**Confidential Report of Neuropsychological Assessment**

Referral Source:

DOE:

Time of Appointment:

**Reason for Referral:**

xxxxx yyyyy is a -year -month old, -handed boy with a history of

He was referred for neuropsychological assessment to clarify his current neurobehavioral functioning and to make recommendations for intervention. Specifically,

**Assessment Methods Used:**

Physical and Neurological Assessment of Subtle Signs (PANESS); Namewriting sample; Wechsler Intelligence Scale for Children, Fourth Edition (WISC-IV); Sequences (Children’s Memory Scale--CMS); Story Memory, Sentence Memory (Wide Range Assessment of Memory and Learning-II—WRAML-II); Rapid Automatized Naming—Numbers, Colors, Letters; Elision (Comprehensive Test of Phonological Processing (CTOPP); Boston Naming Test (BNT); Word Reading, Pseudoword Decoding (Wechsler Individual Achievement Test, Second Edition—WIAT-II); Comprehension of Instructions, Memory for Designs, Word Generation—NEPSY-2; Spatial Span (WISC-IV Integrated); Beery Developmental Tests of Visual Motor Integration (VMI) and Visual Perception (VP); Conners’ Continuous Performance Test II; Hand Movements (Kaufman Assessment Battery for Children, Second Edition—KABC-II); Repeated Patterns Test; Cancellation Tasks (WISC-IV); Sentence Completion; Conners’ Parent Rating Scale (CPRS) and Teacher Rating Scale (CTRS); Behavior Rating Inventory of Executive Function (BRIEF), Parent and Teacher Forms; ADHD Rating Scale IV (Home and School Versions); Adaptive Behavior Assessment System, Second Edition (ABAS-II); Review of medical and school records

**Relevant History:**

xxxxx is the of children ( ) and lives with his parents in. Father works as and mother as a

Family history is negative for attention, learning, psychiatric and neurological disorders.

or Family history is significant for

There were no reported problems with the pregnancy, labor or delivery with xxxxx who was born at the expected time in good condition. There were no perinatal complications and xxxxx has had a healthy childhood. xxxxx was on no medications at the time of assessment. There have been no documented difficulties with vision or hearing. There is no known history of psychological trauma.

or abuse/neglect history

Developmental milestones are reported to have been acquired within normal age level expectations with regard to motor skills, language and socialization. Sleeping, feeding and toilet training all occurred without difficulty and within normal age level expectations.

or xxxxx reportedly had developmental delays in

xxxxx is presently in the grade at School. He has not repeated a grade.

School problems were first identified in the grade, and involved

xxxxx has not had special education services

or

Presently, special education services include

Xxxxx receives related services as part of his IEP including (speech/language, OT, PT)

Previous assessment in revealed

Parents report that xxxxx participates in (hobbies, sports, clubs, etc).

List child’s reported strengths.

**Observations/Test Results:**

General presentation: xxxxx was observed in an extended office visit. He presents as

appearing his chronological age

Grooming is neat

Xxxxx’s play is cooperative and clearly symbolic. or solitary parallel associative relational fragmented and poorly sustained.

Xxxxx’s spontaneous speech was readily available. His thought processes were goal-directed and linear. There was no evidence of suicidal, homicidal or psychotic thinking. No overt loss of contact or disruption of ongoing behavior was observed. There was no indication of impairment to hearing or vision observed during the assessment. xxxxx’s activity level was within normal expectations throughout the assessment. Cooperation was easily elicited and xxxxx’s effort was good. As such, the results are considered to be a valid representation of xxxxx’s present neurobehavioral strengths and weaknesses.

