a live social interaction vs. not), this area is ripe for research to explore further.

Conclusions

This research represents an initial attempt to test theoretical propositions about the potential barriers and facilitators associated with technology-enabled tools for applicants with disabilities recently put forward by Fisher et al. (2024). We examined this by evaluating the performance, anxiety, and reactions of people with and without ASD across three selection tools (VCIs, AVIs, GAs). Our findings provide preliminary evidence for the potential values of AVIs and VCIs as a way to level the playing field for applicants with ASD, especially in terms of assessment performance and reactions. Yet, more research, with both individuals living with ASD and other disabilities, is needed.

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Table 1.

Descriptive Statistics and Correlations for Study Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13
1. ASD Status	0.51	0.50	-												
2. VCI Experience	8.24	10.35	.13	-											
3. AVI Experience	1.76	6.82	.13	.58**	-										
4. GA Experience	0.60	1.61	.05	.08	.03	-									
5. VCI Anxiety	2.85	0.88	.16	.08	.03	.11	(.94)								
6. AVI Anxiety	2.89	0.97	.09	-.09	-.27	-.08	.54**	(.96)							
7. GA Anxiety	2.65	0.97	-.02	.00	.04	-.14	.21	.29*	(.95)						
8. VCI Ease of use	3.84	0.80	-.02	-.10	-.02	-.15	-.60**	-.21	.07	(.85)					
9. AVI Ease of use	3.61	0.86	-.02	-.07	.26	.07	-.37**	-.66**	-.11	.30*	(.86)				
10. GA Ease of use	3.89	0.82	.18	.02	-.19	.03	.07	.14	-.41**	.13	.12	(.85)			
11. VCI Performance	3.29	1.11	-.50**	.18	-.04	-.07	-.17	-.21	-.07	-.09	-.04	-.09	(.93)		
12. AVI Performance	3.26	0.80	-.01	.08	-.25	-.16	.27	.13	-.14	-.19	-.20	.10	.23	(.86)	
13. GA Performance	3.55	0.33	-.03	-.05	-.29*	-.07	-.05	-.05	-.16	-.38**	-.17	-.24	.13	.01	-
14. VCI Social presence	3.81	0.77	-.10	.10	.04	-.14	-.31*	-.18	.05	.56**	.27	.10	-.16	-.07	-.14
15. AVI Social presence	2.18	1.23	.45**	.02	.40**	.16	-.09	-.16	.21	.18	.42**	.03	-.60**	-.15	-.16
16. GA Social presence	2.67	1.15	.38**	.00	.17	.08	-.08	-.13	-.06	.13	.37**	.21	-.50**	-.10	-.11
17. VCI Fairness	3.57	0.60	.14	.11	.16	-.01	-.56**	-.27	.13	.67**	.33*	.16	-.13	-.40**	-.21
18. AVI Fairness	3.37	0.63	.09	-.05	.21	.13	-.26	-.51**	.01	.27	.61**	.15	-.16	-.22	-.06
19. GA Fairness	3.31	0.74	.36**	-.01	-.03	.03	-.09	-.05	-.27	.12	.31*	.63**	-.31*	-.09	-.01
20. Age	30.33	8.49	-.16	.08	-.08	.06	-.18	-.17	.04	.05	.06	-.12	.29*	.20	.10
21. University degree	0.64	0.49	-.14	.09	.11	-.05	-.07	-.19	.13	.00	.12	-.13	.33*	.13	.02
22. Work Experience	9.36	8.25	-.34*	.07	-.09	.06	-.16	-.18	.13	-.07	-.03	-.20	.43**	.10	.15

Variable	14	15	16	17	18	19	20	21	22
14. VCI Social presence	(.86)								
15. AVI Social presence	.26	(.98)							
16. GA Social presence	.33*	.72**	(.93)						
17. VCI Fairness	.45**	.35*	.25	(.75)					
18. AVI Fairness	.27	.46**	.29*	.61**	(.77)				
19. GA Fairness	.29*	.36**	.53**	.40**	.46**	(.84)			
20. Age	.20	-.08	-.06	.19	.09	.08	(.75)		
21. University degree	.00	-.06	-.02	.04	.08	-.03	.30*	(.77)	
22. Work Experience	.15	-.25	-.26	.13	.01	-.05	.86**	.25	(.84)

Note. *N* ranging from 51 to 55 (pairwise deletion). VCI = Video-conference interview; AVI = Asynchronous video interview; GA = Gamified assessment; ASD = autism spectrum disorder (coded as 1 = with ASD, 0 = without ASD). Measures internal consistency reliability (Cronbach's α) provided in the diagonal. * $p < .05$; ** $p < .01$.

