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"WHY DOES MY CHILD REPEAT ME?": A CASE STUDY ON ASSESSING AUTISM SPECTRUM DISORDER IN A CHILD WITH ECHOLALIA AND AUDITORY HYPERSENSITIVITY

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ABSTRACT

This case report presents the psychological assessment of JH, a 6-year-old preschooler with delayed language development, a short attention span, and disruptive behaviour in school. A comprehensive evaluation was conducted using parent interviews, classroom observations, and standardized measures, including the Strengths and Difficulties Questionnaire (SDQ), Child Behaviour Checklist (CBCL), Gilliam Autism Rating Scale (GARS-3), NICHQ Vanderbilt Assessment (Parent & Teacher), Bender-Gestalt Test (BGT), Seguin Form Board Test (SFBT), Wechsler Nonverbal Scale of Ability (WNV), and Vineland Adaptive Behaviour Scales (Vineland-II). Results indicated that JH met the diagnostic criteria for autism spectrum disorder (ASD) and exhibited symptoms associated with attention-deficit/hyperactivity disorder (ADHD). Key findings included attentional challenges, auditory hypersensitivity, and difficulties with peer interactions. Additionally, echolalia went unnoticed as an ASD symptom due to JH's limited speech. This case highlights the importance of a multi-method assessment approach in identifying co-occurring ASD and ADHD, guiding targeted intervention to improve social communication, attention, and classroom engagement.

Keywords: P*sychological Assessment, Preschooler, Autism Spectrum Disorder, Echolalia, Auditory Hypersensitivity*

INTRODUCTION

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by deficits in social communication and the presence of restricted, repetitive behaviours (American Psychiatric Association, 2022). Epidemiological studies estimate that 30%-80% of children with ASD meet the criteria for ADHD, while 20%-50% of children with ADHD exhibit ASD traits (De Giacomo et al., 2024). This overlap might happen due to the shared genetic and

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neurobiological pathways (De Giacomo et al., 2024) implying that Attention-deficit/hyperactivity disorder (ADHD) frequently co-occurs with ASD, further complicating symptom presentation (Hargitai et al., 2023). Consequently, children with both conditions often struggle with inattention, impulsivity, and sensory regulation, which can exacerbate communication and behavioural difficulties (Carta et al., 2020).

Children with ASD often exhibit atypical language development, ranging from delays in expressive and receptive communication to persistent echolalia and deficits in pragmatic language, which affect social interaction (Vogindroukas et al., 2022). Research suggests that up to 75–85% of children with ASD exhibit echolalia at some stage of language development, with its persistence often linked to difficulties in functional language acquisition (Sutherland et al., 2024). However, in children with limited verbal output, echolalia may go unnoticed, complicating diagnosis and intervention.

Other sensory sensitivities common in ASD include a heightened reactivity to auditory stimuli that can interfere with classroom participation and daily functioning (Mallory & Keehn, 2021). Neuroimaging studies have identified atypical cortical responses in the primary auditory cortex of children with ASD, which may explain their heightened sensitivity to loud sounds (Wilson et al., 2022). These sensory disturbances significantly impact attention, learning, and social engagement, often leading to avoidance behaviours in noisy classroom environments (Mallory & Keehn, 2021).

This case report presents the psychological assessment of JH, a preschooler exhibiting echolalia, auditory hypersensitivity, and attention-related difficulties. The assessment aimed to identify underlying neurodevelopmental conditions and highlight the importance of a comprehensive, multi-method approach in distinguishing ASD from overlapping ADHD symptoms to guide appropriate interventions.

CASE PRESENTATION

Background Information

JH, a 6-year-1-month-old boy, was referred by an occupational therapist for psychological assessment due to concerns about his short attention span, limited vocabulary, poor eye contact, and disruptive behaviour at school. While his mother reported that he behaves well at home, his teacher expressed concerns about his difficulties interacting with peers and his tendency to disturb classmates such as repeatedly touching their face during lessons. Additionally, he has difficulty remaining seated, often moving around the classroom during lessons, which has impacted his learning engagement.

JH is the second of three siblings in a family of five. He has an elder sister with a history of speech delay and a younger sister. He previously attended speech therapy in 2020 due to delayed speech development, but sessions were discontinued because of the Movement Control Order (MCO) due to the COVID-19 pandemic.

