

ASD. Because PMs serve a purely social function in language, they include non-tangible words, such as would, could, may, or might. The current study explores the utility of an employment-specific social communication assessment tool, the Voicemail Elicitation Task (VET), in persons with ASD. The VET has proven sensitive to identifying social communication deficits in persons with traumatic brain injury.

**Participants and Methods:** The current cohort comparative study included a sample of young adults with ASD (n=22) and neurotypical controls (NTC; n=10). All participants were given the VET, which utilizes a standardized computerized language sampling procedure that assesses politeness markers (PMs) in work-related role-play scenarios. The outcome measure of the VET is PMs per minute (PMpM) which is obtained by dividing the sum of PMs by the speaking time (in minutes). Higher PMpM indicates higher PM use (more politeness), while lower PMpM indicates lower PM use (less politeness).

**Results:** The preliminary results indicated a significantly lower total PMpM in ASD participants (mean: 13.68 SD: 6.28) compared to NTCs (mean 18.72, SD: 3.65),  $p = 0.026$ . Post hoc analysis indicated that the differences in groups were driven by significantly lower negative PMs rates used by the ASD group (mean 9.18, SD: 5.77) compared to NTCs (mean: 16.30, SD: 7.78),  $p = 0.002$ , while both groups were similar in their mean level of positive PMs use,  $p = 0.442$ .

**Conclusions:** This study represents an important step toward validating the VET for use in ASD, which will improve the capacity of the field to address unemployment in this population. The results of the current study indicate that individuals with ASD show deficits in PM use which could impact their interpersonal relationships within the workplace environment. Designing interventions to target these deficits could help provide better employment outcomes for this population.

**Categories:** Autism Spectrum Disorders/Developmental Disorders/Intellectual Disability

**Keyword 1:** autism spectrum disorder

**Keyword 2:** language disorder

**Keyword 3:** assessment

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## 18 Improving Job Interview Skills in Autistic Youth Using a Combined Intervention Approach Inspired by Positive Psychology

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**Objective:** Nearly 85% of adults on the autism spectrum are unemployed, although nearly 70% of those who are unemployed express a desire and willingness to work. The job interview has been identified as a significant obstacle to obtaining employment by young adults on the spectrum. A growing field of research has been focused on evaluating innovative training tools to improve interview skills. Our previous work shows that a virtual reality job interview training (VR-JIT) tool improves certain job interview skills (such as sounding professional, establishing rapport), but does not improve the ability to speak about personal strengths and abilities. The current study combined VR-JIT with a new training tool: Kessler Foundation Strength Identification and Expression (KF-STRIDE), an intervention grounded in principles of positive psychology. KF-STRIDE targets identification of personal character strengths and expressing those strengths to employers in a socially appropriate way.

**Participants and Methods:** The current study evaluated data from 20 autistic youth, randomized to an experimental group (n=10) and a services-as-usual (SAU) control group (n=10). Those in the experimental group participated in a 12 session intervention (9 sessions using VR-JIT and 3 sessions in KF-STRIDE). Each session was roughly one hour. Job interview performance was assessed by video-recorded mock job interviews rated by blinded assessors pre- and post- the intervention. Paired samples t-tests were conducted to examine differences in job interview skills from baseline to follow up in both groups.

**Results:** The intervention group showed a significant improvement from baseline to follow-up in job interview skills in general ( $p = .004$ ), and specifically sharing strengths about themselves to a future employer ( $p = .004$ ). No significant differences were seen from baseline to follow-up in the SAU group.

**Conclusions:** Individuals on the autism spectrum are significantly underemployed, which negatively impacts one's ability to lead an independent life. Two innovative tools: VR-JIT and KF-STRIDE successfully improved job interview skills, including the ability to identify and express personal strengths. These findings indicate that these combined tools may help to improve employment skills for individuals on the autism spectrum.

**Categories:** Autism Spectrum

Disorders/Developmental Disorders/Intellectual Disability

**Keyword 1:** autism spectrum disorder

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### 19 Preseason Neurocognitive Test Performance and Symptom Reporting Among Student Athletes with Autism Spectrum Disorders

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**Objective:** Participation in sports likely confers multiple benefits for children and adolescents with autism spectrum disorder (ASD). Adolescent student athletes often undergo preseason testing as part of a broader concussion management program for schools. This study compares preseason neurocognitive functioning and symptom reporting between high school athletes with and without ASD.

**Participants and Methods:** Participants were derived from a database of 60,751 adolescent student athletes from Maine (aged 13-18) who completed preseason testing between 2009 and 2019 and did not have missing data on the history question relating to ASD. There were 425 students (0.7%) who self-reported having been diagnosed with ASD in their health history. Cognitive functioning was measured by ImPACT, and the Post-Concussion Symptom Scale (PCSS) was used to obtain symptom ratings. Group differences between the ASD and the population control group on the five ImPACT cognitive test composite raw scores and the total symptom score from the PCSS were examined using Mann-Whitney U tests.

**Results:** Compared to the population control sample, those with ASD reported much greater rates of comorbid conditions: attention deficit/hyperactivity disorder (50.1% vs. 10.3%), special education (39.2% vs. 4.4%), learning disabilities (43.8% vs. 4.4%), and prior treatment for a psychiatric condition (23.4% vs. 7.5%). Groups differed significantly across all neurocognitive composites ( $p$  values  $< .002$ ). However, all differences were negligible in terms of the magnitude of the effects ( $r$  values range from 0.01-0.03). The groups also differed significantly on the PCSS total symptom score ( $p < .001$ ), but the magnitude of the difference was negligible ( $r = .031$ ). Among boys, the ASD group endorsed 21 of the 22 symptoms at a greater rate. Among girls, the ASD group endorsed 11 of the 22 individual baseline symptoms at a greater rate than the control group. Examples of symptoms that were endorsed at a higher rate among both boys and girls with ASD: sensitivity to noise (girls: odds ratio, OR=4.38; boys: OR=4.99), numbness or tingling (girls: OR=3.67; boys: OR=3.25), difficulty remembering (girls: OR=2.01; boys: OR=2.49), difficulty concentrating (girls: OR=1.82; boys: OR=2.40), sleeping more than usual (girls: OR=1.94; boys: OR=1.97), sensitivity to light (girls: OR=1.82; boys: OR=1.76), sadness (girls: OR=1.72; boys: OR=2.56), nervousness (girls: OR=1.80; boys: OR=2.27), and feeling more emotional (girls: OR=1.79; boys: OR=2.84).

**Conclusions:** Students with ASD participating in organized sports are likely high functioning, on average. There were small differences in their cognitive test scores compared to the population control sample. They endorsed more symptoms, however, during baseline preseason testing. If they sustain a concussion, their clinical