

Article

Artificial Intelligence-Enhanced Interview Success: Leveraging Eye-Tracking and Cognitive Measures to Support Self-Regulation in College Students with Attention-Deficit/Hyperactivity Disorder

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Abstract: This study investigates how cognitive and self-regulation factors impact online interview performance among college students with ADHD. With unemployment rates for individuals with disabilities significantly higher than the general population, understanding the unique challenges posed by AI-driven virtual interviews is critical. Forty-six students with ADHD completed a structured interview simulation using the Big Interview platform, coupled with eye-tracking data and cognitive assessments. Results reveal that higher-performing participants (Gold tier) demonstrated a balanced focus on content comprehension and interviewer engagement, while lower-performing participants (Bronze tier) spent significantly more time on content fixation. Logistic regression indicated that cognitive flexibility, as measured by NIH Dimensional Card Sorting, predicts interview success, emphasizing the importance of task-switching skills in virtual environments. These findings suggest the need for targeted interventions, such as executive function training, to prepare neurodivergent individuals for the demands of AI-driven hiring practices. The study highlights the potential of psychophysiological metrics in understanding and enhancing interview performance, advocating for inclusive, evidence-based strategies that align with Diversity, Equity, Inclusion, and Belonging (DEIB) principles. This research provides actionable insights for educators, employers, and technology developers aiming to create accessible and equitable virtual interview platforms.



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Keywords: self-regulation; executive function; artificial intelligence; eye-tracking; students with disabilities; online interview performance; virtual hiring practices

1. Introduction

The convergence of artificial intelligence (AI) and employment interviewing presents both opportunities and challenges for individuals with neurodevelopmental disorders, particularly in measuring and understanding cognitive functioning. Through advanced natural language processing, AI systems can analyze linguistic patterns, including verbal fluency, semantic coherence, and response latency, providing quantitative measures of cognitive performance (Voleti et al., 2019). When combined with standardized neuropsychological assessments such as the NIH Card Sorting Test and Working Memory Index, these linguistic markers offer robust indicators of executive functioning and self-regulation capacity (Kapa & Plante, 2015).

Recent data from the U.S. Bureau of Labor Statistics indicate that persons with disabilities face unemployment rates double that of individuals without disabilities, highlighting persistent employment disparities (Kang et al., 2023). This gap has become increasingly

relevant as organizations transition to AI-powered online screening interviews, which introduce new technological and self-regulatory demands for candidates with attention deficit hyperactivity disorder (ADHD) (Buyl et al., 2022; Center for Democracy & Technology, 2020). Correlational analyses between these cognitive measures and interview performance metrics can reveal valuable insights into the specific challenges faced by individuals with ADHD and inform the development of targeted support strategies (Kaminski et al., 2006; Wodushek, 2003).

Diversity, Equity, Inclusion, and Belonging (DEIB) principles have become increasingly critical in the workplace, particularly as organizations strive to create inclusive environments that value neurodiverse populations. Research underscores that unemployment rates among individuals with disabilities, including those with neurodevelopmental disorders like ADHD, remain disproportionately high—nearly double that of individuals without disabilities (Kang et al., 2023). The adoption of AI-driven virtual interviews, accelerated by the COVID-19 pandemic, adds further complexity to this disparity by introducing new cognitive and self-regulatory demands on candidates (Buyl et al., 2022). These demands can disproportionately affect neurodivergent individuals who often face challenges in executive functioning and self-regulation (Kapa & Plante, 2015). Integrating DEIB frameworks into hiring practices is essential to reducing these barriers, creating equitable interview environments, and ensuring that neurodivergent candidates can effectively showcase their unique capabilities.

2. Literature Review

2.1. *The Evolution of Employment Interviews and Artificial Intelligence Integration*

The global COVID-19 pandemic significantly accelerated the adoption of online interviewing platforms, prompting a substantial shift in recruitment practices (Kumar et al., 2020; Vasilyeva et al., 2020). Major corporations, such as Target and Walmart, have embraced pre-recorded screening interviews that utilize avatar-based systems and artificial intelligence (AI) technology to evaluate candidates (Kumar et al., 2020; Fernández-Martínez & Fernández, 2020). These systems leverage sophisticated AI algorithms to analyze multiple aspects of candidate responses. For instance, natural language processing (NLP) examines the semantic content of responses, as well as speech patterns, voice tone, and pitch, to provide insights into verbal communication (Chen et al., 2016). Additionally, computer vision technology evaluates non-verbal cues, including facial expressions, gestures, and the maintenance of eye contact during interviews (Naim et al., 2015). Furthermore, machine learning algorithms assess communication style and ensure response consistency, providing a comprehensive analysis of candidate performance (Cho et al., 2018; Chatterjee et al., 2018).