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Regarding early development, JH was born full-term via emergency lower segment caesarean section (EMLSCS) with a birth weight of 3.05 kg. His gross motor skills were within the typical range. He began crawling between 7 to 8 months and started walking at approximately one-year-old. However, his speech and language development were delayed. Initially, he relied on gestures (e.g., pulling hands, pointing) to express his needs, which is expected at one year old. However, his first words, '*nak*' (want) and '*susu*' (milk), only emerged between ages 2 and 3 years, whereas most children typically begin speaking their first words between 12 and 18 months.

Currently in preschool, JH is reserved and does not actively seek friendships. Instead of verbalizing his need to use the toilet, he signals by touching his private parts and only expresses his need when prompted. This behaviour was observed during the intake interview and classroom observation.

Additionally, JH exhibited echolalia during assessment sessions, as observed when he frequently repeated the last word of sentences spoken by others. His parents were previously unaware of this behaviour at home. This was overlooked initially as his repetitions seemed like typical attempts to communicate. However, closer observation revealed that his echoed phrases often lacked context and were not used to initiate or sustain conversations, indicating a potential communication delay characteristic of ASD.

During classroom observation, JH displayed hypersensitivity to loud human voices, particularly when others were reading aloud during phonics lessons and prayer recitations. He covered his ears in response, suggesting auditory sensitivities that may interfere with his ability to engage in structured learning environments.

In terms of play, JH interacts with his cousins but is often left out due to his limited speech. His sense of exclusion is further reinforced as his cousins are all female. Despite his social challenges, he has developed a habit of tidying his bed, a routine his mother believes he learned by observing her.

Ethical Considerations

Informed consent was obtained from JH's parents before conducting the psychological assessment and publishing this case study. Confidentiality was upheld by anonymizing identifying details. The assessment and intervention process adhered to the principles of beneficence and non-maleficence, ensuring that JH's well-being remained the priority. Additionally, parental involvement was encouraged throughout the assessment, whenever relevant, to promote transparency and collaborative decision-making.

Assessment Results

A comprehensive assessment battery was administered to evaluate JH's socio-emotional skills, attention, cognitive abilities, language development, and adaptive functioning. The Gilliam

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Autism Rating Scale-Third Edition (GARS-3; Gilliam, 2014) was administered to evaluate the likelihood and severity of ASD, given JH's developmental history, speech delays, social interaction difficulties, and sensory sensitivities. JH's Autism Index score of 87 falls within the very likely range for ASD, indicating a level 2 severity, which requires substantial support (see Table 1).

Table 1
GARS-3 Results

Subscales	Scaled Score	Percentile Rank
Restricted/repetitive Behaviours	6	9
Social Interaction	7	16
Social Communication	9	37
Emotional Responses	10	50
Cognitive Style	8	25
Maladaptive Speech	11	63

The Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) was used to assess JH's overall emotional and behavioural functioning, particularly in relation to concerns about his attention difficulties, social interactions, and disruptive behaviour at school. According to parental reports, he exhibited a high level of conduct problems and a slightly raised level of peer problems, prosocial behaviour, and externalizing problems (see Table 2).

Table 2
SDQ Results

Subscales	Standard Score	Classification
Conduct Problems	5	High
Hyperactivity	5	Close to Average
Emotional Symptoms	0	Close to Average
Peer Problem	3	Slightly Raised
Prosocial Behaviour	7	Slightly Raised
Internalizing Problems	3	Close to Average
Externalizing Problems	10	Slightly Raised
Total Difficulties Score	13	Close to Average

The Child Behaviour Checklist (CBCL; Achenbach & Rescorla, 2001) was administered to JH's parents to assess his emotional, behavioural, and social functioning. It was chosen for its reliability in identifying common behavioural concerns in children with ASD and provided useful insights to complement clinical and classroom observations. Results

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indicated a normal level of internalizing problems, a clinical level of externalizing problems, and a borderline level of total problems (see Table 3).

