Keck School of Medicine of USC

DEPARTMENT OF PSYCHIATRY
AND THE BEHAVIORAL SCIENCES

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Confidential Neuropsychological Report

Lorge, Simone

Neurobehavioral Status Exam

Identifying Information

Patient Name:	Lorge, Simone
MRN:	4174003
Date of Birth:	2010-12-31
Age:	10 years
Gender:	Female
Ethnicity:	White/Caucasian
Handedness:	Right
Education:	4th Grade
Dates of Evaluation:	2021-01-07, 2021-01-14, 2021-01-21, 2021-01-28

Reason for Referral

Simone presents for neuropsychological evaluation to determine her cognitive, academic, and emotional strengths and weaknesses. She was referred by her parents for behavioral and academic concerns, including behavioral immaturity, defiance, attention/executive problems, and reading/learning difficulties. The purpose of the evaluation is to clarify diagnoses and assist with educational and treatment planning. This report is based on a review of available medical and school records, and information gathered across multiple days of assessment. Results and recommendations were discussed with Simone's parents on the last of these evaluation dates during interactive feedback.

Background

Simone's parents have multiple ongoing concerns about her behavior, cognitive and emotional development, and academic growth. She requires frequent redirection and strong reinforcements and consequences in order to manage her behavior. She defies parent requests, engages her parents and sister in frequent arguments and periodic acts of aggression, and commits serious rule violations (e.g., lying, stealing). Her parents struggle with discipline and feel frustrated. They worry about the impact Simone's distractibility, attention, and behavioral issues are having on her academic and social development. Behaviorally, she acts "immature" and will throw unprovoked tantrums. Her parents describe her as having a "lack of executive functioning skills," including an unawareness for how loud she is talking, "squeals" to annoy people, has poor body and voice control, and is defiant. She is forgetful; e.g., forgetting a set of instructions "two-seconds later" such as her nightly bedtime routine. Simone has only recently started to look both ways before crossing the street consistently per mom.

Simone has a tendency to impulsively say things to others that are not true. For example, for unbeknownst reasons, she told folks that her dog had died, which was untrue. She has been accused of stealing on multiple occasions, behavior her mother said started to emerge around age 6. She has allegedly stolen money multiple times, stolen her mothers shampoo, her grandmother's lipstick, and her sister's belongings. She has been accused of stealing money from a friends house ($50), an accusation Mrs. Lorge feels is very much unfounded.

In a separate incident, last year, she told her school psychologist/therapist her older sister Colette "parents me" and that her parents "spank" her when she gets in trouble. She returned to class and repeated it to her teacher. A report was filed with child protective services (CPS) and the investigation was tabled. Her mother sometimes wonders if Simone has a "conscious" about the things she does and way she behaves at times.

Finally, Simone presents with a number of cognitive and learning difficulties (described in more detail below). Her school IEP evaluation indicated a probable learning disorder in reading, and difficulties with attention and behavioral regulation. The fallout has been unwanted negative attention for Simone because she is required to leave class every day for tutoring, which is source of constant distress for her and of questionable benefit to her at this point.

Relevant History

Developmental/Medical

Simone is the product of a planned, 42-week pregnancy (11 days late) delivered via planned home birth. Pregnancy was notable for Rh incompatibility. She was delivered after 4.5 hours of labor weighing 7 lb., 2 oz. Her mother described it as "a short but intense natural delivery" that required the umbilical cord to stay connected until it was done pumping blood from mom to baby. S/p delivery complications included mild jaundice without phototherapy. As an infant, Simone was able to establish regular feeding and sleeping patterns. Major developmental milestones (e.g., standing, walking, uttering first words, speaking in short sentences) were reached within expected time frames. Tantrums, loud screaming, and irritability emerged within the first four years as a toddler. Mrs. Lorge is concerned with Simone's eating habits, as she can be a pick eater and is underweight.

Medical history is generally unremarkable. There is no reported history of loss of consciousness, seizure, or other significant illness. Mom has had concerns with Simone's poor posture/musculoskeletal stability and is accident prone ("she's falling and tripping all the time"). She bites her finger nails throughout the day. She gets chronic blood noses. Simone's hearing is normal. She is far sighted and has prescription eye glasses for reading, but does not like to wear them and refuses to do so at times. No current regular medications. Dr. Edmond Sarraf is her pediatrician. Paternal family history includes ADHD and dyslexia.

Academics

Simone attended preschool in Pasadena from ages 2-3, and then was in a transitional kindergarten class for a year. She has been enrolled at Franklin Elementary School in Santa Monica, CA since kindergarten and is now in fourth grade. She received an IEP toward the end of second grade. School can be excruciatingly challenging for Simone much of the time. She gets "lost" doing her schoolwork and constantly feels overwhelmed. She sometimes refuses to turn in her assignments and/or tests because she either didn't start them, didn't finish them, or didn't understand what was expected of her. She daydreams a lot in school and is always worrying about what everyone thinks. She has an individualized education plan (IEP) at school for reading and attention problems. She has to "log out" of class for tutoring each day on Zoom. She works through the Barton Reading and Spelling Program for dyslexia x2 days/week. She "hates" being

singled out everyday to leave class for an hour to work with her reading tutor. She is supposed to keep a reading log of her IEP work but won't do it. Even at home, Simone gets frustrated when doing her homework, yet will not let her mother help her.

She is performing well-below grade level in reading, writing, and spelling. She writes complete sentences and formulates basic paragraphs, but makes frequent errors in capitalization and punctuation. She has made progress in reading fluency. Her comprehension is better than her basic reading skills (phonics). In math, Simone is performing below grade level, suspected to be due to her difficulty in reading the word problems. When she is prompted to read carefully, or sits with a teacher, she performs better in math. Without these supports, Simone is careless and unmotivated. Her calculation skills are at grade-level. Similarly, in Social Studies and Science, she performs below grade level, because the reading is difficult for her. When teacher reads or supports her reading, she is better able to grasp the concepts. The cumulative impact of her school difficulties has crushed Simone's self-esteem and feelings of competency.

Behavioral/Emotional/Social

At one point in second grade (~2019), Simone threatened to kill herself in what seemed to be related to her feelings of school inadequacy. She began seeing the school counselor for therapy at Franklin. Simone recalls seeing her therapist at school and found it to be helpful. She has not seen any other outside counselor or psychologist.

Simone relates well to her peers and is quite social. However, her mother reported the following:

> "She has tendency to lie, to make up little fibs to look smarter, more cool or get the attention. Then her friends find out its not true and they get upset with her. Or, Simone interrupts them when they are talking, she wants to change the rules to the game. She loves talking to and hanging out with adults, but loves playing with younger kids because she is in control. They look up to her and Simone can be the 'mommy.' She usually wants to be the leader of her peer group."
>
> "Simone has a huge heart! She cares strongly for the family dog-he is the only one that can help her calm down. They sleep together every night. She has a strong energy. People love talking with her, think she's funny and engaging. Simone loves giving compliments (whether they are genuine or she knows that it will make them like her more) again though… a strength. She has a lot of empathy for

> her peers/friends when they get hurt or are left out. She has been praised from teachers for her sweet nature."

Family

She lives with her biological parents and older sister (Colette, age 14) in Santa Monica, CA. English is the primary language spoken. Simone's mother, Cassie Lorge, graduated from high school and is employed as an on set florist and prop stylist. Her father, Alex Lorge, has an MFA and is a film editor. Her parents work opportunities were reduced during the early part of the COVID-19 pandemic and struggled financially for a while, but are now back on track and working steadily. Simone's family is planning to move up to Oregon in the next year.

