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SPEECH THERAPY ASSESSMENT OF WRITTEN LANGUAGE

Done by: 11/02/2022

LAST NAME: BILLAZ

SURNAME: JULIETTE

BIRTH DATE: 12/03/1990 (ELEVEN YEARS AND TWO MONTHS OLD)

GRADE: 6TH

ADDRESS : 12 PLACE GEORFES CLEMENCEAU 73100 AIX LES BAINS

GUARDIAN : Mme BILLAZ M. (2 88 01 99 405 017 67)

Subject of complaint: Persistent difficulties with spelling – TSL diagnosis confirmed

Juliette Billaz, 11 years, 2 months old and 6th grade student had frequent issues during her elementary education due to Specific Problems of the Written Language.

Currently, she is on the 6th grade and has constant issues with spelling. She has been affected by the quick pace of her lessons since she entered school and was unable to keep up with her peers.

The assessment will be done with the digital program Exalang which provides instant results.

Oral Language

Receptive language

Morphosyntactic aspects

	Score	ET	Cent
Comprehension of the instructions	9	-0.01	75

Excellent results in the morphosyntactic aspects, her performance was above average in comparison by her classmates and Juliette's age group.

Expressive language

Meta phonology

	Score	ET	Cent
Phonological cycle	6	-4.43	5

In terms of meta phonology, Juliette scored a result which places her below the level of difficulty for her age group and/or her classmates.

Lexicon and semantics

	Score	ET	Cent
Semantic fluency	11.50	0.02	75
Phonetic fluency	8	-0.15	75

Juliette had excellent results in both tests, lexicon, and semantics.

Written Language

Reading

Aspects of the process (decoding)

Lexicon metrics

	Score	ET	Cent
Lexicon metrics (time) Ⓢ	161	-0.24	50
Lexicon metrics (MLC)	213	-1.03	25
Lexicon metrics (weighted score) Ⓢ	185	-0.42	50

Juliette had average scores in this section.

Decoding (Building and / or communicating)

	Score	ET	Cent
Reading words (score)	80	-11.20	5
Reading words (time) Ⓢ	180	-2.19	5
Reading words (ratio)	44.44	-2.58	5
Lexicon metrics (non-words) Ⓢ	7	-2.67	5

The (homogeneous) scores in these tests exceed the difficulty level of her class and / or age.

Spelling

Grammatical spelling

	Score	ET	Cent
Sentence's complement	0	-4.05	5

The result is below the difficulty level of this subject.

Pre-requirements of written language and other skills

Memory

Short term memory (MCT / MDT)

Visual memory

	Score	ET	Cent
Visual span	5	0.40	90

Juliette had a perfect score on the visual memory test.

Auditory verbal Memory

	Score	ET	Cent
Auditive span (place)	5	-0.77	50
Auditive span (backwards)	5	-1.34	25

Juliette had average scores in this section.

SPEECH THERAPY DIAGNOSIS

Juliette presents an ISL which implies a decline in decoding with the presence of paralexia and contextual errors. Her spelling is the most affected though she has a small lexical stock and limited access to the same.

A speech aid is recommended (that is 30 amo 10,1)

Kind regards,

Caroline Veuillet

Summary and conclusion

The intellectual efficiency test that was done proves the presence of general skills which can be considered **average** scores. Juliette's performance improved in the nonverbal examinations.

Juliette is a young girl particularly helpful and centered but her learning is compromised due to the difficulty with verbal information which can be related to a **limited working memory**. Juliette needs time to receive treatment, her comprehension difficulties are evident in oral as well as written communication.

At school, her difficulties are more evident in writing: Juliette has issues learning the written language (dyslexia / dysorthographie) which results in **considerable fatigue, deficient spelling, decline in performance and comprehension problems**.

It is crucial that Juliette receives pedagogical aid during class, keeping in mind the abovementioned difficulties; she needs verbal information that is synthesized, that her comprehension is verified and that she is given enough time to finish her tasks.