Table 3
CBCL Results

Scales	Standard Score	Classification
Anxious/Depressed	3	Normal
Withdrawn/Depressed	1	Normal
Somatic Complaints	0	Normal
Social Problems	8	Borderline
Thought Problems	4	Normal
Attention Problems	11	Borderline
Rule-breaking Behaviour	2	Normal
Aggressive Behaviour	16	Borderline
Internalising Problems	4	Normal
Externalising Problems	18	Clinical
Total Problems	48	Borderline

The NICHQ Vanderbilt Assessment (Wolraich et al., 2003) was administered to both JH's parents (see Table 4) and teacher (see Table 5) to assess his attention, hyperactivity, and oppositional behaviours. This assessment was selected due to its effectiveness in screening for ADHD-related symptoms across home and school settings, helping to identify potential comorbidities commonly associated with ASD. Although some symptoms were observed, scores remained below the diagnostic thresholds for ADHD, Oppositional Defiant Disorder (ODD), Conduct Disorder (CD), and anxiety/depression.

Table 4
NICHQ Vanderbilt Assessment (Parent Version) Results

Items	Total Score	Number of Score of 2 or 3
1- 9 (Inattentive)	13	5
10 - 18 (Hyp/I)	10	3
1 - 18 (ADHD)	23	8
19 - 26 (ODD)	7	1
27 - 40 (CD)	1	0
41 - 47 (A/D)	0	0
		Number of Score of 4 or 5
48 - 55 (Performance Items)	22	3

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Table 5
NICHQ Vanderbilt Assessment (Teacher Version) Results

Items	Total Score	Number of Score of 2 or 3
1- 9 (Inattention)	3	0
10 - 18 (Hyp/lmp)	7	0
1 - 18 (ADHD)	10	0
19 - 28 (ODD/CD)	3	0
29 - 35 (A/D)	0	0
		Number of Score of 4 or 5
36 - 43 (Performance Items)	24	0

The Bender-Gestalt Test (BGT; Bender, 1938) was used to assess JH's visual-motor integration, with results suggesting a developmental age of 6 years. The Seguin Form Board Test (SFBT; Seguin, 1907) was administered to assess JH's problem-solving and visuospatial skills. He completed the task in three trials, with completion times of 31, 33, and 39 seconds, demonstrating consistent performance across attempts.

The Wechsler Nonverbal Scale of Ability (WNV; Wechsler & Naglieri, 2006), is a nonverbal measure of ability, that was administered to assess JH's cognitive abilities. His intelligence was estimated to be in the average range (Full-scale score = 93), suggesting he performed better than 32% of children in his age group (see Table 6).

Table 6
WNV Results

Subtests	Measures	T-score
Matrices	Perceptual Reasoning	47
Coding	Graphomotor Speed	42
Object Assembly	Perceptual Organization	48
Recognition	Immediate Visual Memory	52

The Vineland Adaptive Behaviour Scales, Second Edition (Vineland-II; Sparrow et al., 2005), was used to assess JH's adaptive functioning in communication, daily living skills, socialization, and motor skills. The results indicated moderately low adaptive functioning, with a notable weakness in coping skills. However, strengths were observed in personal daily living skills and interpersonal relationships (see Table 7).

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Table 7
Vineland-II Results

Domain/Subdomain	Raw Score	*v*-Scale Score	Standard Score	Adaptive Level	Strengths and Weaknesses
Receptive	31	12		Moderately Low	-
Expressive	89	13		Adequate	-
Written	14	12		Moderately Low	-
Communication	-	37	83	**Moderately Low**	-
Personal	75	21		High	S
Domestic	13	13		Adequate	-
Community	20	12		Moderately Low	-
Daily Living Skills	-	46	101	**Adequate**	S
Interpersonal Relationships	57	15		Adequate	S
Play and Leisure Time	39	13		Adequate	-
Coping Skills	15	10		Moderately Low	W
Socialisation	-	38	86	**Adequate**	-
Gross	69	11		Moderately Low	-
Fine	63	13		Adequate	-
Motor Skills	-	24	81	**Moderately Low**	-
Adaptive Behaviour Composite	-	-	85	Moderately Low	-
Maladaptive Behaviour Index	11	17	-	Average	-
Internalising	3	17	-	Average	-
Externalising	2	15	-	Average	-

Integrative Summary

Taken together, the results from the comprehensive assessment battery provide a cohesive picture of JH's developmental, cognitive, emotional, and behavioural functioning. The findings suggest a neurodevelopmental profile consistent with ASD. His GARS-3 scores fall within the "very likely" range for ASD, reflecting difficulties in social communication,

