

NEUROPSYCHOLOGICAL ASSESSMENT IN AUTISM SPECTRUM DISORDER THE NEUROPSYCHOLOGIST-INVESTIGATOR: BETWEEN HIDDEN COMPETENCE AND ANTI-IATROGENIC ETHICS

Francisco Narthagnan Chaves da Silva¹

Abstract: Neuropsychological assessment (NA) is a central tool in the differential diagnosis of Autism Spectrum Disorder (ASD). However, this review and theoretical essay argues that the application of standardized psychometric instruments in Brazil faces severe methodological limitations, especially within the non-verbal population. Factors such as apraxia of speech, barriers in social reciprocity (rapport), and sensory overload often invalidate the measurement of constructs like the Intelligence Quotient (IQ), leading to false negatives of cognitive potential. This is illustrated by emblematic cases of non-verbal individuals (e.g., Jason Arday, Carly Fleischmann) erroneously diagnosed with Intellectual Disability. This article proposes that the solution to this gap lies not in waiting for new tests, but in a paradigm shift: the adoption of a “neuropsychologist-investigator” stance. Grounded in clinical praxis, the text calls on neuropsychologists to question themselves, observe critically, and develop procedural assessment methods that transcend psychometric rigidity, thereby avoiding diagnostic iatrogenesis.

Keywords: Neuropsychological Assessment. Autism Spectrum Disorder. Differential Diagnosis. Psychometrics. Non-Verbal Population. Critical Praxis. Hidden Competence.

¹ Psychologist (CRP-11/16268), Neuropsychologist, NMT, Music Therapist. PhD candidate in Psychology (Christian Business School, Florida, USA). Master's degree in Education (MUST University, Florida, USA/UNICID). Specialist in Applied Behavior Analysis (ABA) and in Psychological Assessment and Psychodiagnosis. Behavior Analyst (IBAO) and Clinical Supervisor (ABA Seal). Postgraduate Professor (CENSUPEG). Member of the Committee for People with Disabilities of CRP-11. Autistic and father of two children on the autism spectrum. CEO of Clínica Mais Afeto Espaço Terapêutico.



INTRODUCTION

The profound phenotypic heterogeneity of Autism Spectrum Disorder (ASD) (AMERICAN PSYCHIATRIC ASSOCIATION, 2022) makes differential diagnosis one of the most complex tasks in contemporary neuropsychology. The diagnosis of ASD is clinical-behavioral, but the simple observation of behaviors is insufficient to outline an effective therapeutic plan.

This essay, based on a critical review of the literature and on the author's praxis — as a neuropsychologist, graduate professor, clinical supervisor in Applied Behavior Analysis (ABA) and autistic psychologist — argues that neuropsychological assessment is indispensable, but its effectiveness is conditioned to a deep critical review of its methods.

The focus of this article is twofold: (1) To reinforce the importance of AN for cognitive mapping and the differential diagnosis (DD) of ASD and (2) To present a methodological critique of the application of standardized tests in populations with restricted orality, something that the author's paternal experience (two children with ASD) and clinical experience revealed to be a blind spot and iatrogenic in diagnostic practice.

Despite the undeniable value of standardized instruments, the Brazilian context imposes additional limits: the unavailability or restriction of use/favorable opinion of large-scale non-verbal tests, access barriers, and training still centered on classical psychometrics. In the light of the historical-cultural tradition (Vygotsky/Luria), intelligence is manifested in mediation: what the subject does with help is also legitimate clinical data. (VYGOTSKY, 2001; LURIA, 1981)

In populations with restricted orality, apraxia, and sensory hyper/hyposensitivity, reducing the assessment to decontextualized scores converts uncertainty into a label — and labels, when misassigned, generate social and therapeutic iatrogenesis. We therefore propose a change of method: map the process and the conditions of access to the task before declaring a “deficit”.



Concept Box

What is the “neuropsychologist-investigator”?

It is the professional who abandons the posture of a mere test taker and adopts a procedural investigation of performance: he describes how the subject tries to solve the tasks, measures limits with mediation (testing of limits), triangulates data with Speech Therapy and OT, and documents sensory, motor and communicational barriers that can falsify the score. Their goal is not to “get a grade,” but to reveal competence—especially when speaking is restricted.