As well, using a computer for some subjects can be useful, an ergo therapist can give their input on this topic.

Ideas and strategies to fulfill Juliette's needs

Furthermore, a list of options with some recommended changes to make, these are based on the observations within the Neuropsychological assessment. The ideas can be improved and adapted in regard to particular needs and can be useful for other students with the same difficulties.

Simplify writing

- Short, simple, synthesized documents that explain only the essential (mind maps charts to help the senses)
- Physical reading materials and “Cloze” texts: keep the written language at a minimum
- Index and visual aids: underline, highlight, circle, cross out, use key words, etc.
- Lessen the quantity of exercises and words to learn to avoid getting fatigued. Quality is more important than quantity.
- Do not mark orthographical errors unless it’s the main subject of evaluation.

Change the message

- Give one task at a time, short and simple.
- Use concrete and visual information: illustrations, examples, demonstrations, schemes, graphs, etc.
- Verify the **correct comprehension** or include a tutoring program.
- Take advantage of learning materials that lessen verbal production: handouts, QCM.
- Congratulate accomplishments, effort, and progress
- Give plenty of **time**

Lessen the homework

- Not to give more than 35 minutes of homework.
- Prioritize visual memory to help the senses (key words, schemes, etc.)
- Prioritize isolated learning (one lesson at a time).

Elements of the anamnesis

The family left France and moved to the United States in July, Juliette’s parents opted to perform in an assessment to prepare their daughter for her reentrance to school.

Medical history and development: Juliette’s development seems normal.

Patient care:

- Speech therapy (Mme Reverdy Juliette and afterwards, Mme Caroline Veuillet). The last assessment, done in February of 2022, showed the existence of a “specific language problem which implies a decline in decoding with the presence of paralexia

and contextual errors. Her spelling is the most affected though she has a good lexical stock and a somewhat functional access to the same”.

School level: Juliette entered school with low energy, despite her motivation and effort her grades are still not a reflection of her achievements, and she feels disheartened. She needs more time to do her work although she benefits from certain improvements in her lessons (like cloze texts). The girl does her homework by herself. Written comprehension is difficult for her. Next year she will enroll on a bilingual American school and will receive the help of a tutor from the get-go.

Daily life: Juliette is the oldest of three siblings, she practices hip hop and is described as an easygoing girl. She has many friends and felt sad when the family left France. She chose to repeat the 6th grade when she goes back to school.

Implemented Tests

The results must be taken into consideration within the established relationship at a precise point of development of the child’s life, therefore, these results are not definitive and may change.

Wisc V (Wechsler Intelligence Scale for Children -5th edition). This assessment is a global evaluation of a child’s cognitive functions in five components: verbal reasoning (ICV), visual-spatial reasoning (IVS), fluid reasoning (IRF), working memory (IMT) and speed of information processing (IVT). The average score of these elements gives the result for an intellectual coefficient (QIT).

Nepsy II: a neuropsychological assessment of the child that evaluates the praxis and sensorimotor functions.

The student’s parents received two questionnaires, the BRIEF questionnaire is an evaluation of the behavior during daily life in relation to specific areas that involve self-sufficient problem solving and social functioning.

Behavior during the assessment

Juliette attended the interview with her parents, and she was able to speak on her difficulties and school life.

During the evaluations, Juliette paid attention, acted precise and calm. Juliette is more introverted but was able to answer adult's questions calmly and regulate her stress during the tests.

The second stage was done on line due to the health threatening context. Juliette participated in the evaluation in a quiet and organized manner.

Test results

Language

Verbal reasoning and acquired knowledge

Juliette was able to make several connections and generalize after a two-word proposal, her conceptualization skills are within the low average level. The vocabulary test showed a satisfactory level since she was able to reproduce her knowledge through verbal communication and her lexicon was clear. The general knowledge was equally satisfactory. There were some difficulties of comprehension with several tasks or items, sometimes it was necessary to repeat or reformulate. Description of the evaluation: Similitudes: couple words presented to the child who must find the similarity between two concepts; vocabulary: word definitions; Information (answer two questions of general culture).