While this technological transformation offers advantages in scalability and accessibility, it potentially creates additional barriers for individuals with ADHD who may struggle with executive functioning and social communication in virtual environments (Miller & Bugnariu, 2016; Coleman et al., 2019).

The inclusion of Diversity, Equity, Inclusion, and Belonging (DEIB) principles in interview preparation strategies is supported by growing evidence on the challenges faced by neurodiverse candidates in virtual hiring environments. Studies highlight how AI-enhanced interviews, while innovative, often fail to accommodate diverse cognitive and communication styles, creating inequities in the evaluation process (Buyl et al., 2022; Fernández-Martínez & Fernández, 2020). This is particularly true for candidates with ADHD, who may struggle with task-switching and maintaining attention in virtual settings (Miller & Bugnariu, 2016). DEIB frameworks provide a pathway for mitigating these barriers by emphasizing inclusive practices such as tailored interview preparation, cognitive flexibility training, and self-advocacy strategies. Research on virtual interview platforms

has shown that embedding DEIB principles can significantly improve outcomes for neurodivergent candidates, fostering environments that recognize and amplify diverse cognitive strengths while promoting equitable access to employment opportunities (Smith et al., 2022; Burke et al., 2021).

2.2. Self-Regulation in Online Interviews

Self-regulation—the ability to control emotions, thoughts, and behaviors in alignment with objectives (Bandura, 1986; Carver & Scheier, 1981) plays a crucial role in interview success. For individuals with ADHD, who often experience difficulties with executive functioning, online interviews present unique challenges in maintaining attention, adapting to changing circumstances, and communicating effectively (Nadeau, 2005). The virtual nature of these online interactions, lacking traditional physical presence and non-verbal cues (Thunberg & Arnell, 2021) can exacerbate difficulties in interpreting social dynamics and organizing coherent responses in real time (Lieberman & Schroeder, 2020).

2.3. Artificial Intelligence-Enhanced Interview Preparation and Support

Recent advances in artificial intelligence (AI) technology have facilitated the development of sophisticated tools for interview preparation. These AI-driven platforms integrate a variety of innovative features to enhance the interview experience. For instance, augmented reality (AR) technologies provide real-time feedback overlays, simulate interactions with virtual interviewers, and allow for environmental customization to create immersive practice scenarios (Luo et al., 2023). Behavioral analytics further enhance these platforms by tracking eye gaze direction, assessing speech fluency, and analyzing nonverbal behaviors, offering valuable insights into communication patterns (Stanica et al., 2018; Weaver et al., 2013).

Additionally, adaptive learning systems play a crucial role by enabling personalized difficulty progression, generating tailored feedback, and analyzing performance trends to guide candidates in improving their interview skills (Burke et al., 2021; Smith et al., 2022). These platforms offer comprehensive feedback and performance evaluations by examining critical factors such as voice modulation and clarity, the relevance and structure of responses, emotional intelligence, and professional presentation skills (Walker et al., 2016; Genova et al., 2021).

Research on the integration of AI technology into the employment interview process has highlighted both the potential benefits and challenges for individuals with disabilities. Following PRISMA guidelines from 2019 to 2023, emerging research demonstrates the transformative potential of artificial intelligence and virtual reality in employment interview preparation (Burke et al., 2021; Smith et al., 2022; Genova et al., 2021).

Some studies have explored the use of AI-powered systems to provide real-time feedback on nonverbal communication, vocal patterns, and semantic coherence, empowering candidates to refine their presentation skills (Chen et al., 2022). These AI-mediated simulations offer a less anxiety-inducing environment for individuals with Autism Spectrum Disorder, ADHD, and other social communication challenges to practice their interview skills (Chen et al., 2016; Luo et al., 2023). Virtual Interactive Training Agents (ViTAs) have shown particular promise, with studies reporting enhanced interview self-efficacy and improved performance metrics among participants with ADHD and other neurodevelopmental disorders (Burke et al., 2021). These AI-driven systems provide structured environments where students can practice interview skills while receiving real-time feedback on their responses, helping to build confidence and competence in professional communication. Expanding upon these groundbreaking developments, Virtual Reality Job Interview Training (VR-JIT) has emerged as a potent addition to the suite of preparation resources available.