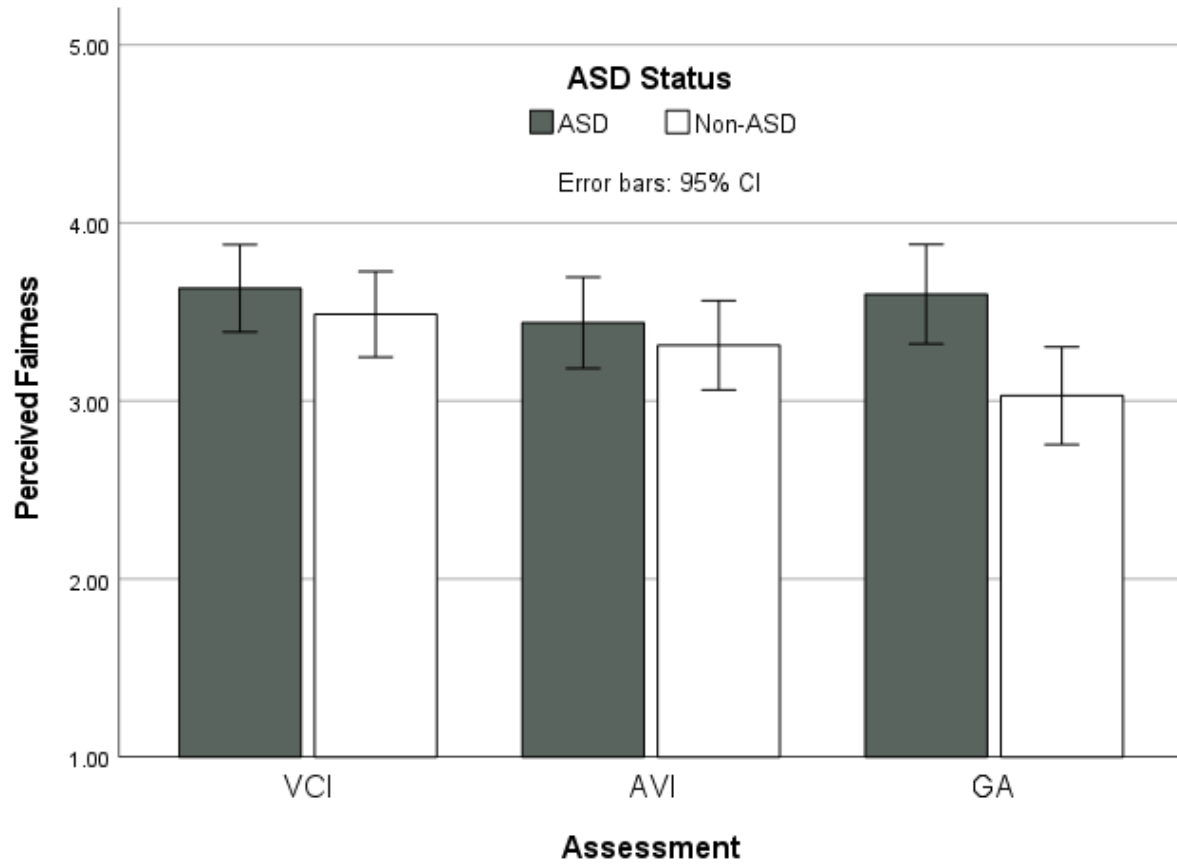
Table 2.**Descriptive Statistics and ANOVA Results for Participants with and without ASD across all Assessment Outcomes**