- Juliette's verbal reasoning places her in the average score in comparison to children of her same age. The difficulties of comprehension can be deemed as occasional.

Oral language

Her phonological conscience is fragile, Juliette was able to change the oral structure of words for some items. The access and work with verbal tags (numbers and letters) seemed automatic: Description of the evaluation: phonological processes: point at the image that contains the correct sound; quick denomination: quickly name the sequences that tend to be automatic (colors, letters...).

- There are phonological difficulties

Visual-spatial reasoning: tracking and perception in space, analysis, and processing of information

The IVS is an evaluation of the child's visual-spatial skills and capacity to build geometrical shapes from a model. She was able to assemble cubes in three dimensions to reproduce a model after several trials. The visual-constructional praxis and visual-spatial processing are within normal level, her performance improves when the motor competence is eliminated: with efficient visual-spatial reasoning, Juliette was able to synthesize abstract visual stimuli.

Description of the evaluation: visual puzzles: visual-spatial reasoning is tested; cubes: assemble two colored cubes in three dimensions to reproduce the model.

- Juliette's reasoning to comprehend and analyze spatial relations is within the normal.

Fluid reasoning: logical thinking and problem solving in new scenarios

Juliette was able to infer logical rules through templates, she took the time to analyze the possible solutions and to build her own reasoning. Furthermore, she was able to apply rules of correspondence and addition to balance in a scale and apply the concept of quantitative equality. In contrast, Juliette had difficulties to solve problems through oral communication: she was unable to understand the sense of the expression and retain the elements for manipulation due to a low working memory. Description of the evaluations: templates: selection of a missing piece within five possibilities to complete a template; balances: choose the missing weigh to equilibrate the scale; arithmetic: calculation problems.

- Juliette's reasoning is normal since she is able to infer and apply logical rules as well as solve problems. However, the oral resolution of problems is more difficult because she has a short functioning working memory.

Speed of information processing: capacity to resolve easy or previously learned tasks with fluidity and speed.

Her processing of fine visual information, related to motor skills, is satisfactory. Juliette was able to answer a graphic code quickly and precisely. When asked to use only fine visual discrimination, Juliette was better at differentiating symbols in several lines. No error was marked, this test showcased a strength in her cognitive profile. Description of the evaluation: Code: copy symbols similar to geometrical shapes in a limited amount of time; symbols: remembering the symbol in a line in a limited amount of time.

- The processing of visual information is normal

Memory competences: aptitude of coding, storing and recuperation of auditive-verbal and visual information

The working memory is the capacity to maintain certain information during a short amount of time to be used afterwards. In this regard, there are many activities that need multiple stages such as reading and mental calculations which need an important effort to pay attention.

Juliette's results of short term auditive memory were within the low average, she was able to retain some numbers and repeat them in the same order. When we add an extra task that requires processing those numbers in the working memory, Juliette was able to reproduce the

numbers in the opposite order (results within the low average). Her results plummeted in the last test because she was unable to keep focused despite the effort in the previous tasks. The processing of the same numbers with a supplementary element (a letter) is less common to forget. Short term memory is more satisfactory at a visual level evaluated through a presentation of pictures.

Long term memory is difficult when it comes to learn stories and posed a challenge due to Juliette's comprehension difficulties. The first story was restored with several important details, but the second story was difficult for Juliette who was still trying to retain verbal information from the first story. The results of recognition, proposed with the scores, confirm her comprehension difficulties.

The memorization of isolated words is excellent and certainly represents a compensation for the comprehension difficulties (Juliette finds it difficult to remember complex verbal information but has a better ability to retain isolated verbal information, one after the other). Nonetheless, this learning is difficult to maintain and could interfere with other information.

Description of the evaluations: memory with numbers: repeat a series of numbers in the correct order; memory with images: remember the correct order of appearing images; stories: listening to a story and repeat it.