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restricted/repetitive behaviours, and emotional responses. These findings are consistent with observed echolalia, limited social reciprocity and sensory sensitivities during assessment sessions. The emotional and behavioural assessments, including the SDQ and CBCL, reveal significant externalizing behaviours such as disruptive behaviour at school, as well as borderline scores for attention and social problems, particularly affecting his functioning in school settings. While the NICHQ assessment did not indicate sufficient symptoms to meet diagnostic thresholds for ADHD or ODD, both parents and teachers reported some concerns related to attention and classroom performance. Additionally, cognitive assessment using the WNV indicated average reasoning abilities, while the Vineland-II results revealed uneven adaptive functioning, with strengths in personal daily living skills and interpersonal relationships, but weaknesses in communication, coping, and motor domains. Overall, these findings support the presence of ASD with co-occurring behavioural concerns and adaptive skill deficits, highlighting the need for targeted interventions at both home and school.

Treatment Plan and Recommendations

Based on the assessment, JH was diagnosed with ASD, requiring substantial support (Level 2) for social communication deficits and restricted repetitive behaviours. To help his parents better understand his condition, psychoeducation on ASD would be beneficial, as supportive parenting plays a crucial role in the development of children with ASD (Chan et al., 2023). JH would also benefit from structured support, including visual schedules for task management, positive reinforcement for attention, and play-based social skills training to enhance his social competence (Gibson et al., 2021). Furthermore, parents are encouraged to implement behavioural strategies such as visual schedules, providing advance notice for transitions, modelling correct sentence structures, maintaining a quiet and organized environment and allowing frequent breaks to support behaviour management (Makris, 2024).

As JH will be entering primary school at the age of seven, he is encouraged to enrol in a mainstream school setting with inclusive education support, where structured routines, predictable expectations, and individual accommodations can facilitate his learning and social participation (Ola-Williams et al., 2024). Given his strengths in personal daily living skills and interpersonal relationships, an inclusive classroom with additional support from a special education teacher or shadow aide may help him adapt more easily while providing opportunities for peer interaction and social modelling (Nisa et al., 2024).

Given the persistent externalizing behaviours and borderline attention difficulties observed in the CBCL and SDQ, as well as the known high comorbidity between ASD and ADHD, a follow-up assessment for ADHD is recommended once JH transitions into primary school. Ongoing monitoring of his attention, impulsivity, and task persistence in classroom settings will help clarify whether additional diagnosis or intervention is warranted.

In terms of intervention, Applied Behaviour Analysis (ABA) is recommended to develop JH's communication, social, and self-regulation skills through evidence-based, structured teaching strategies. Incorporating a naturalistic, play-based approach can further enhance his engagement and promote the generalisation of skills across different settings (Du

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et al., 2024). Additionally, occupational therapy is recommended to help him manage his sensory sensitivities and improve his motor skills (Kashefimehr et al., 2021). Speech therapy may also be beneficial in addressing his echolalia and enhancing his communication skills (Blackburn et al., 2023).

To support long-term development, JH's identified strengths such as his personal self-care abilities and capacity for interpersonal connection can be used to scaffold more challenging tasks. For instance, his ability to follow routines can support the use of daily schedules, and his responsiveness to familiar adults can be leveraged to teach social skills through role play and guided interactions.

Overall, early and continued support through a coordinated intervention plan involving his family, school, and therapeutic services will be essential in promoting JH's growth and helping him reach his full potential.

DISCUSSION AND CONCLUSIONS

This case was selected due to the complex presentation of ASD in JH, particularly the co-occurrence of echolalia and sensory sensitivities. These features introduced unique challenges during the assessment process as well as highlighted the importance of using multiple methods and settings to obtain an accurate understanding of his functioning.

One of the key challenges was evaluating JH's language comprehension in the presence of echolalia. His tendency to repeat words and phrases made it difficult to determine whether he truly understood the instructions or was simply echoing them. To address this, structured tasks, visual prompts, and alternative questioning techniques were employed. These strategies helped differentiate between rote repetition and genuine understanding, allowing for a more accurate interpretation of his cognitive and language abilities.

