

# Co-Occurrence of Hearing Loss and Autism Spectrum Disorder: Delays in Identification and Lack of Access to Care/Services

Samantha Espinal, M.S., Holly Duncan, Au.D., CCC-A, Sarah Ellis, Au.D., CCC-A, Amy Gaskin, Au.D., CCC-A  
Kennedy Krieger Institute Department of Audiology

## Abstract

Hearing loss and autism spectrum disorder (ASD) have the potential to impact speech and language development. Presentation of hearing loss and autism spectrum disorder tends to vary greatly from child to child. Some studies indicate that hearing loss is up to three times more common in children with autism when compared to the general population. Additionally, there is a higher prevalence of autism among children who are deaf/hard of hearing (D/HH). In children with co-occurring autism and hearing loss, it may be difficult to identify both conditions as some features can overlap. This can lead to a missed diagnosis and subsequently, delays in proper intervention. Misdiagnosis can occur in children who show characteristics of hearing loss and/or autism if both conditions are not assessed. The rate of co-occurrence can be difficult to determine for a number of factors.

It is imperative to determine if features such as language delays, developmental delays, sensory sensitivities, and behavioral concerns are related to hearing loss, autism or both. Early identification and proper diagnosis increases the chance for a child to develop language and communication skills. An interdisciplinary approach is key to diagnosing hearing loss and autism spectrum disorder and ensuring that the child is receiving intervention services that support their needs. The goals of this literature review are to investigate the prevalence of children with co-occurring hearing loss and autism spectrum disorder and identify factors that delay dual diagnosis, contribute to misdiagnoses, and prevent a child from receiving early intervention services.

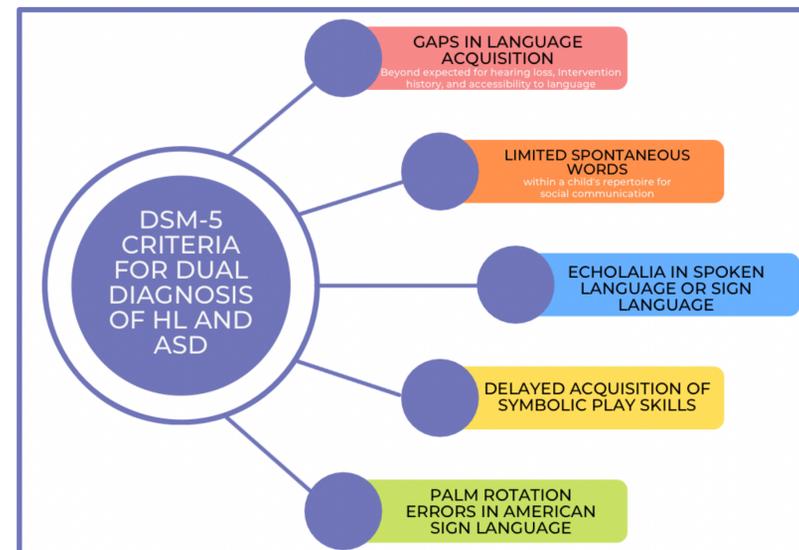
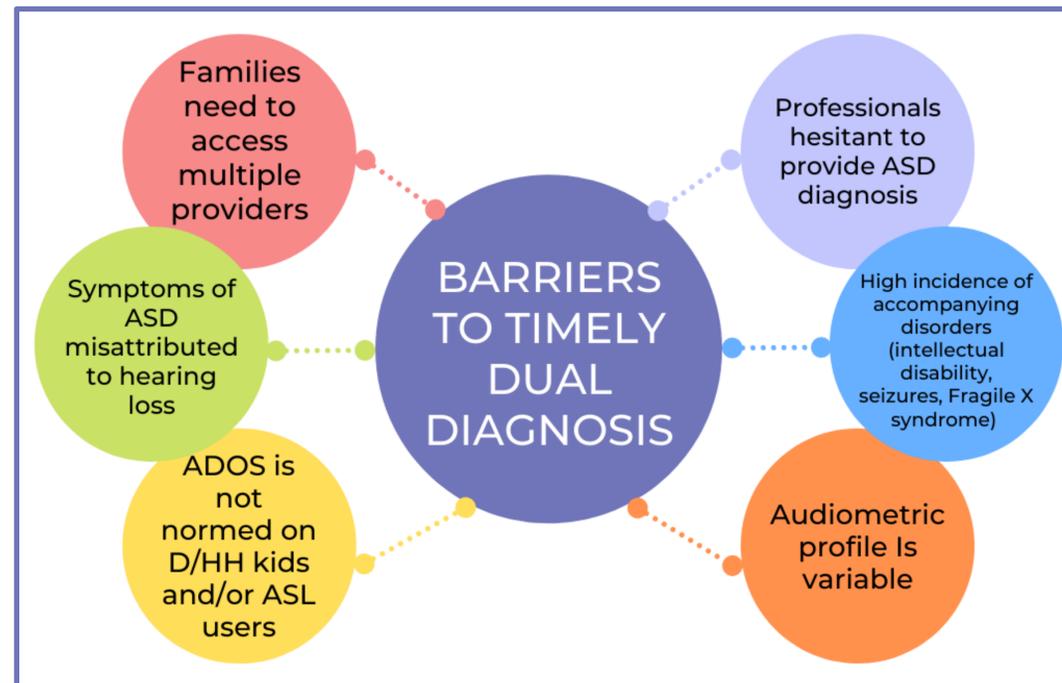
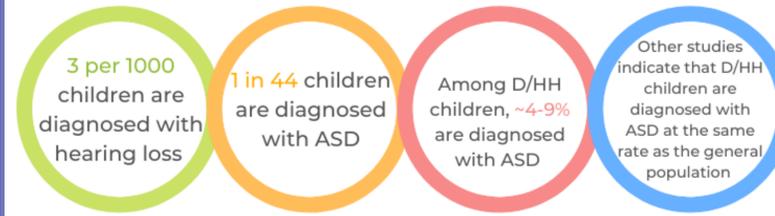
## Learning Objectives