Simone and her sister get along okay most of the time, but not always. Per Cassie Lorge, "They love each other but have a very competitive relationship. When they get along… it's beautiful when they fight… it's all tears."

Mrs. Lorge made this comment about some of Simone's behavior at home:

> "Simone does odd things sometimes… like she doesn't think. For instance, pull on her curtains and make the support come off the wall (9 years old) use a marker and write all over her dresser (9 years old) come in my room and take clothing or jewelry without asking then lie that she took it, not flush her toilet for days, has to be reminded to brush her teeth, puts chewed gum on her bookshelf, the list goes on. And Alex and I get upset with her so much we can see it's wearing on her spirit."

Prior Testing

No prior formal test records were available to review. A copy of a summary of her IEP noted:

> "Simone presents with limited strength, vitality and alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment. This appears to be due to significant inattentive and hyperactive-impulsive/distractible behaviors, as well as difficulty with executive functioning in the school setting. These characteristics appear to be adversely affecting Simone's educational performance in her ability to decode words, and to organize tasks and materials. Therefore, Simone meets the eligibility criteria for Other Health Impairment (OHI) at this time."

In addition, her IEP stated:

> "Simone does display deficits in the basic cognitive processes of Attention and Phonological Processing (memory), which results in a significant discrepancy between her overall intellectual abilities and her academic achievement in Basic Reading based on standardized assessment. There is evidence she may also have a deficit in sensory motor skills, but this is inconclusive due to her recently identified farsightedness and need for glasses. Simone has not made sufficient progress across academic areas, despite several interventions and does not appear to be able to access the general education curriculum adequately. Therefore, she meets the eligibility criteria for a Specific Learning Disability (SLD) at this time.

Neuropsychological Testing

Test Procedures

- Wechsler Intelligence Scale for Children, 5th ed (WISC-5)
- Wide Range Achievement Test, 5th ed (WRAT-5)
- Wechsler Individual Achievement Test, 4th ed (WIAT-4)
- NEPSY-II Developmental Neuropsychological Battery
- NIH Executive Abilities: Measures and Instruments for Neurobehavioral Evaluation and Research (NIH EXAMINER)
- Grooved Pegboard Test
- Bicycle Drawing Task
- Test of Memory Malingering (TOMM)
- BASC-3 Structured Developmental History (SDH)
- BASC-3 Parent Rating Scale (PRS), Child
- BASC-3 Self-Report of Personality (SRP), Child
- Brown Executive Function/Attention Scales (Brown EF/A), Parent Report

Behavioral Observations

Testing

Simone was seen in-person at the USC Psychiatry and Behavioral Health Services (PBHS) clinic on the University Park Campus. She was evaluated across two 4-hour testing sessions scheduled a week apart in a physically distanced testing environment. A number of precautionary safety measures were employed (e.g., masks, gloves, plexiglass dividers) to reduce the risk of coronavirus infection

without interfering with testing. She attended the appointments with her mother Cassie.

Simone transitioned appropriately to begin testing. She brought several stuffed dolls (Yoda) and various other items (her "blanky") with her from home. Physically, Simone is exceptionally tall (>90th percentile in height), thin, and pretty for her age group. Interpersonally, she is friendly and engaging, and it was easy to establish rapport with her. Spontaneous language is easy to elicit from her, as she is talkative and social, and hyper-expressive. Receptive language comprehension is variable. On multiple occasions she misheard what was said to her (e.g., twice, when she was supposed to repeat "8" she substituted "J" and then "A" for 8). She unknowingly confabulates a lot (i.e., makes up words and phrases that are unique to her mental lexicon such as "fratten" and "confrunkled" and "quimping"), which are due to her language-based learning disorder. She uses "filler words" a lot such as "umm yeah," as if she goes blank for a second when trying to think of what to say and loses her train of thought briefly. Aside from the technical paraphasias she made as just described, she has a good sense of humor, likes to engage in a variety of topics, and enjoys engaging in witty banter. Eye contact was variable but appropriate to situation and setting. For paper-and-pencil tests, she used her right hand with variable pencil grip. Her fine-motor dexterity is an area of weakness for her, as is motor persistence; she stood up a lot during testing because it was hard for her to sit still seated for extended periods of time.

It is difficult for Simone to stay on topic. She often comments about events/ideas/thoughts unrelated to the topic of interest and/or task at hand. It distracts her and makes it difficult for her to complete tasks efficiently, especially when she has a time limit set. For example, in the middle of a 1-minute word fluency task, one of her responses triggered an approximate 20" tangent about something that happened last Christmas. Then, she struggles to pick up on nonverbal social cues when subtly being redirected back to task using nonverbal gesturing, requiring more exaggerated and direct gestures. This happened often. These types of difficulties fall within the neuropsychological construct of "stimulus-boundednesss," which is an inappropriate response to a salient environmental (internal or external) stimulus and indicative of poor impulse control. Despite her impulsive nature, Simone was always cooperative and responded to questions in a polite and forthright manner to the best of her abilities. To her credit, even though she had variable attention, she persisted even on challenging items and put forth good effort (as supported by formal effort measures). As such, the evaluation in its entirety is an accurate representation of her functioning at this time, and the results presented herein are considered valid for interpretation.

Child Interview

Simone expressed wide ranging but predominantly negative feelings about everything we discussed over two days of testing. She is open and honest about her school difficulties. She "hates" having to leave Zoom everyday for an hour to work with her reading tutor. It makes her feel bad about herself and she wants no part of her IEP. She said her peers "make fun of me for my IEP." She said her teacher "hates me" and "won't call on me" on Zoom. Simone said she "panics" before all of her tests because she is usually unprepared/didn't study. She fights a lot with her older sister Colette, who calls her "Simon" to irritate her when they are fighting. She openly said she can be a "very naughty child" and is "only good about 1 day a week." She said she gets "excluded" by her friends sometimes, and said, "sometimes I feel like I"m not good enough." She has a "boyfriend" named Hunter who is "cute, funny and puts a smile on my face." She loves her dog "Franky" who is "the only one who is nice to her."

Test Results

Intelligence

Overall intellectual skills were *Average* for her age. Index scores were broadly *Average*, with strengths in verbal reasoning/acquired knowledge. **Table** 1

Academic Skills

Simone's academic skills were at or below age- and grade-expected levels in most areas. Scores across measures of reading and spelling including irregular word reading, nonsense/non-word decoding, spelling to dictation, and decoding fluency were *Low Average* to *Below Average*. Reading comprehension and writing fluency (sans correct spelling and grammar/punctuation) were strengths. General academic fluency was *Low Average* with a notable weakness in math fluency. Her *Low Average* score in math calculation was in part due to her vulnerability to inattentive/impulsive/careless errors (e.g., switching the computational sign) and not yet having mastered the concept of multiplication. **Table** 2

An ability-achievement discrepancy analysis (predicted achievement method) utilizing Simone's WISC-V GAI score of 103 as her general cognitive ability benchmark indicated that her performance on spelling (19-point discrepancy; base

rate < 10%), word reading (20-point discrepancy; base rate < 5%), and her reading composite score (15-point discrepancy; base rate < 10%) were statistically much lower than predicted. Math computation was somewhat lower than expected (15-point discrepancy), but not quite as rare of a finding in the general population (base rate < 15%). Further, measures of nonsense word decoding (18-point discrepancy; base rate < 10%), math fluency (22-point discrepancy; base rate < 5%), and decoding fluency (19-point discrepancy; base rate < 10%) were statistically much lower than predicted. Discrepancy scores of these magnitudes are indicative of *Clinically Significant* weaknesses in reading, spelling, and academic fluency.