Genova et al. (2021) demonstrated the feasibility of VR-JIT for neurodivergent populations, noting significant improvements in experimental groups compared to control conditions. The immersive nature of virtual reality creates a safe space for participants to develop and refine their interview skills, with the added benefit of reducing anxiety through repeated exposure to interview scenarios. The effectiveness of these virtual interventions appears to be closely tied to their ability to support self-regulatory behavior. Smith et al. (2022) found a direct correlation between the number of virtual interview practice sessions and subsequent employment success, particularly when participants progressed through increasingly challenging scenarios. This progression suggests that virtual environments may help students develop crucial self-regulation skills by providing structured opportunities to monitor and adjust their performance (Walker et al., 2016).

Recent technological advancements have enabled more sophisticated monitoring and support of self-regulation through integrated analytics. Eye-tracking technology, speech pattern analysis, and behavioral response monitoring now provide detailed insights into how students with ADHD navigate interview situations (Horn et al., 2023). Group-based Online Training (GOT) programs have added another dimension to virtual interview preparation. Kumazaki et al. (2022) reported significant increases in self-confidence, motivation, and interview performance scores in their study of group-based virtual interview training. The social aspects of these programs appear to complement individual practice sessions, suggesting that a hybrid approach might be most effective for developing interview skills. However, despite these promising developments, several critical research gaps remain. While current literature demonstrates the potential of virtual interview training, questions persist about the long-term effectiveness of these interventions and their ability to adapt to individual differences in executive functioning and communication styles (Munandar et al., 2021). Additionally, the relationship between cognitive measures and interview performance remains understudied, particularly in the context of ADHD.

2.4. Research Objectives

This study investigates the relationship between cognitive measures, eye-tracking data, and AI-evaluated interview performance among college students with ADHD. Specifically, we address two research questions:

1. Does the percentage of fixation duration on the interviewer (Area of Interest—AOI) vary among students with different performance levels (Gold, Silver, Bronze) on the Big Interview AI during the reception language phase?
2. To what extent does the National Institutes of Health (NIH) Card Sorting predict performance categories (Gold, Silver, Bronze) on the Big Interview AI?

This research contributes to the growing body of literature on AI applications in special education and career development by examining how psychophysiological measures and cognitive assessments can inform our understanding of interview performance among students with disabilities (Burke et al., 2021; Smith et al., 2022; Walker et al., 2016). The findings may guide the development of more effective, AI-enhanced interview preparation strategies for neurodivergent individuals.

3. Materials and Methods

3.1. Participants

The recruitment strategy employed a comprehensive approach to identify and engage college students with ADHD. The researchers conducted targeted outreach through multiple institutional channels at a major southeastern university. Primary recruitment efforts were coordinated through three main university departments: Special Education, Student Disability Services, and Career Services. Special Education professors received

recruitment materials to share with eligible students in their programs. The university's Student Disability Services office, which maintains connections with students registered for academic accommodations, distributed recruitment information through their communication networks. Additionally, the Campus Career Services office helped disseminate recruitment materials to reach a broader student population. To be eligible for participation, students needed to meet two key criteria: current enrollment at the university and a diagnosed attention-deficit/hyperactivity disorder (ADHD). Verification of ADHD diagnosis was established either through documentation of registration with Student Accessibility Services (75.5% of participants) and through self-disclosure during the screening process.

