

Hearing But Not Understanding:

An Investigation Into the Perceptions of College Students with Auditory Processing Disorder and/or Attention-Deficit Hyperactivity Disorder on Second Language Learning with Spoken Versus Signed Languages

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Purpose Statement

The purpose of this study was twofold. The first goal was to investigate how undergraduate students formally diagnosed with Auditory Processing Disorder (APD), Attention-Deficit Hyperactivity Disorder (ADHD) or both disorders perceive their experiences, including the level of difficulty, learning a global language.

The second goal was to explore if the perception of language acquisition differs for individuals with APD, ADHD, both disorders, or “typical” students when learning a spoken global language, American Sign Language (ASL), or learning both a spoken global language and ASL.

Definitions

- Auditory Processing Disorder (APD): “deficits in the neural processing of auditory information in the central auditory nervous system” which can lead to “poor performance in... sound localization and lateralization, auditory discrimination, auditory pattern recognition, temporal aspects of audition, auditory performance in competing acoustic signals, and auditory performance in degraded acoustic signals” (American-Speech-Language-Hearing Association, 2024, para. 8).
- Attention-Deficit Hyperactivity Disorder (ADHD): “a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development” (American Psychiatric Association, 2022, p. 68).
- Global Language: a language “which [is] spoken by large numbers of people and/or across a number of national contexts” (Swann et al., 2004, p. 125).

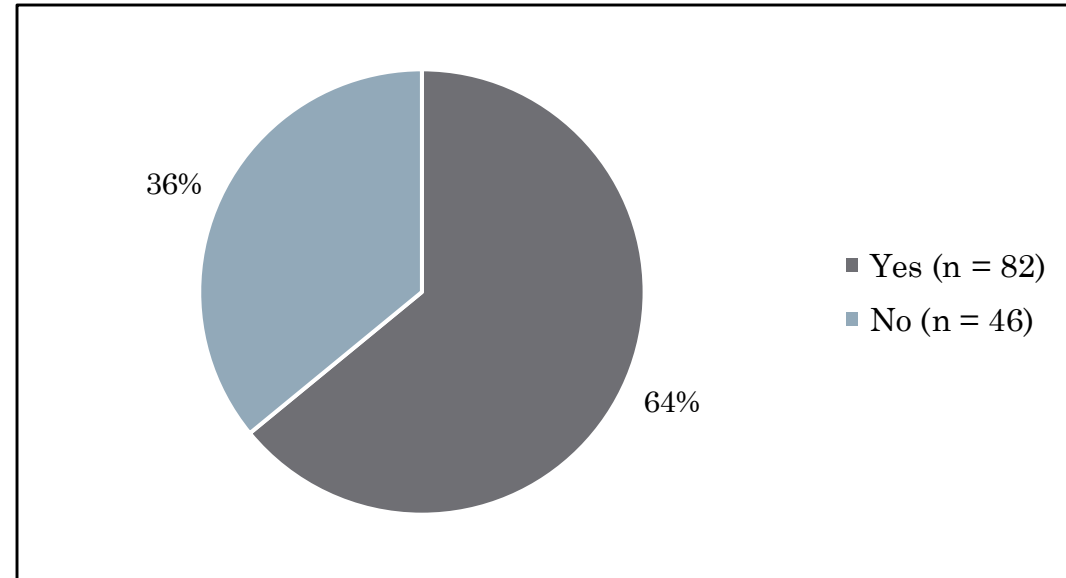
Method

- The researcher utilized quantitative survey research methods for this study
- The survey was sent to undergraduate students diagnosed with APD and/or ADHD attending Kent State University or a school apart of the Great Lakes College Association (GLCA) via the schools' Academic Resource Centers
- “Typical” students were recruited via a school-wide recruitment email sent to students attending the College of Wooster
- Through this recruitment effort, 128 participants completed the survey