Verbal/Language

Scores in this area ranged from *Exceptionally Low* (<1st percentile) to *Above Average* (95th percentile). Simone's strengths on exam were notable in semantic word fluency and her word knowledge/vocabulary skills. However, she was somewhat concrete when asked to apply her strong working vocabulary in a more abstract way by deducing the underlying relationship between two unrelated words. Areas of relative weakness were notable in phonological awareness and listening comprehension. For example, phonemic word fluency (i.e., the ability to generate as many words as possible in 1-minute in response to a letter cue) was *Low Average* given her developmental level, and especially weak when contrasted with her *Above average* semantic word fluency performance. Rapid automatic naming (RAN), a precursor to early reading development proficiency, was *Below Average* across measures. Phonological processing and rapid naming are important skills underlying reading development in early childhood, and her weaknesses in these areas are consistent with her reading/spelling profile and history of learning difficulties in these areas. **Table** 3

Visual Perception/Construction

Scores were *Average* to *High Average* here, without a clear pattern of strengths or weaknesses. **Table** 4

Attention/Executive

Simone evidenced variable attentional and executive functioning on exam, with scores ranging from *Exceptionally Low* (<1st percentile) to *Above Average* (92nd percentile). Her best performance was on an unstructured planning task on which she was left up to her own devices to figure out how to maximize the number of points she could earn while expending the least amount of effort within the allotted six minute time limit. A similar strength as seen on a related card sorting task of concept formation and problem-solving. By contrast, she struggled as the

tasks in this domain became more structured and required increasing levels of cognitive control and/or cognitive flexibility. She made an excessive number of uncorrected errors across tasks, indicative of poor response monitoring (i.e., unaware she had made an error and/or that she had repeated a previous response) and an impulsive response style favoring speed over accuracy. Verbal working memory was relatively low, which is a neurocognitive trait commonly impaired in children with developmental reading difficulties. Processing speed was within the lower end of the average range across tasks. Scores on timed tests varied, but tended to be weaker than on untimed tests; and she performed better on the computerized versions of these measures than the traditional paper-and-pencil versions. **Table**5

Parent ratings indicated *Clinically Significant* executive dysfunction in all areas (>98th percentile in all subdomains), including Activation (organizing, prioritizing, and activating to work), Focus (focusing, sustaining, and shifting attention to tasks), Effort (regulating alertness, sustaining effort, and adjusting processing speed), Emotion (managing frustration and modulating emotions), Memory (utilizing working memory and accessing recall), and Action (monitoring and self-regulating action). **Table** 10

Memory

Simone evidenced uneven performance across measures of verbal and nonverbal learning and memory. She showed clear strengths in verbal memory on exam, both for rote word list learning (*High Average score*) and for contextually-based learning (recalling the descriptive details of a short story; *Above Average score*). In contrast, initial learning and delayed recall of complex, novel visual material (a series of abstract visual designs) was *Low Average* across the learning trials. Few visual details were encoded into her longer-term memory system, supported by her *Below Average score* on the delayed recall trials. **Table** 6

Motor

Simone's scores on a measure of fine motor speed and dexterity fell within the *Exceptionally Low* score range bilaterally. Her score is consistent with individuals who need to be deliberate and focused when performing goal-directed activities that involve small objects. Finger dexterity was significantly better in her nondominant left hand compared to her dominant right hand, which is an atypical pattern in the general child population, yet is a pattern we commonly see in right-handed children with language-based learning disorders. Complex motor sequencing/programming was easier for Simone than simple repeated tapping, suggesting she was better able to focus during the more challenging task. **Table** 7

Emotional/Behavioral/Adaptive

Parent Report

In addition to the attention and executive concerns noted above, parent ratings on the BASC-3 indicated *Clinically Significant* difficulties with Externalizing Behavior across all related areas, including Hyperactivity, Attention Problems, Aggression, Conduct Problems. Her Externalizing Problems composite scale *T* score was 101 (i.e., five standard deviations above average) at a percentile rank >99. Simone's mother reports Simone engages in many disruptive, impulsive, and uncontrolled behaviors; displays a high number of argumentative and defiant behaviorS; and reports that Simone frequently engages in rule-breaking behavior including lying and stealing. Further, symptom clusters on the Depression scale were markedly elevated related to general negative emotionality[1]. Simone has a tendency to become irritable quickly and has difficulty maintaining her self-control when faced with adversity. She has a tendency to become easily upset, frustrated, and/or angered in response to environmental changes; and has difficulty controlling and maintaining her behavior and mood. Simone's mother noted Simone engages in behaviors that are considered strange or odd and she generally seems disconnected from her surroundings. Finally, Simone's Activities of Daily Living are significantly impaired, noting she has difficulty performing simple daily tasks in a safe and efficient manner. **Table** 8

Self-Report

Simone completed an objective, age-appropriate measure of personality and emotional functioning. Her responses produced an infrequency index score that fell within the *Caution* range. An elevated infrequency index score typically indicates the presence of extraordinarily high levels of maladaptive behavior or emotional distress, and further indicates Simone has a negative overall view of her own thoughts, feelings, and behavior. Three items in particular were flagged due to the rarity in which they are endorsed by children of the same age:

- I like who I am. (False)
- I am good at schoolwork. (Never)
- I get along with my teacher. (Never)

Every composite score and subscale fell within the *Clinically Significant* range, rendering the measure in its entirety uninterpretable, other than to reiterate that Simone is experiencing a wide range of challenges and difficulties in almost every area of her behavioral, social, academic, and emotional functioning. **Table** 9

Broad domain scores

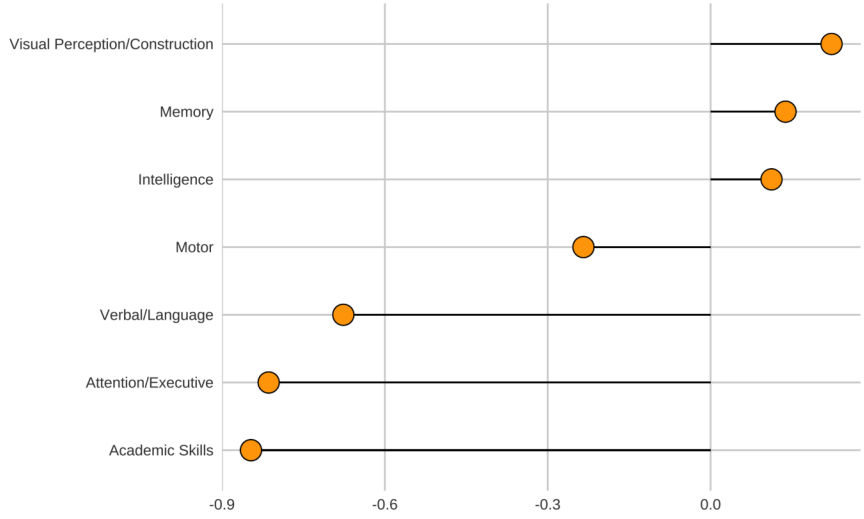

Figure 1: Simone's broad neurocognitive domain scores. Her academic skills and attentional/executive functioning are areas of relative weakness. *Note:* scores = *z*-scores (Mean = 0, SD = 1); a test score of 0 falls at the 50th percentile relative to peers.