Although sensory sensitivities were not evident during the one-on-one assessment sessions, they became apparent during the classroom observation, which formed part of the overall evaluation. JH displayed signs of auditory sensitivity during read-aloud activities, such as covering his ears and appearing distressed. These behaviours were also reported by his teacher. While they did not interfere with formal testing, their emergence in a naturalistic setting underscores the value of assessing children across multiple settings. It also emphasizes the need for school-based accommodations to support his sensory regulation and engagement in learning.

In light of these observations, this case contributes to a broader understanding of how echolalia and sensory sensitivities manifest in children with ASD. One important area for future research is the relationship between echolalia and language comprehension in children with ASD. JH's echolalia presented challenges in assessing his true understanding of instructions. While echolalia is often seen as a barrier to communication, some studies suggest it may serve a functional role in language development (Xie et al., 2023). Previous neuroimaging studies indicate that children with ASD who use echolalia often show increased right-hemisphere activation and reduced left-hemisphere dominance, suggesting alternative language

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development pathways (McFayden et al., 2022). Future research could explore how different types of echolalia (immediate vs. delayed) relate to comprehension and cognitive processing, offering insights into how children with ASD use echolalia as a learning mechanism.

Overall, this case study provides insights into the assessment and support of children with ASD who exhibit echolalia and sensory sensitivities. Understanding these challenges, particularly their impact on communication and social interactions, can help in developing tailored interventions that support language development, sensory regulation, and overall well-being.

REFERENCES

Achenbach, T. M., & Rescorla, L. A. (2001). *Manual for the ASEBA school-age forms & profiles.* University of Vermont, Research Center for Children, Youth, & Families.

American Psychiatric Association (APA) (2022). *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR™).*

Bender, L. (1938). *A visual motor gestalt test and its clinical use*. American Orthopsychiatric Association.

Blackburn, C., Tueres, M., Sandanayake, N., Roberts, J., & Sutherland, R. (2023). A systematic review of interventions for echolalia in autistic children. *International Journal of Language & Communication Disorders, 58*(6), 1977 - 1993. https://doi.org/10.1111/1460-6984.12931

Carta, A., Fucà, E., Guerrera, S., Napoli, E., Valeri, G., & Vicari, S. (2020). Characterization of Clinical Manifestations in the Co-occurring Phenotype of Attention Deficit/Hyperactivity Disorder and Autism Spectrum Disorder. *Frontiers in Psychology*, *11*, Article 861. https://doi.org/10.3389/fpsyg.2020.00861

Chan, V., Albaum, C., Nazilla Khanlou, Westra, H. A., & Weiss, J. A. (2023). Parent Involvement in Mental Health Treatment for Autistic Children: A Grounded Theory-Informed Qualitative Analysis. *Child Psychiatry & Human Development, 56*(4), 982 - 995. https://doi.org/10.1007/s10578-023-01621-x

De Giacomo, A., Craig, F., Medicamento, S., Gradia, F., Sardella, D., Costabile, A., Matera, E., & Turi, M. (2024). Identifying Autistic-Like Symptoms in Children with ADHD: A Comparative Study Using ADOS-2. *Neuropsychiatric Disease and Treatment, 20*, 1367–1376. https://doi.org/10.2147/NDT.S462030

Du, G., Guo, Y., & Xu, W. (2024). The effectiveness of applied behavior analysis program training on enhancing autistic children's emotional-social skills. *BMC Psychology, 12*(1), 568. https://doi.org/10.1186/s40359-024-02045-5

Gibson, J. L., Pritchard, E., & de Lemos, C. (2021). Play-based interventions to support social and communication development in autistic children aged 2–8 years: A scoping review. *Autism & Developmental Language Impairments, 6*(1), 1–30. https://doi.org/10.1177/23969415211015840

Evaluation Studies in Social Sciences (ESSS)
eISSN xxxx Vol 10/ 2021 (1-12)
https://ejournal.upsi.edu.my/index.php/ESSS/index
http://ejournal.upsi.edu.my/index.php/ESSS
DOI: https://doi.org/10.37134/esss.vol6.1.1.2025

Gilliam, J. E. (2014). *Gilliam Autism Rating Scale– Third Edition (GARS-3).* Pro-Ed.