The researchers recruited 46 students with diagnosed ADHD from a major southeastern U.S. university through targeted outreach to Special Education Departments, Student Disability Offices, and Career Services. As shown in Table 1, the participants represented diverse academic standings: seniors (21.7%), juniors (21.7%), freshmen (19.6%), master's students (8.7%), doctoral students (6.5%), and sophomores (6.5%). The sample's gender distribution included 54.3% female, 21.7% male, and 15.2% non-binary, with 8.7% missing data, which is within acceptable ranges for social science research where missing data under 10% is generally considered negligible for statistical analyses (Bennett, 2001; Dong & Peng, 2013). Racial composition reflected 65.2% White, 13% Black or African American, 13% Latin, and 4.3% Asian. The mean age was 21.49 years, typical for a college population. Major fields of study varied, with concentrations in Health Sciences, Aerospace Engineering, and Biology. Notably, 75.5% of participants were registered with university student accessibility services and voluntarily confirmed their ADHD diagnosis.

Table 1. Demographic characteristics of study in participants (N = 46).

Variable	n	%
Gender		
Female	25	54.3
Male	10	21.8
Non-Binary	7	15.2
Missing	4	8.7
Race		
Asian	25	54.3
Black/African American	6	13
Latin	6	13
White	30	65.2
Academic Standing		
Freshman	10	21.7
Sophomore	3	6.5
Junior	10	21.7
Senior	10	21.7
Masters	4	8.7
Doctoral	3	6.5

3.2. Study Procedures

After obtaining consent, the researchers followed a structured sequence to minimize fatigue and optimize data quality. Participants completed initial screening and consent processes, followed by ADHD diagnosis verification. They then proceeded through cognitive assessments before engaging in eye-tracking calibration using iMotions 10.1.1 software. The interview simulation was framed as a “dream job” scenario to enhance engagement and ecological validity.

The analytical approach integrated three distinct data streams: AI-generated interview performance metrics, eye-tracking data on visual attention patterns, and standardized cognitive assessment scores. This comprehensive analysis allowed us to examine the

relationships between cognitive functioning, visual attention, and interview performance. The AI scoring system provided detailed feedback on interview responses, while eye-tracking metrics offered insights into visual attention patterns. We analyzed these data streams in conjunction with cognitive assessment scores to provide a holistic understanding of how students with ADHD navigate online interview scenarios.

3.3. Instruments

We utilized the Big Interview platform, an AI-driven simulation system, to evaluate interview performance. This platform analyzes various aspects of interview responses, including content quality, formulation, and delivery. It categorizes performance into three tiers: Gold (well-articulated responses), Silver (competent with room for improvement), and Bronze (areas needing significant development). This approach ensures consistent evaluation while providing detailed feedback on specific performance aspects.

To measure visual attention and engagement during interviews, we used the Tobii Pro Fusion eye tracker, a high-precision device capable of sampling rates from 60 to 1200 Hz. This technology captured detailed gaze data, offering insights into participants' visual attention patterns and engagement with the virtual interviewer—crucial for understanding how students with ADHD allocate their attention during interview scenarios.

Participants completed two standardized assessments to evaluate cognitive functioning and self-regulation. The Flanker Inhibition and Sustained Attention Test, part of the NIH Toolbox, measured executive function and attention control, with scores ranging from 85 to 115. The Metacognition Self-Regulation subscale of the Motivated Strategies for Learning Questionnaire (MSLQ) provided insights into participants' use of self-regulatory strategies through 12 items rated on a 7-point Likert scale.

3.4. Data Analysis

The data analysis for this study was conducted to explore the relationships between participants' executive function capacities and their performance during online job interviews. All statistical analyses were conducted using SPSS Software version 29 (IBM Corp, 2021), and assumptions for t-tests and logistic regression (e.g., normality, independence, and absence of multicollinearity) were assessed prior to running the models. Effect sizes were calculated for all tests to provide additional context for interpreting the practical significance of the findings.

For Research Question 1—examining whether the percentage of fixation duration on the interviewer (Area of Interest—AOI) varied among students with different performance levels (Gold, Silver, Bronze) during the reception language phase—-independent samples t-tests were used to compare group means. This approach allowed for the identification of statistically significant differences in AOI fixation duration, highlighting whether participants with varying performance levels demonstrated distinct visual attention patterns during online job interviews.

For Research Question 2—investigating the extent to which standardized cognitive measures (e.g., NIH Card Sorting) predicted the odds of achieving higher performance outcomes (Gold/Silver versus Bronze) on the Big Interview—binary logistic regression was employed. This method was appropriate for modeling the probability of higher performance based on cognitive flexibility and executive functioning as measured by the NIH Card Sorting task. The Gold and Silver performance categories were collapsed into a single high-performing group due to their shared characteristics and to ensure sufficient statistical power given the small sample size. This adjustment enabled a more robust binary comparison, providing interpretable results while maintaining the methodological rigor of the analysis.