Neurocognitive strengths and weaknesses

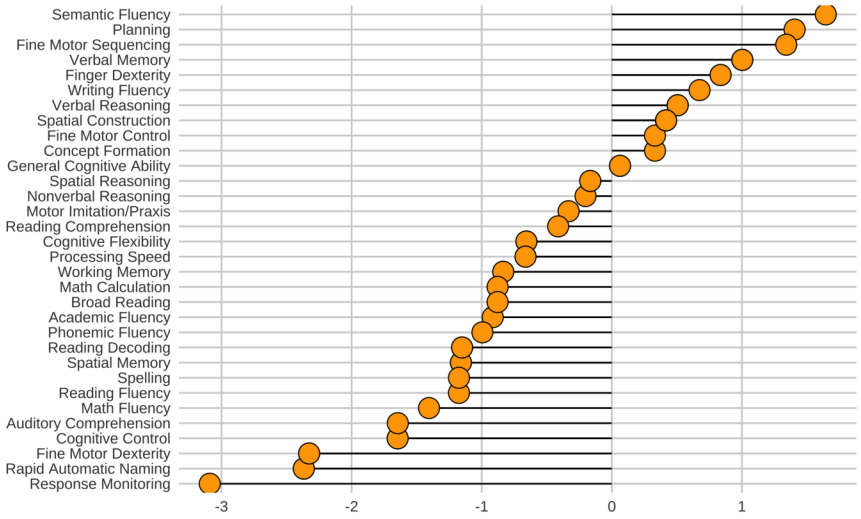

Figure 2: Simone's low reading and spelling scores are mediated thru specific processing weaknesses in fine motor dexterity, rapid automatic naming, inhibiiton, and working memory. *Note:* Scores have been uniformly transformed to *z*-scores (Mean = 0, SD = 1), meaning a *z*-score of 0 falls at the 50th percentile, *z* of 1 falls at the 84th percentile, and *z* of -1 falls at the 16th percentile.

Summary/Impression

Key Findings

- Age-expected general cognitive/intellectual skills with strong semantic knowledge and verbal memory
- Relative weaknesses in reading decoding, reading fluency, orthography, and phonological processing, resulting in clinically significant learning deficits in reading and spelling
- Ongoing difficulties with attention and executive skills in real-world settings

Overall Evaluation Interpretation

Simone is without question a talented youngster who presents with a multitude of intellectual and interpersonal strengths that will serve her well in future scholastic and social endeavors. When she is attentive, Simone is very perceptive about how others are thinking or feeling, which helps her to connect with her friends and maintain these relationships. When she is inattentive, which based on the entirety of the data and information collected during the current evaluation is much more the norm for her, everything else suffers, including her relationships/friendships, school work, family relations, and sense of well-being. Importantly, her general intellectual skills are within the expected range for her age, which means Simone has the resources she needs to be able to keep pace with her peers on a wide variety of cognitive and problem-solving tasks. However, her ability to demonstrate these skills is limited by severe executive dysfunction (e.g., difficulties with attention, sustained mental effort, emotional reactivity, and cognitive impulsivity) and difficulties with behavioral regulation. With the exception of reading, relative weaknesses across neuropsychological domains were secondary to her executive

dysfunction rather than actual cognitive difficulties. Simone's difficulties with sustained mental effort and attention are limiting her ability to function optimally in her daily life. To put it in context, attention is a basic function underlying most, if not all, domains of neuropsychological and academic functioning. Related, executive functions orchestrate the ways in which a child's intellectual strengths and weaknesses are either utilized or compensated for (respectively) in everyday life. If a child has limited attention/executive skills (e.g., an inability to sustain or divide attentional focus, or a reduced ability to selectively attend to competing stimuli or ignore distracting stimuli), they will struggle to interact with their environment to an adequate degree and, thus have limited functioning in almost all other areas. This is why even the most mundane of tasks other kids do without thinking twice are usually a challenge for Simone.

Diagnostically, Simone's psychosocial and academic history is consistent with *attention-deficit/hyperactivity disorder*. Her behavioral presentation and neuropsychological profile are consistent with this diagnosis, as testing variability was primarily related to her deficits in executive functioning: despite her intellectual strengths and best intentions, sustaining attention to task was excruciatingly effortful for Simone throughout this evaluation. Because of her ADHD, Simone is always distracted by "something," whether its her own thoughts/imagination or an environmental distractor. As a result, she is constantly playing "catch up" about what she missed, which consumes all of her mental energy and leaves her looking inattentive, forgetful, or unmotivated at times, and constantly feeling overwhelmed and stressed. She has not yet developed the "top-down" cognitive and impulse control tools she needs to manage her feelings and emotions in a more productive way when this happens, and it is impinging upon her self-management skills and daily functioning. Some of these skills will develop naturally as she matures, but she needs to be taught supplemental ways to better manage her inattention more effectively in the interim.

Reading decoding, reading fluency, and word spelling are areas of significant weakness. Simone is unable to decode novel words (and nonwords) quickly or accurately, and she presents with relative deficits in rapid automatic naming and phonological awareness (skillsets tightly correlated with early reading development). Additionally, a qualitative review of Simone's test data suggests greater difficulties than her scores might otherwise indicate. More specifically, reading errors were secondary to (1) ongoing difficulties with decoding, including an inability to accurately and/or consistently read consonant blends or vowel teams, or to decode using any strategy beyond slavishly sounding out each letter; (2) difficulties correctly blending letter sounds even when she did decode them accurately; (3) ongoing letter confusion (e.g., for b/d); (4) a tendency to impulsively guess words based on their initial few letters or the context of the passage; (5) a vulnerability for making inattentive/impulsive insertions/deletions and

substitutions of smaller words and suffixes, or simply making up words altogether; and (6) general sequencing/ordering difficulties (e.g., when instructed to repeat "2-5-9" would usually respond with something like "2-9-5"). Simone's reading fluency is slow and labored despite her vulnerability for impulsive errors, and her spelling reflects a lack of awareness of many common rules. Current test results are consistent with *developmental dyslexia* (i.e., a specific learning disorder [SLD] with impairment in reading). The discrepancies between her predicted reading scores and her obtained reading scores are 1-2 standard deviations apart, which are large effect sizes and rare in prevalence in the average 10-year-old fourth grader who has had educational opportunities similar to Simone.

Even though Simone's reading comprehension is okay, on occasion she will be at risk for reading directions too quickly or skipping them altogether, further reducing her ability to follow written instructions accurately. She may be prone to giving up on tasks even when they are well within her cognitive ability because it takes so much work (or mental effort) for her to finish them. Simone will also have greater difficulties learning through "listening" rather than "doing." In other words, unless lessons have an applied hands-on component and she is given some degree of individualized assistance, she will struggle to consistently attend to, understand, and automatize new skills. Moreover, Simone performs school-like tasks best when she is able to dictate her own set of rules in order to figure out a solution, and when tasks are novel and within an optimal range of difficulty: As soon as something is remotely boring, she loses interest, and as soon as something is perceived as challenging, she tends to give up trying unless supported and encouraged. Simone will be much more receptive to the school environment if (a) the material to be learned is presented in a way that does not tax her attentional abilities, and then (b) when being tested, if she is given some degree of freedom/flexibility to come to the correct answer(s) in her own way, without strictly adhering to preconceived rules and procedures; otherwise, she will continue to flounder.

Simone exhibits clear difficulties with encoding (i.e., spelling) that is best captured through a specific learning disorder with impairment in written expression, termed *developmental dysgraphia*. I would guess that learning to fluently and accurately read and spell words with irregular pronunciations and spellings is unappealing to Simone because it requires learning endless particulars and exceptions. She would prefer (as most of us do) that English spelling were more regular, following the pronunciation of words more closely. There is a degree of randomness to the words she reads and spells with seeming fluidity because she has by brute force memorized them and/or has figured out alternative approaches based on her work with her school tutors. The rest of the time, she has to rely upon her intuition and reasoning skills to "fill in the gaps" when reading and writing, which must certainly be exhausting. The challenges associated with both learning

disorders are best described from an academic perspective through a language-based learning disability or a specific learning disability (affecting reading, reading fluency, and spelling) that will warrant ongoing specialized services. Notably, dyslexia and dysgraphia almost always coexists with ADHD. Moreover, disorders of written expression are often accompanied by reading, math, oral language, and/or attentional difficulties, and it is debatable whether this disorder exists in isolation. Because the combination of ADHD, dyslexia, and dysgraphia are impeding her school performance and general sense of well-being, it is imperative school-based accommodations be available to her.