The results from xxxxx’s performance during this neuropsychological assessment are summarized below. Where appropriate, qualitative observations are included. Results from formal tests are reported in comparison to other children xxxxx’s age, as range of functioning (i.e., below average, average, above average) and as standardized scores. Standardized scores take a variety of forms, including those summarized in the table below. Higher scores generally represent better performance, unless noted otherwise (e.g., *BRIEF, Conners’ Rating Scales*). Cultural considerations were made when selecting measures, interpreting results, and making diagnostic impressions and recommendations.

|  |  |
| --- | --- |
| **Standardized Score** | **Average Range of Scores +/- 1 SD** |
| Scaled Score (ScS) | 7 to 13 |
| Standard Score (SS) | 85 to 115 |
| T-score (T) | 40 to 60 |
| z-score (z) | -1 to 1 |

Mood/social-affective processing: Throughout the assessment, xxxxx’s mood was upbeat, stable and cheerful. His affect was enthusiastic. There was no evidence of anxiety, excessive worry or eroded self-esteem.

On the *Sentence Completion* task, xxxxx’s productions revealed themes of

Parent reports on the *CPRS* rating form indicate no concerns with anxiety and depression, somatic complaints or social withdrawal. Teacher reports on the *Conners’* *Teacher Form* are similarly unremarkable

Parent report on the *BASC-2* rating form indicated clinically significant concerns XXX. XXX’s teacher also completed the *BASC-*2, and reported clinically significant concerns with XXX.

With regard to social cognition, xxxxx presents with no observable disturbance in face recognition, peer interaction, social pragmatics or modulation of behavior (boundaries, distances). The paralinguistic aspects of his communication are entirely intact. On formal tests, he was able to extract information from visually presented social situations involving cause and effect. Similarly, xxxxx was able to verbally describe his understanding of social situations (example?). He was also able to demonstrate empathy effectively, as noted by (example?)

social connectedness

social judgment

linguistic affect

prosody (also understanding others’ prosody, body language, etc)

understanding of examiner’s perspective (theory of mind?)

Attention/executive functions: xxxxx’s ability to modulate and direct attention was entirely appropriate in the individual setting. There was no evidence of impulsivity, distractibility or attractibility observed. His arousal level was within normal limits.

Parent reports on the *CPRS* reveal

significant concerns with distractibility and hyperactivity

concerns about persistence on demanding tasks

Similarly, the teacher reports on the *CTRS* note

The *ADHD Rating Scale IV* assesses symptoms of ADHD as defined by DSM-IV. Parent and school reports are listed below. In general, reports of symptoms at home are endorsed more than those at school

On performance-based tasks, xxxxx demonstrated pervasive deficits in all aspects of attention. OR

Selective attention is the ability to inhibit orienting to something of interest. It involves the discrimination of relevant from irrelevant information in memory, requiring automaticity of processing. xxxxx demonstrated age-appropriate skills on all tasks requiring focused and visual selective attention (i.e., *WISC IV Cancellation* ScS = )

Visual span (*Spatial Span* forwardScS = *KABC-II Hand Movements* ScS =

Verbal working memory (*CMS Sequences* ScS =

Visual working memory (*Spatial Span* backward ScS =

Sustained attention and vigilance (e.g., *Conners' Continuous Performance Test-II*)

impulsiveness, vigilance deteriorates over time, persistence on an effortful task

Executive function refers to the domain of cognitive abilities that includes self-regulation, set maintenance, selective inhibition of responding, response preparation, cognitive flexibility and organizing time and space. Executive functions involve developing and implementing an approach to performing a task that is not habitually performed. These skills are related to the development of frontal brain systems, and become more salient in later elementary school years and beyond, especially in the remediation of areas of learning weaknesses, and in regulating behavior independently.

On a parent rating of executive function i.e., *Behavior Rating Inventory of Executive Function* (*BRIEF*), xxxxx’s parents note

Teacher ratings on the *BRIEF* also note

Behaviorally xxxxx’s ability to plan, organize and execute problem solving was excellent. When faced with novel problem solving situations, xxxxx’s productions were deliberate, efficient, flexible and persistent, showing good judgment as to the level of difficulty of tasks. He was independently able to initiate, sustain, inhibit inappropriate responses and persist across tasks.