4. Results

4.1. Research Question 1: Does the Percentage of Fixation Duration on the Interviewer (Area of Interest—AOI) Vary Among Students with Different Performance Levels (i.e., Gold, Silver, Bronze) on the Big Interview Artificial Intelligence During the Reception Language Phase?

The first research question examines the percentage of fixation duration on different areas of interest (interviewer, content, interviewee) among students with different performance levels (Gold, Silver, Bronze) during the receptive language phase of an online interview. An independent samples *t*-test was conducted to compare the means of fixation duration between the interviewer, content, and interviewee. The results showed a statistically significant difference between groups for the content area (Table 2). The Bronze group spent more time attempting to comprehend the question instead of engaging with the other individuals in the interview. Furthermore, there was a trend in the data indicating that those who scored better spent more time engaging. These findings suggest that individuals with higher performance levels in a practice job interview exhibit more engagement during the receptive language phase, while the Bronze group focuses more on the content area.

Table 2. Independent samples *t*-test of time spent on AOI of interviewer, AOI of content, and AOI (interviewee).

	<i>M</i> <i>Difference</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>Two-Sided p</i>
AOI Content Percent	−0.02876	0.01406	−2.046	45	0.047
AOI Interviewee Percent	−0.4445	−0.4445	−1.274	45	0.209
AOI Interviewer Percent	−0.3183	0.03183	0.617	45	0.540

4.2. Research Question 2: To What Extent Do Standardized Cognitive Measures National Institutes of Health (NIH Card Sorting) Predict the Odds of a Candidate's Performance (Gold/Silver Versus Bronze) on the Big Interview?

Addressing the second research question, the researchers performed a binary logistic regression analysis to assess the predictive power of cognitive assessments in determining a candidate's likelihood of performing well on the Big Interview.

The results revealed that a lower score on the NIH Dimensional Card Sorting task, which measures task-switching ability, was associated with poorer performance on the online interview. This suggests that the cognitive challenges often faced by individuals with ADHD, such as difficulty with task-switching, may negatively impact their performance in online interview scenarios. The results to this research question are finalized in Table 3. These findings contribute to our understanding of the self-regulation strategies and cognitive factors that influence the performance of college students with ADHD in online interview scenarios.

Table 3. Logistic regression analysis for prediction outcomes using cognitive and self-regulation measures.

	β	S.E.	Wald	df	Sig.	Exp(B)	95% C for Exp (β)	
							Lower	Upper
NIH Dimensional Card Sorting	−0.065	0.024	7.487	1	0.006	0.937	0.895	0.982
NIH Flanker	0.012	0.033	0.139	1	0.710	1.012	0.949	1.080
MSLQ	−0.385	0.380	1.024	1	0.312	0.681	0.323	1.434
NIH List Sorting	−0.050	0.032	2.495	1	0.114	0.951	0.893	1.012
Constant	10.843	4.953	4.793	1	0.029	51,171.956		

5. Discussion

To support neurodivergent individuals and enhance equitable opportunities in the interview process, this study identifies four key areas of development: self-regulation, executive function, communication skills, and the integration of Diversity, Equity, Inclusion, and Belonging (DEIB) principles. Each area addresses critical skills and strategies necessary for fostering inclusive practices that empower candidates to navigate professional challenges successfully while recognizing and accommodating diverse cognitive and cultural strengths. The following sections provide an in-depth exploration of these areas and their implications for education, hiring practices, and workforce preparation.

5.1. Four Principal Areas for Development

5.1.1. Self-Regulation

The findings indicated that Bronze-tier participants focused excessively on content comprehension during the reception language phase, often at the expense of engaging with the interviewer. This suggests a need for strategies that help students balance attention between understanding content and building interpersonal connections during interviews.

5.1.2. Executive Function

The study revealed that cognitive flexibility, as measured by the NIH Dimensional Card Sorting task, was a significant predictor of higher interview performance, with Gold- and Silver-tier participants demonstrating greater adaptability in task-switching. These findings emphasize the importance of developing interventions that enhance mental flexibility, such as task-switching exercises, role-playing scenarios, and adaptive learning platforms designed to simulate the dynamic demands of online interviews.