However, Simone's ADHD and learning disorders/disabilities are not sufficient to explain her full presentation. She presents with a host of oppositional and defiant behavior, and mild to moderate socially deviant behaviors such as stealing and lying. Taken at face value, this profile is consistent with either emerging oppositional defiant disorder (ODD) or else conduct disorder (CD) as additional comorbid diagnostic possibilities to consider. However, true conduct disorder in young girls is rare, so before jumping to that conclusion, I am instead considering the alternative possibility that Simone is experiencing a high degree of internal distress at all times, especially when she is at school, given the inherent evaluative process in an academic setting, and, coupled with her general propensity to behaving impulsively, is acting out in different disruptive ways out of frustration (versus more severe latent psychopathology potentially emerging). In other words, all the negative feedback she has been getting from school and from her social and family interactions over the past >year has depressed her mood and saddened her general outlook on things, and perhaps she even feels helpless and/or hopeless, which she (nonconsciously) expresses behaviorally as chronic irritability, oppositionality, and periodic statements of self-harm. While she (probably) used to exert a great deal of effort to hide her learning and attention challenges from others (outside her family) in prior school years, at least when she could, she has fallen so far behind this year via remote learning during the pandemic that at this point she has thrown up her hands and has stopped trying altogether. And she is not subtle about it anymore (for better or worse) because she just doesn't have the frustration tolerance for it anymore. It is easy to see where her frustration comes from, when even the littlest of things such as remembering to look both ways when crossing the street require a considerably higher amount of effort from Simone than is expected for others her age. It is important to note for future teachers that Simone is likely not being "oppositional" if she repeatedly engages in unwanted behaviors even after redirection; teachers will need to understand that this is due to her difficulties with behavioral dysregulation, attention, dyslexia, and sustained mental effort (which are not entirely under her control). Her chronically anxious mood adds to her inability to tolerate frustration. Thus, thinking about Simone as an oppositional child will inadvertently lead teachers to implement behavioral plans that will actually exacerbate rather than support her emotional and

behavioral difficulties. The alternative would be to diagnose her with and treat her for something like conduct disorder and major depression, but I think her difficulties are much more nuanced and circumstantial than that. An experienced child clinical psychologist and/or child and adolescent psychiatrist would be better equipped to sort this out.

When children have learning, attention, and emotional problems, the presentation of their symptoms can be confusing, and even misleading. For this reason, it is helpful to further explore how these characteristics may present. For example, although Simone does want to perform well on academic tasks, she will often work quickly, inattentively, and impulsively when faced with tasks she feels are well within her ability level. However, when task complexity increases, she has greater difficulties remaining on task. At other times, Simone may be very quick to give up on tasks if she is feeling uncertain of her ability to perform "well," and when her difficulties with sustained mental effort make it too challenging for her to exert herself to find the correct answer. Because of her ADHD and dyslexia, Simone can also find it challenging to attend to, understand, and retain orally presented information, which in turn limits her ability to efficiently encode new information and to access it when she needs to share her knowledge with others. This in turn can reduce her output. For example, it places her at risk for decreased "comprehension skills," as she may be prone to taking a more concrete and even rigid approach to interpreting directions, which was seen on current exam. Similarly, her emotional state may limit her from accurately drawing inferences, especially when she has no way of confirming that her answers are correct. This ambiguity can be especially distressing for children like Simone, and it contributes to her reluctance to answer questions or initiate tasks even when she is more than capable of providing accurate responses.

Given Simone's presentation, she will profit from a multifaceted program of intervention (psychosocial, psychoeducational, scholastic, and psychopharmacological in nature) aimed at improving attention and learning efficiency, reducing or finding reasonable substitutes for her impulsive and problematic behavior, enhancing her network of social interaction, capitalizing on her strengths, and bolstering her scholastic return-on-investment for her efforts. There is every reason to believe Simone will get her academic career back on track with proper support, as the learning difficulties and attention problems with which she presents are common in school-age children and can be treated with a multitude of evidence-based interventions.

Diagnostic Impression

- F90.2 Attention-deficit/hyperactivity disorder, combined type
- F81.0 Specific reading disorder (decoding and fluency)
- F81.81 Disorder of written expression (spelling)
- F43.25 Adjustment Disorder with mixed disturbance of emotions and conduct
- Rule out Oppositional defiant disorder
- Rule out Conduct disorder
- Rule out Disruptive mood dysregulation disorder
- Rule out Developmental coordination disorder (dyspraxia)

Recommendations

Recommendations for Medical/Health Care

1. Clinical neuropsychiatric consultation and treatment: Given Simone's mood and conduct problems noted above, she would benefit from additional expert consultation with a child and adolescent psychiatrist or clinical psychologist to further explore the roots underlying her difficulties in this area. The behaviors listed below were identified during the current evaluation as problematic and may be appropriate targets for intervention or treatment.
    - Conduct problems: Lying, rule breaking, threatening to hurt self and/or others, stealing, and teasing/bullying others.
    - Behavioral problems: Cannot wait to take turn/impulsivity, disrupting other children's activities, interrupting others when they are speaking, and acting in a safe manner more consistently.
2. Simone's parents are encouraged to continue to learn more about the nature of Attention-Deficit/Hyperactivity Disorders, their symptoms, causes, and available treatment options. Recommended sources of information include the Internet web site www.chadd.org.
3. Treatment options for ADHD typically include a combination of behavioral techniques, consideration of stimulant medication, environmental organization, and the maintenance of a long-term perspective of ADHD as a chronic condition. Simone's parents may wish to discuss whether medical treatment of Simone's symptoms is indicated, with either Dr. Elmashat or Simone's pediatrician, and to request the consideration of possible alternative medical factors that may influence Simone's diagnosis as a rule out. In Simone's specific case, a methylphenidate preparation at low dosage preparation may be the best choice of medication to address both her impulsivity and inattentiveness.

4. Simone's challenges with sustained attention and working memory may also respond to a computerized training program known as Cogmed working memory training. This program is administered in the home and has research proven effectiveness in improving attention and working memory, with emerging evidence of effectiveness in treating reading as well. Information is available at www.cogmed.com.

Recommendations for School

1. Cassie Lorge is encouraged to share the current report with the personnel at Simone's school to integrate the current findings and recommendations with her current IEP, and to make adjustments as necessary.
2. The National Reading Panel has suggested that competent reading requires a pyramid of skills that progress from phonemic awareness to phonics, to fluency, to language to comprehension. Interventions for children with reading disorders needs to focus on balanced literacy, top-down strategies, and improved motivation and confidence.
3. Developmental dyslexia has been proven to respond to a combination of direct instruction in the language building blocks (phonemes) of reading, along with decoding strategies, fluency training, and ultimately whole word recognition. A secondary and essential component of remediation involves the development of effective reading strategies. Simone is developmentally reaching the end of a "window of opportunity" of brain development, during which time she might maximally benefit from such interventions, and the intensity of intervention at this time of her life seems to predict future success in reading. In other words, high intensity services now, for a shorter period of time, will likely work better than more prolonged but lower intensity of services. To this end, Simone's parents are encouraged to investigate the availability of an intensive program that will work on the core skills of phonological awareness and the development of efficient sight word decoding skills.
4. Research into the effectiveness of various forms of reading intervention has been reviewed by the Florida Center for Reading Research, and is summarized at www.fcrr.org. This Center reviews several of the currently available remediation programs and reveals that there are many effective strategies.