Practical principles: (1) structured clinical observation; (2) qualitative analysis of the error and assisted success; (3) alternative/augmentative communication in the instructions; (4) multiprofessional triangulation; (5) anti-iatrogenic ethics in conclusion.

THE ROLE OF NEUROPSYCHOLOGY IN THE DIFFERENTIAL DIAGNOSIS OF ASD

The primary function of neuropsychology is to map the cognitive profile that underlies the observed behaviors. The symptomatic overlap with ADHD is notorious (ROMERO et al., 2021). A neuropsychologist must be able to discern whether the observed “inattention” is a primary deficit in inhibitory control (ADHD) or a consequence of cognitive rigidity and hyperfocus (ASD).

To this end, AN investigates specific domains:

- Executive Functions (EF): The assessment of EFs is the central pillar (DEMETRIOU et al., 2019).
- Theory of Mind (ToM): The ability to infer mental states of others (BARON-COHEN, 2000).
- Central Coherence (Weak): The tendency towards detail-focused processing at the expense of context (HAPPÉ; FRITH, 2006).



Without this mapping, the clinician runs the risk of diagnosing ADHD when, in fact, the symptoms are manifestations of ASD, or vice versa, leading to mistaken interventions.

METHODOLOGY

“Following methodological recommendations of good practices in psychological assessment (AERA; APA; NCME, 2014; CFP, 2018), This is a theoretical essay anchored in the author’s narrative review and reflective clinical praxis. The narrative review included classic and contemporary literature on ASD, EF, Theory of Mind, central coherence and psychological assessment, associated with reports of emblematic cases of hidden competence in non-verbal autistics. Clinical praxis includes supervision in ABA and neuropsychological performance in Brazilian contexts, with emphasis on sensorimotor barriers, alternative communication and qualitative analysis of performance. The objective is to propose procedural evaluation guidelines that mitigate psychometric biases and reduce diagnostic iatrogenesis.

THE METHODOLOGICAL CHALLENGE: THE INVALIDITY OF STANDARD TESTING IN NONVERBAL AUTISM

“As proposed by Malloy-Diniz, Fuentes and Cosenza (2018), contemporary neuropsychology goes beyond measurement, incorporating ecological and procedural analysis of data.” The greatest limitation of classical neuropsychology arises when faced with level 2 or 3 support autism. This is where clinical practice in Brazil encounters its greatest obstacle. The measurement of the Intelligence Quotient (IQ) is the most critical point. Instruments such as the Wechsler Intelligence Scale for Children (WISC-V) (WECHSLER, 2014) are heavily dependent on language and motor skills.

The validity of the scores obtained in this population is often compromised by multiple con-



founding factors:

- Contamination by Apraxia/Dyspraxia: The child may understand the instruction, but be unable to plan the motor response of speech (Apraxia of Speech) or gesture (Dyspraxia).
- The Motivational Question and Rapport: Psychometric tests assume that the subject is motivated to “prove” his or her competence to a stranger. For many autistic individuals, this premise is null.
- Sensory Overload: The testing environment (lighting, noise) can be sensorially overwhelming, leading to downgraded performance that reflects shutdown.

Therefore, a neuropsychological report that concludes “Intellectual Disability” (ID) in a non-verbal autistic patient, based purely on standardized scores, is at serious risk of diagnostic iatrogenesis. Performance (what was demonstrated in the test) is confused with competence (the real potential of the individual).

THE EVIDENCE OF HIDDEN COMPETENCE: EMBLEMATIC CASES

The biographical literature and case reports documented by the media are clear proof that the traditional psychometric assessment is a “trap” when assessing non-verbal autism. These cases are not miracles; are exposures of severe diagnostic failures.

The most striking example is that of Dr. Jason Arday. Diagnosed with ASD and “global developmental delay,” Arday was unable to speak until he was 11 and unable to read or write until he was 18. Under any standard testing metric (such as the WISC-V applied in his childhood), his profile would be classified as severe Intellectual Disability. However, in 2023, Arday became the youngest (and black) appointed tenured professor at the University of Cambridge (ANDREWS, 2023). Its trajectory exposes that the intelligence was intact, but imprisoned by motor and communication barriers



that the tests were unable to circumvent.