5.1.3. Communication Skills

Communication skills, specifically the ability to balance content comprehension and interviewer engagement, were critical to successful interview performance. Participants in the Gold-tier group demonstrated a more effective balance, engaging actively with the interviewer while still focusing on content. In contrast, Bronze-tier participants spent excessive time on content fixation, often neglecting the interpersonal aspect of the interview. This finding points to the need for strategies that enhance both verbal and non-verbal communication during interviews.

5.1.4. Integration of Diversity, Equity, Inclusion, and Belonging (DEIB) Principles

The inclusion of DEIB practices across these three principal areas is essential to fostering a truly inclusive and equitable interview process. Neurodivergent individuals often encounter systemic barriers in traditional hiring processes, such as rigid performance expectations that fail to accommodate diverse cognitive strengths. By embedding DEIB principles into self-regulation, executive function, and communication skill development, educators and organizations can create environments that recognize and amplify neurodiverse abilities.

Additionally, the intersection of ADHD and cultural identity is critical to consider in the context of the interviewing process, as cultural norms and systemic inequities can influence how ADHD is understood, diagnosed, and accommodated. Black, Hispanic, and other underrepresented groups are often less likely to receive an ADHD diagnosis compared to their White peers, even when exhibiting similar symptoms, and ADHD is frequently diagnosed alongside other conditions, such as anxiety or learning disabilities (Morgan et al., 2017; Slobodin & Masalha, 2020). These disparities can result from cultural

stigmas, implicit biases, and limited access to diagnostic resources, which may affect how neurodivergent candidates are supported during interviews.

Employers should be mindful of these disparities and adopt inclusive practices to ensure that all candidates, regardless of cultural background or comorbid diagnoses, can effectively showcase their skills. For example, providing clear instructions, offering interview accommodations such as extended response time or the option for alternative formats, and training interviewers on recognizing diverse communication and cognitive styles can help mitigate potential biases.

Educators and related service specialists should also consider these cultural and diagnostic complexities when preparing neurodivergent students for the workforce. Culturally responsive strategies, such as addressing stigma, engaging families, and creating individualized support plans, can help learners navigate the challenges of the interview process. Recognizing that ADHD is often an additional diagnosis and tailoring interventions to reflect both the cultural and cognitive experiences of learners ensures they are equipped with the skills and confidence needed for professional success. By prioritizing these considerations, both educators and employers can create environments that align with Diversity, Equity, Inclusion, and Belonging (DEIB) principles, fostering equity and accessibility in the hiring process.

Diversity, Equity, Inclusion, and Belonging (DEIB) initiatives are fundamentally grounded in legal frameworks such as ([Rehabilitation Act of 1973, Section 504, 29 U.S.C. § 794, 1973](#)), which mandates that individuals with disabilities be provided with reasonable accommodations. These may include extended time to process questions, access to pre-interview preparation materials, or the option to select alternative interview formats. Such accommodations are not only a legal requirement, but also a necessary step toward addressing structural inequities that disproportionately impact neurodivergent individuals, including those with ADHD. By adhering to these legal mandates, organizations can foster equitable and inclusive hiring practices that enable all candidates to fully demonstrate their skills and potential. These efforts align with the broader principles of DEIB, ensuring that workplaces not only comply with the law, but also embrace the innovative potential of cognitive diversity, ultimately driving success and inclusion in the workforce.

5.2. Limitations

The present study aimed to investigate the experiences of college students with ADHD in online interview scenarios and provide valuable insights for educators, administrators, and technology developers in creating inclusive and supportive interview platforms. However, it is crucial to acknowledge and address the limitations of the study design.

First, the study did not exclude participants with comorbidities. While this decision was made to increase the sample size and promote inclusivity, it may have introduced self-reporting bias and potential inaccuracies in the diagnosis information provided by the participants. It is worth noting that 75.5% of the participants were registered with student accessibility services at UCF and voluntarily disclosed their confirmed ADHD diagnosis, underscoring the importance of considering the participants' self-reported diagnosis in the context of their engagement with support services.