5. For children aged 7–12, recommended programs include Orton--Gillingham, Lindamood-Bell Phoneme Sequencing, and certain other programs. Current understanding suggests that programs that are explicit, teach to mastery, are oriented to academic content, provide scaffolding and emotional support, and monitor progress are particularly effective. The Barton method is one such approach.
6. Simone's parents are encouraged to review the book Overcoming Dyslexia, by Dr. Sally Shaywitz (New York: Alfred A. Knopf, 2004), which presents scientific understanding of dyslexia and its remediation in an easy to read, understandable format. This book covers what is known about the biological basis of reading disorders, as well as what can be done to help children become confident readers. Yale Center for Dyslexia and Creativity (https://dyslexia.yale.edu/) is an excellent resource geared to dyslexia and learning disorders.
7. Simone will need a program of intervention that addresses both her dyslexia as well as her attention challenges. Each component is a necessary, but not sufficient, part of helping her to resolve her difficulties in school. As such, careful attention to Simone' capacity for focused and sustained attention should be paid by her reading tutors, and consideration given to the potential that she may benefit from a trial of stimulant medication, to determine its effectiveness in assisting her with learning to read.
8. Simone's need for educational assistance focuses upon her need for a skills trainer/monitor. Arrange for Simone to have regularly scheduled times to checkin with this individual, ideally at the beginning and end of each week, and possibly for a brief period of time during each day. This individual should serve as a liaison between Simone and her teachers, and all teachers and school personnel should report progress and concerns to this person on a regular basis. This individual should then assist Simone in the development of a plan to address areas of need, including organizational skills, time management, study skills, test taking, etc.
9. Simone should be provided as minimally distracting a seating placement as possible. Although this recommendation is generally considered to imply the front of the class, each environment should be reviewed to maximize her ability to focus upon the task at hand, while reducing peripheral distractions. Many students with ADHD find that listening to soft background music while they study is actually helpful.
10. Provide anticipatory guidance as to upcoming events, assignments and projects that are due. Help Simone to begin to use a day planner or calendar, and to prepare for upcoming requirements. Cue her (and the rest of the class), ten minutes before the end of class periods, to finish up her

work, write down her assignments, and perform any other tasks. Simone may need specific assistance in the use of a well-organized notebook and filing system.

11. Simone's difficulties with sustained attention suggest the need to break assignments and projects into shorter, sequentially organized steps. Ask her to complete these "mini assignments" and provide opportunities for feedback and reinforcement at each step. Rather than provide long-term goals and expectations, provide much shorter-term assignments and consequences. Help Simone to plan, to use time management strategies, and to self-monitor her progress. The goal of independence will be achieved when she is able to consistently perform such activities without help, however at the present time it will be essential for her to receive this form of assistance.
12. Assist Simone with appreciating the "big picture" in tasks, prior to her becoming caught up in the details. Ask her to restate (in different words) what the task or problem is asking for, and to then develop a plan of how to go about solving the task. As she then takes the individual steps toward problem solution, ask her to regularly relate them back to the overall plan, and to become better aware of the relationship of her activities to the goal.
13. Consider assigning Simone a "study buddy" who can provide her with copies of notes taken in lecture classes, and with whom she can have telephone/video chat contact if she does not understand or remember aspects of homework assignments.
14. If possible, it might be helpful if Simone's teachers did not count spelling errors against her on history, science or other, similar tests. This will allow her to demonstrate her knowledge on the subject matter without fear of being penalized for secondary academic skills deficits.
15. Simone will respond better to situations that she finds stimulating and engaging. Varying the instructional medium and pace will help sustain interest. She would probably find lessons that emphasize "hands-on" activities more engaging. Keeping the time required for sustained attention on task balanced with learning that is more active will improve performance.
16. Simone performs better on tasks that are auditory or verbal in nature, as opposed to visual tasks. Given this information, it is recommended that she receive auditory presentation of material as often as possible, and that she is given the opportunity to record class lectures on a portable recording device, so that she can utilize the recording to study or do work at home. Combine verbal directions with illustrations or demonstrations of the

desired task. The use of multiple modes of instruction increases the probability of successful learning of the task.

17. Simone tends to lose focus as the day goes on and activity-level may increase during the day. Therefore, schedule the most demanding attention tasks in the morning. Along with breaking up the need for sustaining attention for a long period, Simone would do better when allowed frequent breaks to move around inside and outside the classroom.
18. Simone may get overwhelmed with large assignments. Adjust the assignment down to smaller intervals, give the assignment one sheet at a time, or assign every third problem, rather than every one. Schedule breaks after an optimum attention time period and then return to the assignment. And emphasize that part of the work routine is to "check your work." Students tend to complete work and turn it in without checking it over. Give Simone some instruction in how to check work and practice it with her.
19. Make sure that Simone establishes eye contact when receiving direction/instruction. This will improve understanding and follow-through on the task. And after giving Simone directions, have her paraphrase what the teacher has said. This will increase comprehension and provide an opportunity to check for understanding. This should be done at home, too.
20. Completing schoolwork and maintaining behavior during the school day can be exhausting experiences. Large homework loads on a regular basis can become discouraging and very stressful for parents as well. Attempt to have homework reduced, if possible, and limited to guided practice on material that Simone has begun to master. Attempt to break down long-term assignments into steps to lessen Simone feeling overwhelmed. Consider having her complete every third problem instead of answering each one. Emphasize practice and assignment completion on the word processor to lower the frustration many students feel with written work.
21. Emphasize accuracy over speed by providing separate grades for these skills on assignments, increasing the amount of time that Simone has to complete in-class assignments so that she does not feel rushed; teach her strategies to check over her work including before (i.e., coding multiplication problems in orange on her math worksheet) and after she completes it (i.e., checking the accuracy of her responses). She is encouraged to proofread her tests for errors and mistakes.
22. Simone will benefit from taking tests in a small, structured setting outside of the classroom to reduce distractions and to ease her stress due to inefficient information processing. She should apply for and received

additional time for exams and standardized exams (time and a half or double time).

23. Finally, Simone will need external organization of her efforts, in the form of someone previewing what she is to do, providing commentary and feedback as to what she is doing, and review of her actions after she has finished. Providing external feedback will assist her to become more self-aware and reflective.

Recommendations for Home

1. Behavior modification: Modifying problematic behaviors starts with implementing a reward-based modification program. We all respond well to rewards and incentives we perceive as highly stimulating or valuable; children and adolescents are no different. For different age groups, reward examples include: video games, action-based play (sports or other physical activity), building activities, and activities outside of the school setting. Since Simone is the best source of identifying a meaningful reward, ask her what she would like to earn. Rewards should be: (1) changed frequently to maintain "novelty power" and (2) roughly equal to the goal(s) your child has met. In other words, it would be unreasonable to pair a reward of "new iPad" with a goal like "turn in all homework assignments for one week."
2. Instead of only pointing out Simone's inappropriate or undesirable activities and/or behaviors (i.e., "negative attention"), point out alternatives that are available. This will clarify expectations and avoid what she might perceive as constant criticism. Further, instead of only identifying Simone's undesirable behaviors with punishment or scolding (inherently negative statements), praise her when she does something appropriate or desirable. This will change the tempo and tone of parent/child interactions by reducing the frequency of negative statements, overall. It also serves to reduce or eliminate what Simone might perceive as constant criticism.
3. Simone's parent(s) should solidify their reinforcement with a good ratio of "positive" to "negative" statements. A good ratio is typically considered two "positive" statements for every "negative" statement. This ratio will help to reduce and prevent frustration on Simone's part; too many critical/negative statements might also eventually cause a reduction or elimination of any gains made through a contingency-based reward system.