Similarly, Carly Fleischmann, diagnosed with severe autism, oral-motor apraxia and classified by experts as having “mental retardation”, surprised everyone when, at the age of 10, she began to communicate by typing. Once a communication channel was established, subsequent IQ tests revealed a score of 120 (FLEISCHMANN; FLEISCHMANN, 2012). The diagnosis of ID was not real; it was an artifact of apraxia that prevented verbal expression.

There are numerous other cases, such as that of Ido Kedar (2012), author of “Ido in Autismland”, who spent his childhood being treated as intellectually incapable until he learned to type; or Jacob Rock, a 19-year-old young man, almost totally non-verbal, who shocked his family by revealing himself to be a poet and composer, even composing a symphony (ROCK; ROCK, 2023).

These cases prove the central argument of this article: the tests assessed only motor and verbal performance, and failed miserably to assess cognitive competence. The neuropsychologist who ignores this possibility is practicing bad science.

THE APPEAL TO CRITICALITY: THE PRAXIS OF THE NEUROPSYCHOLOGIST-RESEARCHER

The methodological critique deepens when we analyze the Brazilian reality. International non-verbal instruments (e.g., Leiter-3, TONI-4) do not have a favorable opinion in the Psychological Testing Evaluation System (SATEPSI) of the Federal Council of Psychology.

This puts us in a methodological bind. If the ideal tests are not available or approved, what to do? The responsibility is the neuropsychologist to inquire before attributing a concept as devastating as “Intellectual Disability” to something that is, most likely, an artifact of evaluation. The “discomfort” with the inadequacy of the tests should be the engine for the change in posture.

We propose replacing the “test taker” model with the “neuropsychologist-researcher” model, which adopts the following principles:



1. The Primacy of Clinical Observation: Tracking the child's sensory profile, motivators and idiosyncratic forms of communication.
2. The Qualitative Analysis of the Process: Use the instruments we have (e.g., WISC-V) in a qualitative way. More important than the "0" (wrong) score is how the patient failed. Did he try and fail to perform motorically (suggesting apraxia)?
3. The Use of Assisted Assessment (Testing of Limits): The clinician must "think of other means". What happens if I give the instruction in Alternative Communication (AAC)? If I give physical help to point it out? If the child gets it right with help, competence was present.
4. Triangulation of Sources: Cross-referencing data with speech therapists (specialists in apraxia) and occupational therapists (specialists in sensory integration).

Minimal hybrid protocol for ASD with restricted orality

1. Sensory ambiance: light/noise adjustment; regulating object and previously agreed pauses.
2. Multimodal instructions: simple verbal + pictograms + modeling; repeat just to ensure understanding.
3. Testing of limits: after standard application, re-apply key items with graded mediation (visual cues, AAC, light motor aid).
4. Qualitative record: describe how it makes mistakes and how it gets it right with support (apraxia? latency due to overload?).
5. Multiprofessional triangulation: phono (oral apraxia/dyspraxia), OT (sensory integration), school/family (ecology).
6. Conditional conclusions: when the score may be contaminated by an access barrier, declare limitation and postpone stable labels (e.g., DI) until convergent evidence is obtained



CONCLUSION: THE IMPERATIVE OF METHODOLOGICAL DISCOMFORT

Neuropsychology cannot be an accomplice of diagnostic iatrogenesis. The “discomfort” I feel as an autistic psychologist, parent and clinician, when receiving reports that label non-verbal children as intellectually disabled based on inadequate tests, should be the discomfort of our entire professional category.

We are failing our patients when we hide behind the false security of a psychometric score. Cases like that of Jason Arday and Carly Fleischmann are a stark reminder of the potential we are neglecting.

A flawed report is not just bad science; It is a barrier to access. It denies the child the right to appropriate interventions (such as ABA, which depends on an accurate repertoire assessment) and negatively shapes the expectations of parents and educators.

Neuropsychology cannot outsource its consciousness to a score. In ASD with restricted orality, any non-contextualized conclusion runs the risk of confusing performance with competence and, thus, fabricating barriers to access to therapies and rights. The case is no exception: it is a warning.