Second, the study may have been affected by volunteer bias, as the participants primarily consisted of individuals who were willing to engage in the study. This could potentially impact the representation of the sample, as students with a strong dislike for online interviewing may be underrepresented. Future research should aim to explore strategies to mitigate volunteer bias and ensure a more diverse and representative sample.

Lastly, although appropriate statistical analyses were employed, the small sample size posed limitations by reducing the ability to detect subtle yet meaningful effects, thereby

increasing the likelihood of Type II errors. This limitation also impacted the precision and generalizability of the findings, which should be interpreted as preliminary. Future research should prioritize ongoing data collection to achieve a sufficiently large sample size, guided by power analyses to determine the optimal number of participants needed for detecting significant effects. Moreover, additional efforts to provide robust evidence of sample representativeness will further enhance the reliability and broader applicability of future findings.

Despite these limitations, the study provides valuable insights into the experiences of college students with ADHD in online interview scenarios. By addressing these limitations and considering the nuanced challenges faced by individuals with ADHD, educators, administrators, and technology developers can work towards creating interview platforms that are more inclusive, supportive, and accommodating for this population. Further research is warranted to build upon these findings and develop effective interventions and strategies to enhance the interview experiences and employment prospects of college students with ADHD.

5.3. Implications for Practice

The findings of this study have valuable implications for both educators and individuals diagnosed with ADHD. Regarding the first research question, it is evident that the Bronze group focused more on the content during the interview. Consequently, educators can emphasize the importance of a more balanced interview, addressing both content and engagement skills. Educators can help students develop these skills by emphasizing techniques such as active listening and managing conversational flow through balanced turn-taking, topic flow, and utterance production ([Blackwell & Stockall, 2021](#)). Furthermore, the analysis showed no significant difference in eye contact between the interviewer and interviewee, suggesting that educators can shift the focus from eye contact to other skills such as body language and posture.

For the second research question, cognitive flexibility played a significant role in interview performance. Educators can provide targeted instruction and skill-building opportunities to enhance the executive function abilities of students with ADHD, specifically focusing on improving cognitive flexibility. Educators can employ virtual simulations with adjustable task complexity and personalized feedback can help neurodivergent individuals practice adapting to new information in real time ([Walker et al., 2016](#)). Similarly, hiring processes that include flexible and inclusive interview formats can better support candidates with varying executive functioning capabilities, fostering equity and reducing barriers to success. By explicitly developing these executive function skills, which are often challenging for individuals with ADHD, educators can better prepare students to navigate the dynamic and multifaceted nature of online interviews. Additionally, incorporating self-monitoring techniques, such as checklists or prompts, can help students with ADHD maintain focus, shift their attention as needed, and respond flexibly to the evolving interview scenario. Additionally, educators can assist learners in developing self-monitoring strategies, including checklists, to help individuals navigate the interview process.

Maintaining engagement during interviews is crucial, which can be achieved by creating a distraction-free environment, turning off notifications, and resisting the urge to engage in other activities. Furthermore, advocating for oneself by requesting content questions in advance can be helpful, especially when supporting the use of the Americans with Disabilities Act. Developing cognitive flexibility and staying adaptable in responses are also advised. Individuals should be self-aware of the best strategies for them and implement them effectively to navigate the interview process successfully.

5.4. Diversity and Inclusion

The integration of Diversity, Equity, Inclusion, and Belonging (DEIB) practices in online interview processes is crucial for accommodating the diverse needs of neurodiverse populations, particularly college students with ADHD. The study offers pivotal insights into the interviewing behaviors of these students, categorizing their performance into three tiers: Gold, Silver, and Bronze. Notably, the Bronze group exhibited a longer fixation duration on content comprehension, suggesting a potential area for enhanced educational support. This fixation disparity underscores the necessity for DEIB practices that emphasize a balanced approach to both content understanding and interpersonal engagement in interviews.

In addition to behavioral observations, the study employed binary logistic regression to ascertain the effects of cognitive flexibility on interview outcomes. The negative correlation with the NIH Dimensional Card Sorting task underscores the challenges faced by individuals with ADHD in task-switching scenarios, a skill imperative in the fluid dynamics of interviews. These findings advocate for the inclusion of executive function skill development in preparatory programs, highlighting the need for tailored strategies that foster cognitive flexibility.