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A Research Note. *Journal of Child Psychology and Psychiatry, 38*(5), 581–586. https://doi.org/10.1111/j.1469-7610.1997.tb01545.x

Hargitai, L. D., Livingston, L. A., Waldren, L. H., Robinson, R., Jarrold, C., & Shah, P. (2023). Attention-deficit hyperactivity disorder traits are a more important predictor of internalising problems than autistic traits. *Scientific Reports, 13*(1), 31. https://doi.org/10.1038/s41598-022-26350-4

Kashefimehr, B., Huri, M., Kayihan, H., & Havaei, N. (2021). The relationship between the sensory processing and occupational motor skills of children with autism spectrum disorder. *International Journal of Therapy and Rehabilitation, 28*(4), 1–8. https://doi.org/10.12968/ijtr.2019.0137

Makris, M. P. (2024). Building bridges, empowering families: a leadership program for parents of children with autism spectrum disorder (ASD). *Theseus.fi.* http://www.theseus.fi/handle/10024/868200

Mallory, C., & Keehn, B. (2021). Implications of Sensory Processing and Attentional Differences Associated With Autism in Academic Settings: An Integrative Review. *Frontiers in Psychiatry*, *12*(12), 695825. https://doi.org/10.3389/fpsyt.2021.695825

McFayden, T. C., Kennison, S. M., & Bowers, J. M. (2022). Echolalia from a transdiagnostic perspective. *Autism & Developmental Language Impairments, 7*, 239694152211404. https://doi.org/10.1177/23969415221140464

Nisa, U., Zain, A., & Rahmah, A. (2024). The Role of Shadow Teachers For Supporting Learning Assistance on Children with Special Needs in Inclusive Early Childhood Education. *Journal of Islamic Education Students (JIES), 4*(1), 32. https://doi.org/10.31958/jies.v4i1.12298

Ola-Williams, M. C., Ola-Williams, A., & Ogbaini, C. A. (2024). Breaking Barriers: Enhancing Support for Autistic Students Through Individual Education Programs. *International Journal of Universal Education, 2*(1), 50–60. https://doi.org/10.33084/ijue.v2i1.7528

Seguin, E. (1907). *Idiocy and its treatment by the physiological method (2nd ed.).* Teachers College, Columbia University.

Sparrow, S. S., Cicchetti, D., & Balla, D. A. (2005). *Vineland Adaptive Behavior Scales, Second Edition (Vineland-II)* [Database record]. APA PsycTests. https://doi.org/10.1037/t15164-000

Sutherland, R., Bryant, L., Dray, J., & Roberts, J. (2024). Prevalence of Echolalia in Autism: A Rapid Review of Current Findings and a Journey Back to Historical Data. *Current Developmental Disorders Reports, 11*(4), 171-183. https://doi.org/10.1007/s40474-024-00311-0

Vogindroukas, I., Stankova, M., Chelas, E.-N., & Proedrou, A. (2022). Language and Speech Characteristics in Autism. *Neuropsychiatric Disease and Treatment, 18*(18), 2367–

2377. https://doi.org/10.2147/ndt.s331987

Wechsler, D., & Naglieri, J. A. (2006). *Wechsler Nonverbal Scale of Ability (WNV)* [Database record]. APA PsycTests. https://doi.org/10.1037/t15176-000

Wilson, K. C., Kornisch, M., & Ikuta, T. (2022). Disrupted functional connectivity of the primary auditory cortex in autism. *Psychiatry Research: Neuroimaging*, *324*, 111490. https://doi.org/10.1016/j.pscychresns.2022.111490

Wolraich, M. L., Lambert, W., Doffing, M. A., Bickman, L., Simmons, T., & Worley, K. (2003). Psychometric Properties of the Vanderbilt ADHD Diagnostic Parent Rating Scale in a Referred Population. *Journal of Pediatric Psychology*, *28*(8), 559–568. https://doi.org/10.1093/jpepsy/jsg046

Xie, F., Pascual, E., & Oakley, T. (2023). Functional echolalia in autism speech: Verbal formulae and repeated prior utterances as communicative and cognitive strategies. *Frontiers in Psychology*, *14*, 1010615. https://doi.org/10.3389/fpsyg.2023.1010615