Xxxxx used spontaneous organization of material during complex problem solving tasks

(e.g., clustering on *CVLT-C*)

xxxxx was adept at devising a problem solving strategies (versus applying a rule in an automatic fashion)

(e.g., *NEPSY-2/DKEFS Tower*) OR

(CONSIDER...Do differences in ability level account for this problem?--if so, not truly executive function problem)

Self-monitoring was entirely intact. OR xxxxx did not use feedback

No difficulties were noted with maintaining or shifting set. OR set-breaks

Inhibitory controls were consistently within normal limits. OR intrusions stimulus bound behavior

xxxxx had consistent difficulties on tasks requiring simultaneous organization and output

e.g., *Rey Figure* versus *VMI*

*Letter Fluency* versus *Semantic Fluency*

*Story Memory* versus *Sentence Memory*

General cognitive abilities: A comprehensive intellectual assessment was completed in and revealed overall functioning in the Average range for age (Full Scale IQ = ). Reports from teachers and parents are entirely consistent with the previous assessment, and as such formal testing was not repeated at this time.

OR

Administration of the *WISC-IV* yields a Full Scale IQ score of 99 (%ile = ). In comparison to age-related peers, xxxxx’s overall intellectual functioning is in the average range for age. In general, verbal and nonverbal problem solving skills are equally well developed. Scores from the current assessment are generally consistent with those from the evaluation. Individual test scores and Index scores are listed below:

Examination of the quality of performance reveals that xxxxx has a well-developed verbal knowledge base, good descriptive vocabulary and appropriate ability to synthesize nonverbal problem solving activities.

xxxxx had particular difficulties with timed activities?

Adaptive Skills: Parent ratings of independent self-help skills were assessed via the *Adaptive Behavior Assessment System* (*ABAS-II*) and the Adaptive Skills composite of the *BASC-2*.

Language and language-related processes: (paragraph 1) Throughout the assessment, xxxxx’s spontaneous language was easy to elicit. Reciprocal communication was adequate, with appropriate appreciation of linguistic parameters.

Auditory comprehension and verbal formulation were appropriate in conversation. Xxxxx’s speech was fluent and prosodic, with appropriate articulation, voice quality and volume. OR... flat, hyperprosodic

In conversation, xxxxx’s grammatic usage and sentence structure were well-developed for age. OR

vocabulary/usage/syntax-order or elements/atypical usage/word retrieval

No difficulties with comprehension were noted. OR

needs modified language disorganized circumstantial tangential slowed rate of processing

linguistic aspects of language

phonology

morphology

syntax

dysphasic

connected speech

paraphasias?

literal paraphasia--phonological errors (Broca’s, Conduction)

verbal paraphasia--substitution of a semantically correct word (Wernicke’s)

circumlocution--describing an object or indicating its function (Wernicke’s and anomics)

Formal testing revealed (i.e., general impression of language---we look at 4 things)

naming (picture vs real), single object vs rapid; repetition (lists vs sentences); fluency (oral, written); comprehension (oral, written)

Among receptive tasks, xxxxx has an appropriate verbal span (*WISC-IV Digit Span* forward span ScS = ). As the load of semantic processing becomes greater, xxxxx continues to perform in the expected range for age (e.g., *WRAML-2 Sentence Repetition* ScS = ). Xxxxx performed above age level expectations on a task requiring comprehension of aurally-presented instructions (i.e., *Token Test*) with regard to one-step commands (Part 1 = 84th %ile), two-step commands (Part 3 = 73rd %ile), and commands involving complex syntax (Part 5 = 80th %ile). Delayed recall?

Verbal memory

rehearsal, encoding problems, storage, retrieval issues, interference

*Story Memory*

immmediate versus delayed

recall versus recognition--implies retrieval

memory for material in context

learning of new information

learns from repeated trials

incidental learning

Expressively, xxxxx’s language skills are also intact. Confrontation naming (i.e., *Boston Naming Test*) was age appropriate (z = ; %ile) and no problems with lexical retrieval were noted. Xxxxx’s ability to produce words in response to a semantic cue (*NEPSY Verbal Fluency* *Semantic*) is within normal limits (ScS = ), as is his ability to produce fluent responses to a letter cue (*NEPSY Verbal Fluency—Letter Fluency* = ScS = ).