The study not only amplifies the voices of neurodiverse individuals in online interview contexts, but also provides a blueprint for inclusive practices that align with DEIB frameworks. By adopting these insights, educators can more effectively prepare students with disabilities for the workforce, and individuals can leverage self-advocacy and adaptive strategies to navigate the complexities of virtual interviews. Such concerted efforts are vital in fostering an equitable job market that values diversity and recognizes the distinct contributions of all individuals.

5.5. Recommendations for Future Research

Several future research ideas can further advance the use of physiological metrics to assess the online interview performance of college students with ADHD. These ideas aim to explore different aspects of the topic, contributing to a more comprehensive understanding of the factors influencing interview performance and the development of effective interventions.

One potential avenue involves utilizing multimodal data, such as galvanic skin response and facial analysis, to examine the impact of saccades and anxiety on neurodiverse individuals during online interviews. Incorporating these additional physiological metrics can help researchers better understand the cognitive and emotional processes underlying interview performance. Correlating these metrics with interview outcomes can provide valuable insights into the specific physiological responses associated with successful performance and those that may hinder it. This research can contribute to the development of targeted interventions and support strategies that address the unique challenges faced by individuals with ADHD during online interviews.

Another important direction is to diversify the participant population to include individuals with other types of diagnoses in addition to ADHD. Expanding the scope of research to encompass a more inclusive and diverse range of abilities and racial backgrounds can provide a comprehensive understanding of the interview experiences and performance of neurodiverse individuals. This broader perspective can inform the development of interventions and support systems that are more inclusive and tailored to the unique needs of individuals with various neurodevelopmental disorders.

Furthermore, future research can focus on exploring psychophysiological measures during the expressive language phase of online interviews. While the present study primarily examined the participants' psychophysiological responses during the listening phase, investigating the strategies they employ when expressing themselves can provide valuable

insights into the cognitive and physiological processes involved in effective communication. Understanding how individuals with ADHD navigate the challenges of expressing themselves during online interviews can inform the development of interventions and training programs that enhance their communication skills. By examining the psychophysiological measures during the expressive language phase, researchers can gain a more holistic understanding of the interview performance of college students with ADHD.

Lastly, a promising area for future research is to design and implement an intervention study specifically targeting cognitive flexibility and its impact on communication skills during online interviews. Cognitive flexibility plays a crucial role in adaptive behavior and effective communication. Investigating the effects of interventions that improve cognitive flexibility on the communication skills of college students with ADHD can provide valuable insights into how cognitive flexibility influences interview performance.

6. Conclusions

Our study reveals critical insights into how college students with ADHD navigate online interviews, particularly regarding self-regulation strategies and executive function. Key findings demonstrate that Bronze-scoring participants emphasized content comprehension over engagement, while Gold-scoring participants achieved a more effective balance between these elements. Notably, the absence of significant differences in visual attention patterns suggests that traditional emphasis on eye contact may be less relevant than previously assumed in online contexts.

The findings reveal three critical domains requiring attention in preparing students with ADHD for online interviews. First, the research highlights the importance of developing self-regulation through structured reflective practices and explicit performance feedback, which enables students to craft and refine personalized interview strategies. Second, cognitive flexibility emerged as a significant predictor of interview success, suggesting that targeted training in this executive function domain could enhance performance outcomes. Finally, the results indicate that traditional emphasis on metrics like eye contact may be less relevant in online settings, pointing to the need for a more comprehensive approach to communication competencies that encompasses body language, voice modulation, and other aspects of virtual presence. These insights suggest that effective interview preparation programs should integrate all three domains—self-regulation, executive function, and communication skills—while adapting traditional interview preparation strategies to address the unique challenges of the virtual environment.

Our investigation into neurodivergent students' interview experiences contributes valuable insights into interview preparation approaches in an increasingly digital workplace. The integration of evidence-based, neurodiversity-affirming practices not only enhances individual interview performance, but also challenges traditional interview paradigms. The findings underscore the importance of creating interview environments that accommodate diverse cognitive strengths, offering practical recommendations for both academic and organizational contexts. As virtual interviews become increasingly prevalent, this work provides preliminary guidance for creating interview environments that recognize and amplify diverse strengths. By advancing these efforts, we aim to contribute to the broader conversation on how interview practices can support diversity and inclusivity in the workforce, while acknowledging the need for further research to substantiate these findings.

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