4. Studying: It will be helpful for Simone to structure her participation in the learning environment at home in order to maximize her attention and focus. For example, learning how to work in shorter intervals (with reinforcement following completion of individual task segments, e.g., 15 minutes of social media time) will assist her in effectively directing her attention to the information being presented or learned. The environment should be free of clutter and visual and auditory distractions kept to a minimum. She should turn her phone off (if she has one) during study sessions to avoid distractions from friends and family members.
5. Executive functioning: Mindfulness is a technique in which Simone can learn to ignore distracting thoughts and concentrate on the task at hand. People of all ages can benefit from mindfulness training, which can help them to develop cognitive control. This book and website are good places to start: *Mindful Parenting for ADHD* by Mark Bertin, MD (https://developmentaldoctor.com/mindful-parenting-adhd/)
6. Books recommendations:
    - *Taking Charge of ADHD: The Complete, Authoritative Guide for Parents* by Russell Barkley, PhD
    - *Late, Lost, and Unprepared: A Parent's Guide to Helping Children with Executive Functioning* by Joyce Cooper-Kahn, PhD & Laurie Dietzel, PhD
    - *Smart but Scattered: The Revolutionary "Executive Skills" Approach to Helping Kids Reach Their Potential* by Peg Dawson PhD and Richard Guare PhD
7. Online resources:
    - Smart but Scattered resources website (https://www.smartbutscatteredkids.com/resources/print-articles/)
    - Tips for Caregivers on Schooling at Home (https://www.smartbutscatteredkids.com/wp-content/uploads/Tips-for-Caregivers-Schooling-at-Home.pdf)
8. Extracurricular activities: Extracurricular activities are highly encouraged (yet carefully balanced with her academic demands) to foster continued positive socialization experiences. As we discussed during feedback, try to find a creative outlet for Simone such as acting classes, or singing, or dancing—something she will be good at and have success at.
9. Given the critical period in which Simone is developing, I would like to follow up with her in 6-9 months, to be sure that she is making appropriate progress, unless further concerns arise that need to be addressed sooner.

It was a pleasure to work with Simone and her family. Please contact me (joey.trampush@med.usc.edu) with any questions or concerns regarding this patient.

Sincerely,

Joey W. Trampush, Ph.D.
Della Martin Assistant Professor of Psychiatry
Department of Psychiatry and the Behavioral Sciences
University of Southern California Keck School of Medicine
CA License PSY29212

Data Tables and Figures

Test Selection Procedures

Neuropsychological tests are intrinsically performance-based, and cognitive performance assessed during this neuropsychological evaluation is summarized below. Where appropriate, qualitative observations are included. Cultural considerations were made when selecting measures, interpreting results, and making diagnostic impressions and recommendations. Results from formal tests are reported in comparison to other individuals the same age, sex, and educational level as range of functioning (e.g., superior, average, abnormal). Test score labels are intended solely to be descriptive, identifying positions of scores relative to a normal curve distribution, and should be interpreted within the context of the patient's individual presentation and history. Although standardized scores provide the clinician with an important and necessary understanding of the patient's test performance compared with a normative group, they do not on their own lead to accurate diagnosis or treatment recommendations.

Test Score Labels/Ranges

Score range	Standard score	*T* score	Scaled score	*z*-score	Percentile (‰)
Exceptionally High	≧ 130	70 +	16 +	2 +	≧ 98
Above Average	120 – 129	63 – 69	14 – 15	1.3 – 1.9	91 – 97
High Average	110 – 119	57 – 62	12 – 13	0.7 – 1.2	75 – 90
Average	90 – 109	44 – 56	9 – 11	-0.7 – 0.6	25 – 74
Low Average	80 – 89	37 – 43	7 – 8	-1.3 – -0.6	9 – 24
Below Average	70 – 79	30 – 36	4 – 6	-2 – -1.4	2 – 8
Exceptionally Low	< 70	< 30	< 4	< -2	< 2

Statistical (Guilmette et al., 2020 (page 39)) (`top`) and clinical (Schoenberg & Rum, 2017 (page 39)) (`bottom`) interpretation of test scores

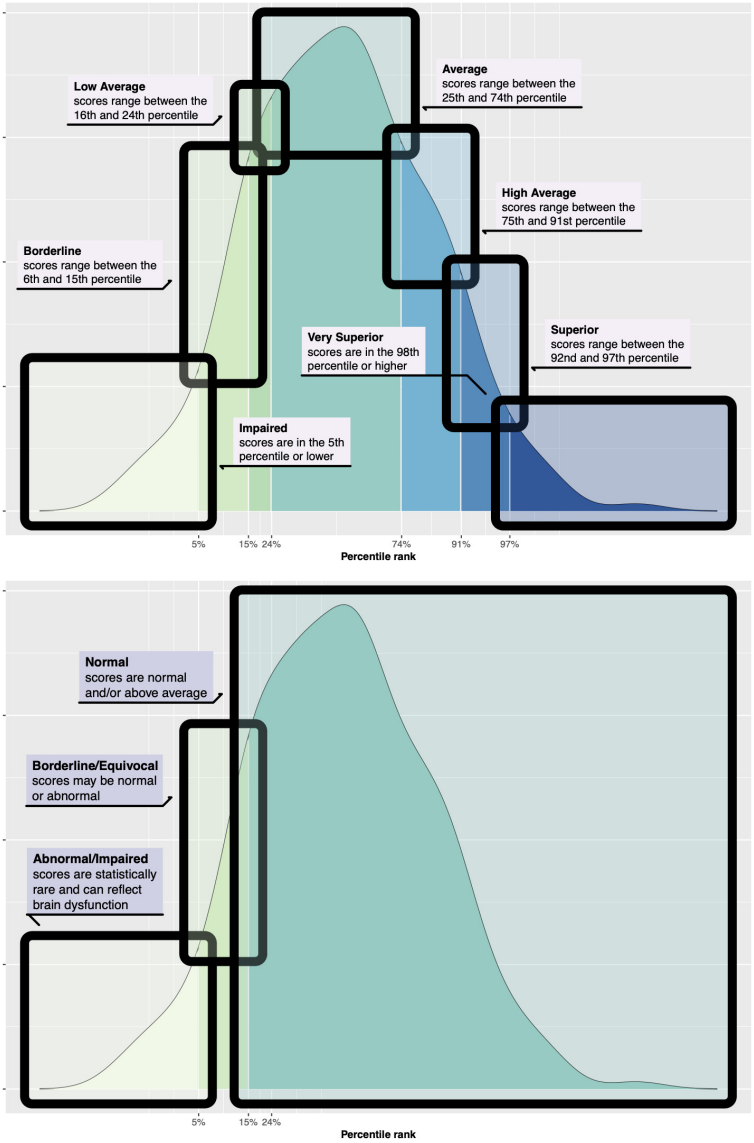

Figure 3: Guidelines for interpretation

Neurocognitive Measures

Table 1: Intelligence

Scale	Score	‰ Rank	Range	Subdomain
WISC-5				
Verbal Comprehension (VCI)	108	70	Average	Verbal Reasoning
Fluid Reasoning (FRI)	97	42	Average	Nonverbal Reasoning
Full Scale IQ (FSIQ)	99	47	Average	General Cognitive Ability
General Ability (GAI)	103	58	Average	General Cognitive Ability