We propose an ethical and methodological pact: in the face of signs of apraxia, sensory overload and rupture of rapport, the priority is to ensure access to the task (AAC, sensory adjustments, graded mediation) and to document the process, before crystallizing diagnoses with high social cost. The neuropsychologist-researcher does not “soften science”; it refines it, replacing the illusory security of the number with the ecological validity of the data.

Future research should consolidate hybrid protocols and objective indicators of assisted competence, while the services form teams capable of recognizing barriers of expression as a measurement variable. Where the manual ends, the true neuropsychological assessment begins.

The conclusion of this article is, therefore, an ethical and methodological challenge. A challenge for the neuropsychologist to abandon the inertia of the “test applicator” and assume his role as a clinician-investigator. That the professional inquires himself, observes, thinks of other means and



resists the simplification of attributing a concept to a phenomenon that is not understood. True neuropsychological assessment in nonverbal ASD begins where the test manual ends.

References

American Psychiatric Association. (2022). Diagnostic and statistical manual of mental disorders (5th ed., text rev.).

Andrews, F. (2023, March 2). Meet Jason Arday, Cambridge University's youngest ever Black professor, who didn't speak until he was 11. CBS News. <https://www.cbsnews.com/news/jason-arday-cambridge-university-youngest-black-professor-didnt-speak-age-11-autism/>

Baron-Cohen, S. (2000). Theory of mind in normal development and autism. *Prisme*, 34, 174-183.

Demetriou, E. A., Lampit, A., Quintana, D. S., Naismith, S. L., Song, Y. J. C., Pye, J. E., ... & Guastella, A. J. (2019). Autism spectrum disorder and attention deficit hyperactivity disorder: A systematic review and meta-analysis of executive function. *Molecular Psychiatry*, 24(8), 1164-1184.

Fleischmann, A., & Fleischmann, C. (2012). *Carly's Voice: Breaking Through Autism*. Touchstone.

Globo (Producer). (2023, November 12). Non-verbal autistic creates symphony mentally at age 19 [TV show episode]. In *Fantástico*. Rede Globo.

Happé, F., & Frith, U. (2006). The weak coherence account: detail-focused cognitive style in autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 36(1), 5-25.

Kedar, I. (2012). *Ido in Autismland: Climbing Out of Autism's Silent Prison*. Ido Kedar.

Lord, C., Rutter, M., DiLavore, P. C., Risi, S., Gotham, K., & Bishop, S. L. (2012). *Autism Diagnostic Observation Schedule, Second Edition (ADOS-2) Manual (Part I: Modules 1-4)*. Western Psychological Services.

Romero, M., Aguilar, J. M., Del-Rey-Mejías, Á., Mayoral, F., Rapado-Castro, M., Padrón, G., ... &



Rueda, I. (2021). Psychiatric comorbidities in children and adolescents with Autism Spectrum Disorder. *Psychothema*, 33(2), 209-217.

Wechsler, D. (2014). Wechsler Intelligence Scale for Children – WISC-V: Technical Manual (F. C. R. de S. and N. M. C. de C., Adapt.). Pearson Clinical Brazil.

AERA; APA; NCME. Standards for Educational and Psychological Testing. Washington, DC: American Educational Research Association, 2014.

FEDERAL COUNCIL OF PSYCHOLOGY (CFP). CFP Resolution No. 009/2018. It establishes guidelines for psychological assessment and the use of instruments. Brasília: CFP, 2018.

VYGOTSKY, L. S. *Pensamento e língua*. 2. ed. São Paulo: Martins Fontes, 2001.

LURIA, A. R. *The brain in action*. São Paulo: Icon, 1981.

MALLOY-DINIZ, L. F.; FUENTES, D.; COSENZA, R. (Orgs.). *Neuropsychology: theory and practice*. 2. ed. Porto Alegre: Artmed, 2018.

SEABRA, A. G.; DIAS, N. M. (Orgs.). *Child neuropsychological evaluation*. Porto Alegre: Artmed, 2012.

SATTTLER, J. M. *Assessment of Children: Cognitive Foundations and Applications*. 6th ed. San Diego, CA: Jerome M. Sattler Publisher, 2018.

SATTTLER, J. M.; RYAN, J. J. *Assessment with the WISC-V*. San Diego, CA: Jerome M. Sattler Publisher, 2016.