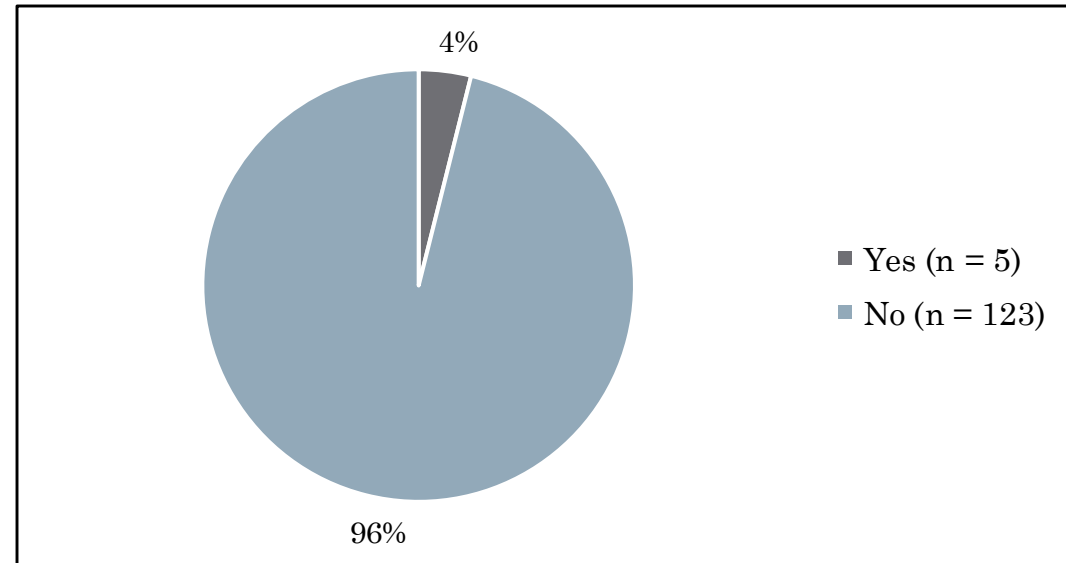
Participants

- There were a total of 128 participants who completed the survey
- Out of those participants:
- 78 had only a diagnosis of ADHD
- 1 had only a diagnosis of APD
- 4 had diagnoses of APD and ADHD
- 45 had neither a diagnosis of APD nor ADHD

Diagnosis of ADHD



Diagnosis of APD



First Major Conclusion

Difficulty of Learning Aspects of a Global Language for Participants with APD and/or ADHD and Participants with Neither Disorder

Factor	Disorder		Typical		<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Difficulty Expressively Communicating	3.68	1.21	3.43	1.12	.98	86	.329
Difficulty Receptively Understanding	3.55	1.19	2.91	1.17	2.46	86	.016*
Difficulty Remembering Words	3.68	1.31	2.83	1.38	2.91	86	.005*

Note. *Indicated a statistically significant relationship ($p < 0.05$)

- **There is a significant difference between the receptive understanding and ability to remember words between the “Disorder” and “Typical” groups who took a spoken global language**

Second Major Conclusion

- Trends indicated that participants who took ASL had less difficulty in their expressive ability, receptive ability, and ability to remember vocabulary than participants who took a spoken global language

Difficulty of Different Aspects of Learning a Spoken Language or ASL for Participants with APD and/or ADHD

Theme	n	M	SD
Difficulty of Expressive Communication in Spoken Global Language	52	3.7	1.20
Difficulty of Expressive Communication in ASL	9	3.3	1.32
Receptive Understanding in Spoken Global Language	52	3.6	1.18
Receptive Understanding in ASL	9	2.9	1.45
Remembering Words in Spoken Global Language	52	3.7	1.31
Remembering Signs in ASL	9	2.9	1.17

Note. A smaller M means that participants did not have as much difficulty learning that aspect of the spoken language or ASL

Final Major Conclusion

- Participants with APD and/or ADHD reported that they felt they had to work harder to achieve similar grades to their “typical” peers, which coincides with half of all participants diagnosed with APD and/or ADHD not having access to or utilizing accommodations when taking a global language course

Implications

- Given that participants with APD and/or ADHD struggled more with receptively understanding and remembering words in a global language, more global languages that are not disproportionately difficult for students with APD and/or ADHD should be offered
- Due to participants with APD and/or ADHD reporting less difficulty learning ASL when compared to a spoken global language, ASL should be offered at more colleges and universities
- There is a need for colleges and universities to inform students about their ability to receive accommodations, especially if the student did not receive accommodations when they were younger

References

- American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.).
- American Speech-Language-Hearing Association. (2024). *Central auditory processing disorder*. <https://www.asha.org/practice-portal/clinical-topics/central-auditory-processing-disorder/>
- Swann, J., Deumert, A., Lillis, T., & Mesthrie, R. (2004). Global language. In *A Dictionary of Sociolinguistics*. Edinburgh University Press.