- The auditive-verbal memory is on the low average and represents the weak spot in Juliette's profile.
- The short working memory could explain the comprehension difficulties or oral language when dealing with a lot of information.
- The memorization learning is excellent, surely to compensate the difficulties in comprehension but Juliette needs many repetitions and many support elements, for instance, visual supports.
- Visual memory is efficient

Attention and executive functions: cognitive regulation and cognitive, emotional, and behavioral control

The executive functions represent the adaptability of our behavior in a certain context, these allow for regulation and cognitive, emotional as well as behavioral control. Furthermore, these participate in all new scenarios, problem solving and maintaining focus. These skills help us to plan (planification), change strategies with ease (mental flexibility), inhibit a behavior that we previously adopted and that won't work in a new scenario, resist, or avoid acting on impulse (inhibition) and process information that is temporarily stored in our memory (working memory).

The Behavior Rating Inventory of Executive Function (BRIEF) is recommended to parents and teachers, it is not a difficult evaluation since it can be done at home.

The questionnaire for teachers has more answers that need interpretation.

Sustained auditive attention

Juliette was able to maintain a level of attention in a constant manner. Her sustained auditive attention skills are satisfactory. Nepsy-II: Auditive attention (point the correct circle upon hearing the target color).

Inhibition (stop automatic responses)

Juliette has a good control of inhibition; she was able to stop automatic responses when receiving contradictory instructions. However, her limited working memory made it difficult to process all verbal information and instructions, her responses were slow, so Juliette was unable to keep up with the speaker's rhythm. Test: Nepsy-II: association of responses: give contradictory responses.

Mental flexibility (capacity to change tasks or mental strategy, to adapt)

Juliette was able to demonstrate cognitive flexibility, she managed to adapt easily to changes of strategy or instructions. As well, she showed good organization and planning skills in the task related to the reproduction of a complex geometrical shape. Test: Rey figure: reproduction of a complex geometrical shape (immediate copy after memorization).

- After the aforementioned questionnaires Juliette did not encounter any attention issues in her daily life. As well, the tests showed good skills to maintain her attention.
- Juliette needs time to process information in order to use self-control (inhibition).
- Working memory issues are present and affect the processing of verbal information. Juliette needs time and verification of her comprehension.

Laura Sion, neuropsychologist

Juliette BILLAZ: report of neuropsychological assessment

- Comparison score: ns 8
- Errors: ns 9

- Rey figure: copy pc 25 / memory: pc 50

Language test's scores	
<ul style="list-style-type: none">• CMS:<ul style="list-style-type: none">○ Stories<ul style="list-style-type: none">▪ Immediate recall: ns 4▪ Different recall: ns 4▪ Reconnaissance: ns 3○ List of words:<ul style="list-style-type: none">▪ Learning: ns 15▪ Different recall: ns 7▪ Different reconnaissance: ns 7○ Sequences: ns 7	
<ul style="list-style-type: none">• <u>NEPSY 2:</u><ul style="list-style-type: none">○ Phonological processes: ns 7○ Quick denomination: ns 9	

INTERPRETATION OF RESULTS

Average of standard scores (NS) = 10 (+/-3)