	<i>M (SD)</i>						ANOVA <i>F</i> -value (partial η^2)		
	VCI		AVI		GA		Assessment type	ASD status	Interaction
	ASD	Non-ASD	ASD	Non-ASD	ASD	Non-ASD			
Anxiety	2.99 (0.70)	2.70 (1.05)	2.95 (0.87)	2.81 (1.07)	2.58 (0.91)	2.63 (1.02)	1.94 (.04)	0.41 (.01)	0.65 (.01)
Fairness	3.63 (0.62)	3.49 (0.60)	3.44 (0.61)	3.31 (0.66)	3.60 (0.70)	3.03 (0.69)	3.78* (.07)	3.67 [†] (.07)	3.65* (.07)
Performance	2.70 (1.14)	3.84 (0.84)	3.20 (0.79)	3.23 (0.79)	3.54 (0.31)	3.54 (0.37)	2.99 [†] (.06)	7.47** (.14)	10.25** (.18)
Ease of use	3.82 (0.74)	3.85 (0.90)	3.60 (0.90)	3.63 (0.84)	4.06 (0.73)	3.74 (0.91)	1.99 (.04)	0.31 (.01)	0.93 (.02)
Social presence	3.72 (0.85)	3.88 (0.74)	2.73 (1.33)	1.63 (0.87)	3.07 (1.06)	2.26 (1.12)	65.98** (.57)	6.48** (.12)	10.32** (.17)

Note. $N = 51$ (except for performance, $N = 49$). VCI = Video-conference interview; AVI = Asynchronous video interview; GA = Gamified assessment; ASD = autism spectrum disorder. [†] $p < .10$; * $p < .05$; ** $p < .01$.

Figure 1.

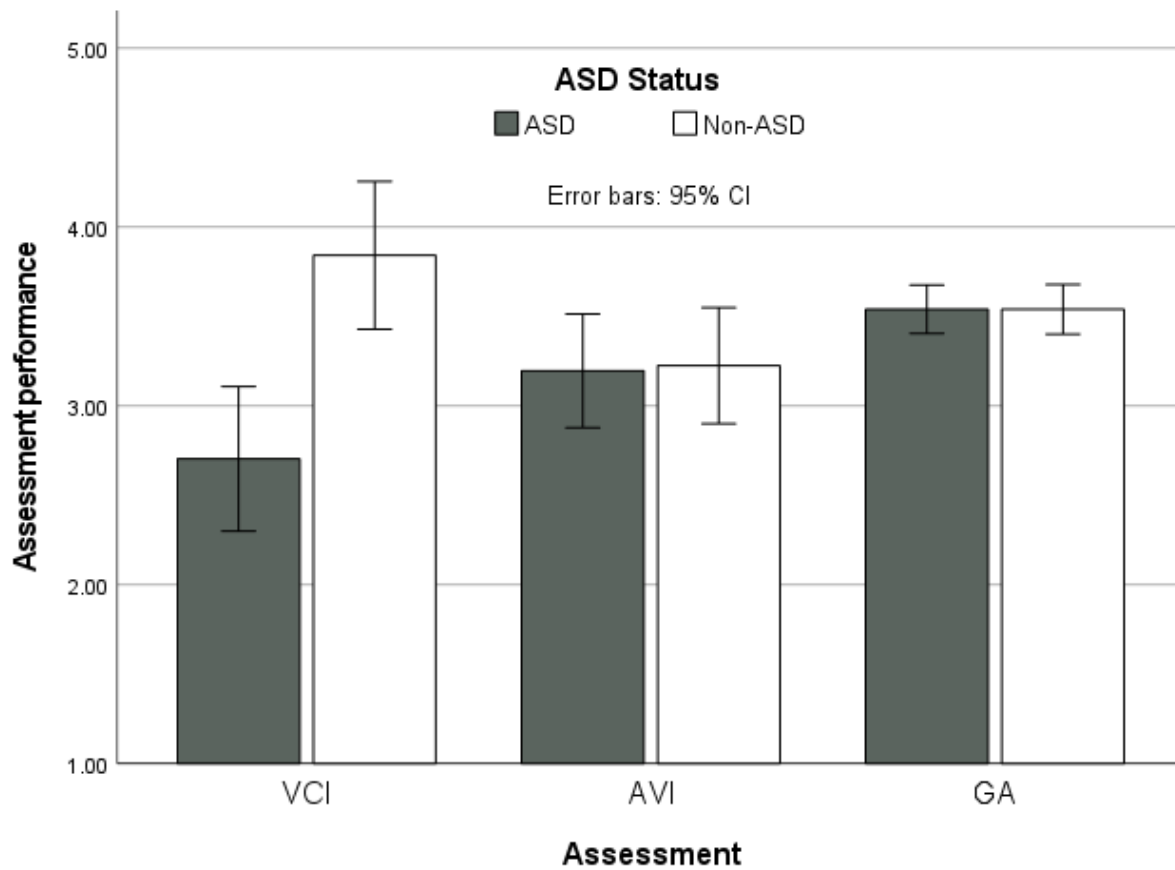
Perceived Fairness for Participants with and without ASD across Assessment Types