[a] Score = Standard/Composite score (M = 100, SD = 15)

Table 2: Academic Skills

Scale	Score	‰ Rank	Range	Subdomain
KTEA-3				
Nonsense Word Decoding	83	13	Low Average	Reading Decoding
Academic Fluency Composite	86	18	Low Average	Academic Fluency
Writing Fluency	110	75	High Average	Writing Fluency
Math Fluency	79	8	Below Average	Math Fluency
Decoding Fluency	82	12	Low Average	Reading Fluency
WRAT-5				
Math Computation	87	19	Low Average	Math Calculation
Spelling	82	12	Low Average	Spelling
Word Reading	82	12	Low Average	Reading Decoding
Sentence Comprehension	94	34	Average	Reading Comprehension
Reading Composite	87	19	Low Average	Broad Reading

[a] Score = Standard/Composite score (M = 100, SD = 15)

Table 3: Verbal/Language

Scale	Score	‰ Rank	Range	Subdomain
NEPSY-2				
Inhibition Naming	1	0	Exceptionally Low	Rapid Automatic Naming
Comprehension of Instructions	5	5	Below Average	Auditory Comprehension
Speeded Naming	5	5	Below Average	Rapid Automatic Naming
Word Generation Initial Letter	7	16	Low Average	Phonemic Fluency
Word Generation Semantic	15	95	Above Average	Semantic Fluency
WISC-5				
Similarities	10	50	Average	Verbal Reasoning
Vocabulary	13	84	High Average	Verbal Reasoning

[a] Score = Scaled score (M = 10, SD = 3)

Table 4: Visual Perception/Construction

Scale	Score	‰ Rank	Range	Subdomain
NEPSY-2				
Clocks	12	75	High Average	Spatial Construction
Design Copying Process	13	84	High Average	Spatial Construction
WISC-5				
Block Design	10	50	Average	Spatial Construction
Matrix Reasoning	10	50	Average	Spatial Reasoning
Figure Weights	9	37	Average	Spatial Reasoning
Block Design No Time Bonus	10	50	Average	Spatial Construction

[a] Score = Scaled score (M = 10, SD = 3)

Table 5: Attention/Executive

Scale	Score	‰ Rank	Range	Subdomain
NIH EXAMINER				
Dot Counting Total	40	16	Low Average	Working Memory
Unstructured Task Weighted Score	64	92	Above Average	Planning
Set Shifting Task Shift Score	53	63	Average	Cognitive Flexibility
Flanker Task Total Score	48	42	Average	Cognitive Control
NEPSY-2				
Animal Sorting	11	63	Average	Concept Formation
Inhibition Inhibition	1	0	Exceptionally Low	Cognitive Control
Inhibition Switching	5	5	Below Average	Cognitive Flexibility
Inhibition Total Errors	1	0	Exceptionally Low	Response Monitoring
Visuomotor Precision	7	16	Low Average	Processing Speed
WISC-5				
Letter-Number Sequencing	8	25	Low Average	Working Memory
Coding	9	37	Average	Processing Speed

[a] Score = *T* score (M = 50, SD = 10) or Scaled score (M = 10, SD = 3)

Table 6: Memory

Scale	Score	‰ Rank	Range	Subdomain
NEPSY-2				
List Memory and List Memory Delayed	12	75	High Average	Verbal Memory
Memory for Designs	8	25	Low Average	Spatial Memory
Memory for Designs Delayed	5	5	Below Average	Spatial Memory
Narrative Memory Free Recall	14	91	Above Average	Verbal Memory
Narrative Memory Free and Cued Recall	13	84	High Average	Verbal Memory

[a] Score = Scaled score (M = 10, SD = 3)

Table 7: Motor

Scale	Score	‰ Rank	Range	Subdomain
Grooved Pegboard				
Dominant Hand	21	1	Exceptionally Low	Fine Motor Dexterity
Nondominant Hand	18	1	Exceptionally Low	Fine Motor Dexterity
NEPSY-2				
Fingertip Tapping Dominant Hand	11	63	Average	Finger Dexterity
Fingertip Tapping Nondominant Hand	14	91	Above Average	Finger Dexterity
Fingertip Tapping Repetitions	11	63	Average	Fine Motor Control
Fingertip Tapping Sequences	14	91	Above Average	Fine Motor Sequencing
Imitating Hand Positions	9	37	Average	Motor Imitation/Praxis

[a] Score = *T* score (M = 50, SD = 10) or Scaled score (M = 10, SD = 3)

Behavioral Rating Scales

Table 8: BASC-3 Parent Rating Scale (PRS), Child

Scale	Score	‰ Rank	Range
Composite Score Summary			
Externalizing Problems	101	99	Clinically Significant
Internalizing Problems	66	93	At-Risk
Behavioral Symptoms Index	90	99	Clinically Significant
Adaptive Skills	35	8	At-Risk
Scale Score Summary			
Hyperactivity	94	99	Clinically Significant
Aggression	87	99	Clinically Significant
Conduct Problems	101	99	Clinically Significant
Anxiety	51	60	Average
Depression	88	99	Clinically Significant
Somatization	52	62	Average
Atypicality	81	98	Clinically Significant
Withdrawal	51	64	Average
Attention Problems	77	99	Clinically Significant
Adaptability	32	3	At-Risk
Social Skills	50	43	Average
Leadership	47	37	Average
Activities of Daily Living	23	1	Clinically Significant
Functional Communication	31	5	At-Risk

[a] Score = *T* score (M = 50, SD = 10))
Note: *T* scores are reversed for the Adaptive Skills measures.

Table 9: BASC-3 Self-Report of Personality (SRP), Child

Scale	Score	‰ Rank	Range
Composite Score Summary			
School Problems	85	99	Clinically Significant
Internalizing Problems	91	99	Clinically Significant
Inattention/Hyperactivity	80	99	Clinically Significant
Emotional Symptoms Index	89	99	Clinically Significant
Personal Adjustment	19	1	Clinically Significant
Scale Score Summary			
Attitude to School	76	98	Clinically Significant
Attitude to Teachers	85	99	Clinically Significant
Atypicality	74	97	Clinically Significant
Locus of Control	86	99	Clinically Significant
Social Stress	72	97	Clinically Significant
Anxiety	77	99	Clinically Significant
Depression	96	99	Clinically Significant
Sense of Inadequacy	99	99	Clinically Significant
Attention Problems	79	99	Clinically Significant
Hyperactivity	76	98	Clinically Significant
Relations with Parents	24	2	Clinically Significant
Interpersonal Relations	16	1	Clinically Significant
Self-Esteem	15	1	Clinically Significant
Self-Reliance	45	31	Average

[a] Score = *T* score (M = 50, SD = 10))
Note: *T* scores are reversed for the Adaptive Skills measures.

Table 10: Brown Executive Function/Attention Scales (Brown EF/A), Parent Report

Scale	Score	‰ Rank	Range
Activation	87	99	Markedly atypical (very significant problem)
Focus	83	99	Markedly atypical (very significant problem)
Effort	79	99	Markedly atypical (very significant problem)
Emotion	76	98	Markedly atypical (very significant problem)
Memory	83	99	Markedly atypical (very significant problem)
Action	82	99	Markedly atypical (very significant problem)
Total Composite	85	99	Markedly atypical (very significant problem)

[a] Score = *T* score (M = 50, SD = 10)

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Footnotes:

1. This pattern occurred in 100% of the BASC-3 standardization sample with clinically significant Hyperactivity, Aggression, Conduct Problems, and Attention Problems scale scores. ↩