Percentile (pc): within the average, between the 25th and 75th percentile

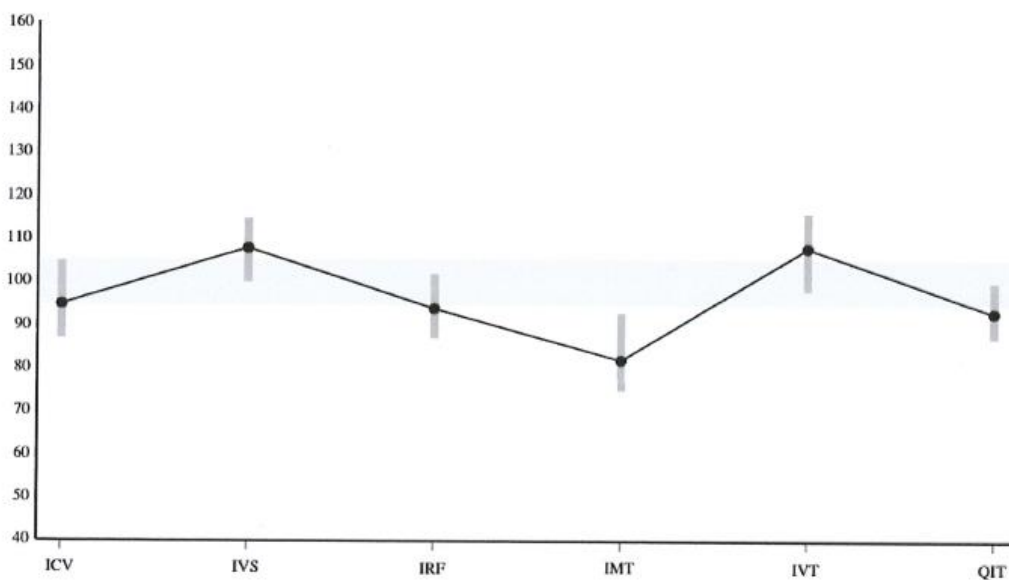
Scores of WISC V

- Figure 1: Composite scores in tasks**

Average between 80 and 120

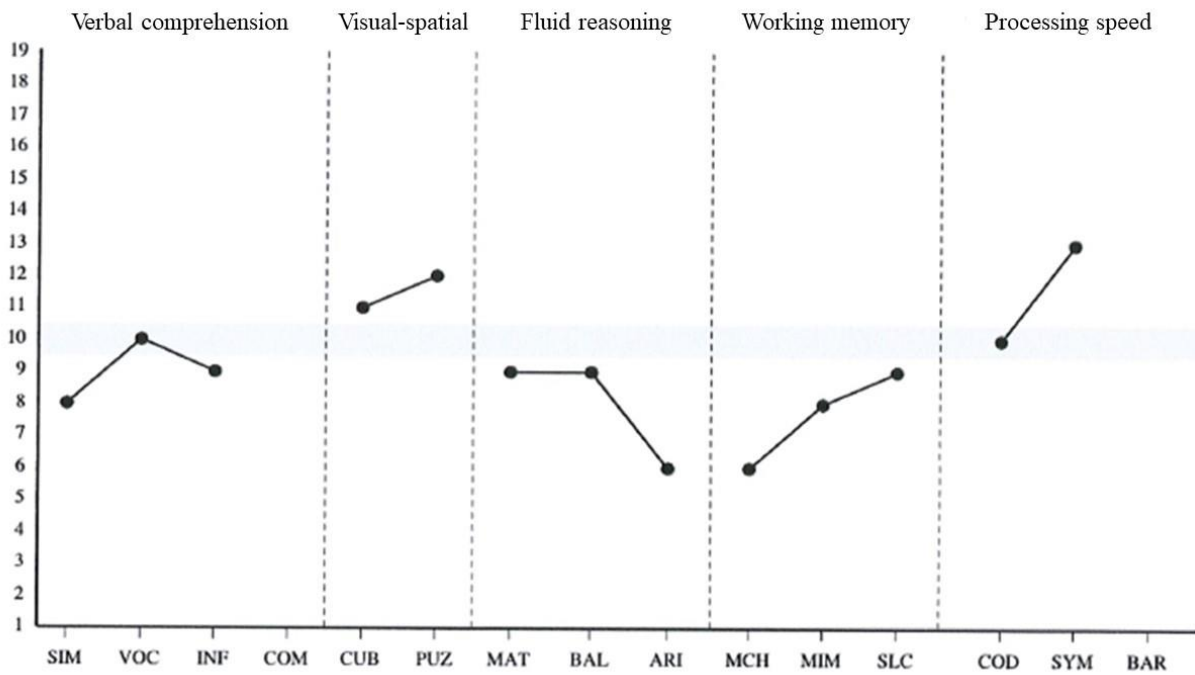
Composite		Sum of standard scores	Composite score	Percentile rank	Confidence interval	Qualitative description
Verbal comprehension	ICV	18	95	37	87-105	Average
Visual-spatial	IVS	23	108	70	100-115	Average
Fluid reasoning	IRF	18	94	34	87-102	Average
Working memory	IMT	14	82	12	75-93	Below average
Processing speed	IVT	23	108	70	98-116	Average
Global scale	QIT	63	93	32	87-100	Average