Language skills considered crucial for the development of reading include phonological processing, rapid naming, and decoding of real and nonsense words. Xxxxx’s phonological processing was entirely intact (*CTOPP Elision* ScS = ) . Similarly, Xxxxx’s ability to decode non-words is in the average range for age as is his ability to read real single words. It is noteworthy; however,

Scores from the *Rapid Automatized Naming (RAN) Tests* demonstrated

Nonverbal/visual processing: There are no observed disturbances in visual acuity, face or object recognition, appreciation of personal space or navigation in topographic area.

neglect, inattention for hemispace?

xxxxx's performance on constructional tasks (*WISC-IV Block Design*, *VMI*)

Complex (nonmotor) perceptual tasks involving appreciation of object perception (e.g., *Beery Visual Perception* SS  *=*  )

Note are there difficulties with:

visual acuity

eye movement control

visual scanning

ocular tracking

face processing

spatial orientation

form complexity

figure/ground

perceptual constancy

depth perception

movement perception

fractionated attention to detail in spatial processing

*Visual Motor Integration* was scored formally at the (SS = ).

*CMS Faces* immediate

delayed

Sensorimotor/praxis: Routine gait, body and facial features are grossly within normal limits.

*Gait disturbances:*

short-stepped, narrow-based, shuffling (festinating)--Parkinsonianism

impaired alternation of feet (apraxic)---normal pressure hydrocephalus

broad-based and lurching (ataxic)---cerebellar lesions

swinging of one leg outward, excessive wear on one side of foot (hemiparetic)---infarctions

excessively lifting the knees to raise the feet (steppage)----infections (syphilis)---e.g., disturbance to position sense

Romberg sign (falls when standing with eyes closed)

posturing

decreased arm swing

*Body habitus:*

atrophy, asymmetry

dysmorphic features

*Facies:*

eye droop (ptosis), drooling, loss of tone in forehead, lower face (note whether it is whole face [facial palsy, e.g., bells palsy] or just lower face [cortical problem-stroke])

dysmorphic features

tics

*Tone problems:*

Dystonia-- involves the inadequate co‑contraction of antagonistic muscles, dystonic overflow of muscle activity to muscles not normally involved, and/or facilitating and inhibitory activities and various antagonistic gestures

Spasticity (i.e., velocity dependent change in tone)

if upper motor neurons--weakness, fatigability, clonus, Babinski (upturning toe when bottom of foot is scratched, upper motor neuron disorder)

if lower motor neurons--fasciculation, atrophy weakness, fatigue

*tremor:*

at rest---basal ganglia ?

intention--cerebellar signs

Bimanual coordination is intact. xxxxx is right/left-handed for writing and drawing. Pencil grip in the preferred hand is in the conventional tripod configuration. A similar grip was used in the nondominant hand. OR describe pencil grip

posturing?

balance

fine finger dexterity

difficulty inhibiting extra overflow movements

axial vs. appendicular problems

visual motor

far-point copying difficulties

difficulties with integration across visual midline

xxxxx was able to discriminate left from right accurately. OR

There was evidence of directional confusion in reaching.

xxxxx’s handwriting is

a fluent, cursive script dysfluent

even, legible manuscript uneven,

fast, slow and effortful

*Repeated Patterns* a task involving careful, graphomotor output, was produced (speed, accuracy)

Results of the *PANESS* reveal mild difficulties with motor impersistence and unexpected motor overflow bilaterally. Additionally, there was bilaterally slowed performance on repetitive timed motor activities

repetitive alternating movements left greater than right

dysfluencies

mirror overflow

temporal errors

dyskinetic syndromes

Use of motor feedback was intact. OR

Proprioceptive, kinesthetic, visual feedback

primary sensation

finger recognition

fingertip symbol writing

Praxis involves the knowledge and performance of skilled motor movements.

xxxxx was able to demonstrate adequate praxis on a variety of tasks, including....