- Discuss the prevalence of co-occurring hearing loss and autism spectrum disorder
- Highlight the importance of completing audiologic evaluations in children who are diagnosed with or show signs of autism spectrum disorder
- Discuss barriers to services and effects of late identification

## Methods

- Databases
  - Gallaudet University Library
- Search Terms
  - Hearing loss, autism spectrum disorder, early identification, co-occurrence, dual diagnosis, developmental delays
- 7 articles were included in the review

## Prevalence of Dual Diagnosis



## Research Limitations

- Variability in reported prevalence of dual diagnosis
- Small sample sizes
- Little information about appropriate audiologic intervention practices
- Little research as been conducted on the efficacy of using the ADOS-2 to diagnose autism in children who are D/HH
- The majority of studies discussed children who had a diagnosis of hearing loss before receiving a diagnosis of ASD

## Clinical Implications

- Highlights the importance of multidisciplinary evaluations
- Be aware of useful resources for families
- Consider how testing can be modified to ensure reliable results while taking into consideration the comfort and need of the child
- Important to be aware of the possibility of dual diagnosis
- It is important to ensure the hearing status of a child with language delays prior to other evaluations
- Collaborating between providers and families to ensure treatment plans are feasible and meeting their needs
- Consider what tools are appropriate for diagnosis

**"Optimal treatments for children with this dual diagnosis are not simply the union of standard practices in supports offered by either condition. Rather, the diagnoses demand that treatment approaches be tailored and, perhaps, call for the development of unique treatment protocols"**

-Amy Szarkowski, Ph.D., Suzanne Flynn, Ph.D., and Terrell Clark, Ph.D. (2014)

## References

- Dale, B. A., & Neild, R. (2020). The assessment needs of families with children who are deaf and hard of hearing referred for an autism spectrum disorder evaluation. *Psychology in the Schools, 57*(3), 475-484. <https://doi.org/10.1002/pits.22328>
- Demopoulos, C., & Lewine, J. D. (2016). Audiometric Profiles in Autism Spectrum Disorders: Does Subclinical Hearing Loss Impact Communication? *Autism Research, 9*(1), 107-120. <https://doi.org/10.1002/aur.1495>
- Fitzpatrick, E. M., Lambert, L., Whittingham, J., & Leblanc, E. (2014). Examination of characteristics and management of children with hearing loss and autism spectrum disorders. *International Journal of Audiology, 53*(9), 577-586. <https://doi.org/10.3109/14992027.2014.903338>
- Madhusoodanan, J. (2020). Confusion at the crossroads of autism and hearing loss, 1-7. Retrieved from <https://www.spectrumnews.org>
- Szarkowski, A., Flynn, S., & Clark, T. (2014). Dually diagnosed: A retrospective study of the process of diagnosing autism spectrum disorders in children who are deaf and hard of hearing. *Seminars in Speech and Language, 35*(4), 301-308. <https://doi.org/10.1055/s-0034-1389102>
- Szarkowski, A., & Johnston, J. (2018). Dually Diagnosed: Autism and Hearing Loss. *The ASHA Leader, 23*(4), 20-21. <https://doi.org/10.1044/leader.aaa.23042018.20>
- Szarkowski, A., Mood, D., Shield, A., Wiley, S., & Yoshinaga-Itano, C. (2014). A Summary of current understanding regarding children with autism spectrum disorder who are deaf or hard of hearing. *Seminars in Speech and Language, 35*(4), 241-259. <https://doi.org/10.1055/s-0034-1389097>