- Figure 2: graphic of index scores**



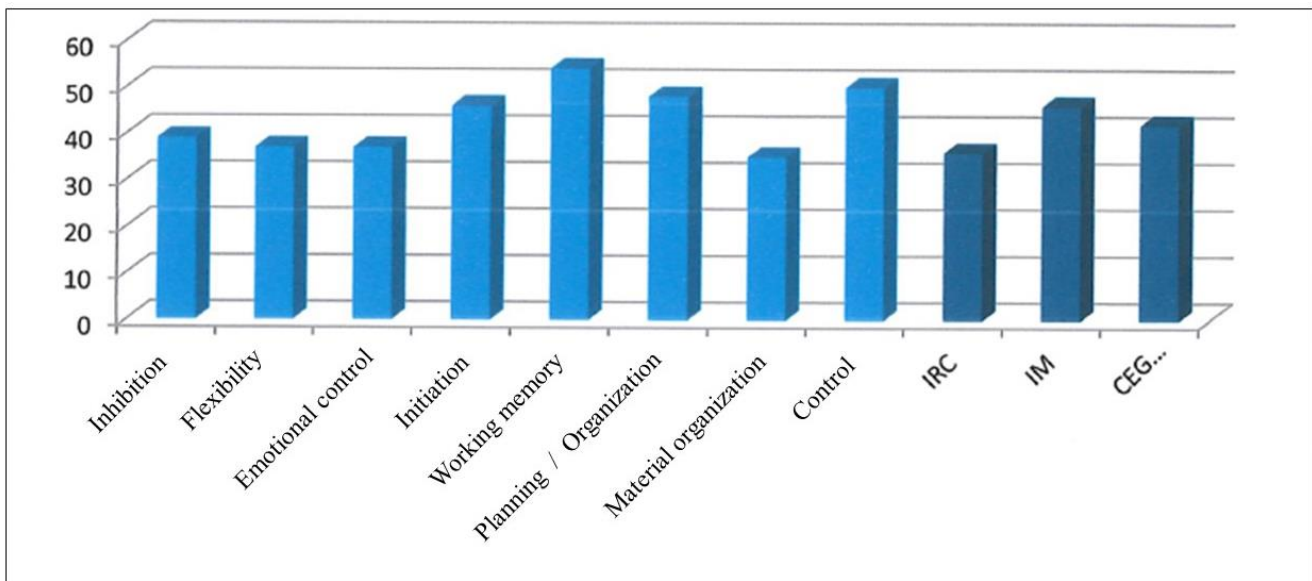
- Figure 3: graphic of standard scores in IQ tests**

Average of standard scores = 10 (+/-3)



Scores in attention tests

BRIEF PARENTS: the score $T > 65$ is considered as a significant difficulty.



- **Nepsy II:**
 - **Auditive attention:** NS 12 (pc errors: commission: 51.75/omission: 51.75 / inhibition: 26.50). Scaled score: 12
 - **Response association:** NS 12 (pc errors: commission: 26.50/omission: 11.25 / inhibition: 51.75). Scaled score: 6
 - **Comparison score:** ns 4
 - **Inhibition:**
 - Denomination: ns 8 (errors pc: 51.75/ corrected: 51.75/ total: 26.50). Scaled score: ns 8
 - Inhibition: ns 6 (errors pc: 26.50) Scaled score: ns 7
 - Comparison score: ns 7
 - Change: ns 9 (errors pc: 51.75/ corrected: 26.50 / total:26.50) Scaled score: ns 8