Two types of knowledge needed for skilled movements:

mechanical (tool action knowledge; how to fabricate tools); action-tool associative knowledge

temporal spatial (errors here---parietal lobe (L); posterior, decreased discrimination)

buccofacial

limb

Assessment for apraxia (like assessment for aphasia):

pantomime (e.g., show me how you\_\_\_\_\_\_)

imitate (do this\_\_\_\_\_\_\_)

recognize (is this the correct way to \_\_\_\_\_\_\_\_\_?)

fluency (write a letter, put in envelope, put a stamp on and mail)

Look for:

Spatial errors

movement (fixating, coordination)

posturing errors (self as body part, object)

orientation (in plane)

temporal errors

speed up (when supposed to slow down)

Deictic behavior involves the development of the ability to accurately (in timing and space) represent the movement of a particular task.

pointing to locus of action (under 4 years of age)

body part as tool (age 4)

holding without extent (by age 8)

holding with extent (by age 12)

Academic Skills: Brief assessment of academic achievement was completed during the current assessment. Results are listed below

(for READING discuss)

lexical access

phonemic errors

fluency

speed

comprehension

word reading

non-word reading

spelling

xxxxx’s performance on math and arithmetic skills revealed

(for MATH discuss)

number processing

magnitude judgment

calculation

procedural knowledge

carrying

confusion of component steps

wrong calculation

ordering error

incompletion

part whole perception

**Impression:**

paragraph 1

xxxxx presents as a (brief description, highlight strengths)

Overall cognitive abilities, as measured by a standardized intellectual battery, are in the range, in comparison to youngsters of the same age. Verbal and nonverbal knowledge base and skills

paragraph 2 (neuropsychological dx functional)

The neuropsychological protocol as a whole highlights a

significant neurodevelopmental disorder

constitutionally-based learning disability

longstanding, well-documented learning disorder

in the context of

lead poisoning

Spina Bifida

premature birth

prenatal exposure to toxins

traumatic brain injury

other

At the present time, the most significant areas of concern from a neuropsychological perspective include:

Paragraph 3 (neuropsychological dx functional brain systems)

This presentation is consistent with disturbance to/inefficiency in (brain systems, if applicable)

The current protocol is highly consistent with xxxxx’s developmental neurological history

is entirely consistent with previous test findings (DESCRIBE ANY CHANGE OVER TIME)

paragraph 4 (risk statement)

As a result of having early neurological compromise, xxxxx’s nervous system is considered to have developed differently than most youngsters. Therefore, it is expected that his neurobehavioral development will be "off developmental track" in comparison to his peers. That is, while he can be expected to acquire quite a bit of skill, xxxxx’s pattern of progress will probably be unlike that of most children with his intellectual ability. He may need to use alternative learning strategies, and may require extra time or assistance on activities he is expected to learn.

OR

All of the aforementioned issues can be expected to have a pervasive impact on xxxxx’s development of academic and social skills. This is particularly true, considering

OR

With this neuropsychological profile, along with the history of xxxxx remains at risk for

academic

social

behavioral

being misunderstood

OR

With this learning style, xxxxx is at risk for academic difficulties in the context of increased complexity of material

**Recommendations:**

The primary recommendation where xxxxx is concerned at this point is

Medical

Academic

Social

Psychiatric

xxxxx has made excellent progress. He is functioning quite well, given his extensive history. As such, the goal of those involved in his care will be to promote continued progress.

xxxxx’s present educational plan is strongly endorsed. or

xxxxx will need accommodations for complexity of information.

amount of info

nature of processing required

amount of support available/needed

In class adaptations, modifications should include

(Does child need any of the following?)

IEP meeting

Modifications on standardized tests

Extended school year

Repeat a grade

I would strongly recommend the following books as reference guides in assisting xxxxx:

The following websites may be of particular interest:

These findings and recommendations were discussed in detail with parents who have a good understanding of xxxxx’s needs. xxxxx should have a follow-up neuropsychological assessment in . In the interim, I would recommend that xxxxx have a “check up” appointment in six months to monitor progress. We enjoyed meeting with xxxxx. I can be reached at

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Board Certified in Clinical Neuropsychology

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CPT:

Dx:

**Test Scores**

(separate sheet)