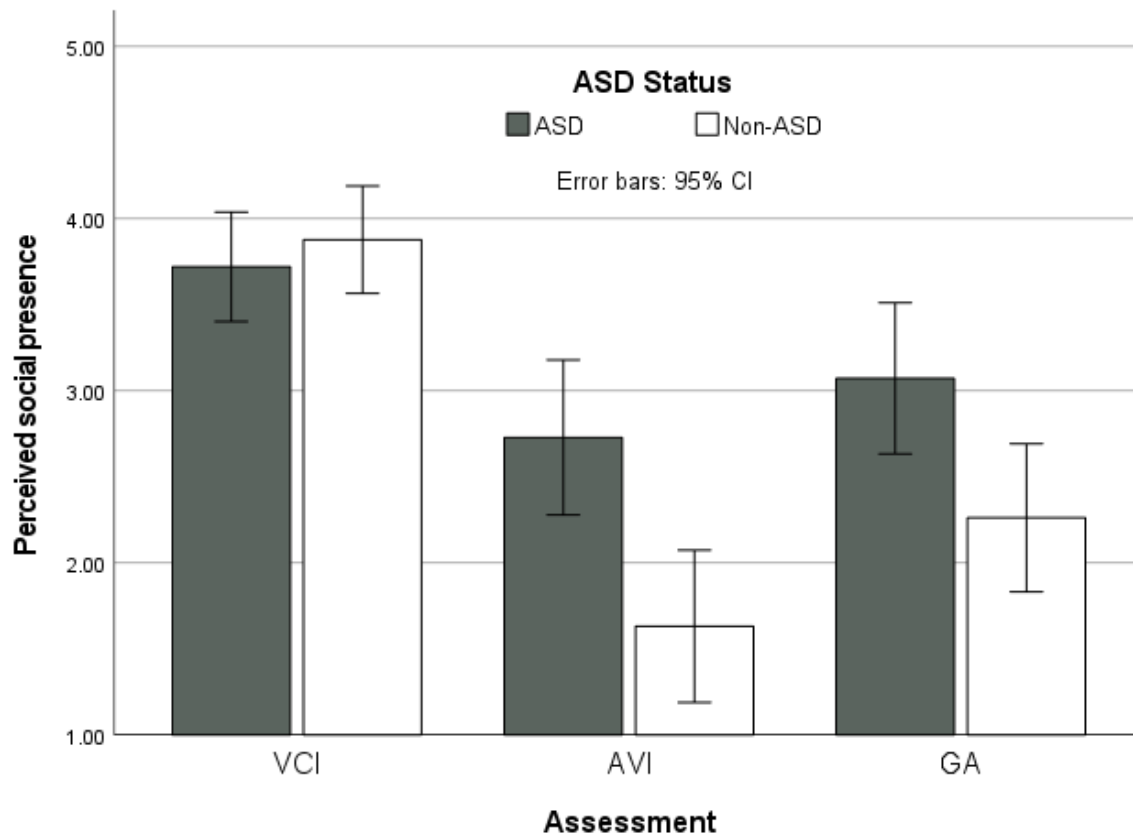
Note. VCI = Video-conference interview; AVI = Asynchronous video interview; GA = Gamified assessment; ASD = autism spectrum disorder.

Figure 2.

Assessment Performance for Participants with and without ASD across Assessment Types



Note. VCI = Video-conference interview; AVI = Asynchronous video interview; GA = Gamified assessment; ASD = autism spectrum disorder.

*Figure 3.***Perceived Social Presence for Participants with and without ASD across Assessment Types**

Note. VCI = Video-conference interview; AVI = Asynchronous video interview; GA = Gamified assessment; ASD = autism spectrum disorder.