**Neuropsychological Report**

Institution Affiliation

Student Name

Professor

Course

Date

**Neuropsychological Report**

**D.O.B: 8/9/2013**

**AGE: 10 Years 1 Month**

**DATE SEEN: October 2023**

**SCHOOL & GRADE: Parkville Primary School, Year 4**

**Background Information**

Riley is a 10-year-old child studying at Parkville Primary School, Melbourne. He is currently in year 4. His parents, Mr. and Mrs. S, have stable jobs where his father works as a freelance graphic designer, whereas his mother works with a non-profit organization. Since his birth, Riley has never had any serious medical conditions except when he was hospitalized two years ago after getting involved in a road accident. Although he escaped with minor injuries, including bruises on the head and face and a broken arm, he suffered a concussion and a brief loss of consciousness. Through the support of his parents, who live together, he fully recovered from the accident.

Riley’s parents and teacher noticed some neuropsychological issues with the child, leading to this assessment. Although the medical report indicates that Riley was born during a normal pregnancy, his parents point out that he was a poor sleeper as a baby. Besides, he exhibited high activity levels and was fearless in childhood. This is one notable abnormality observed by Riley’s parents. In a similar context, he has also shown signs of poor concentration and a need for constant attention at school and home.

Additionally, the parent report suggests that he seems not to comprehend the consequences of his actions on several occasions. As a result, he is usually under the supervision of an adult. Apart from these shortcomings, the parent's report suggests that one of Riley's strengths is his fascination with airplanes. His interest in airplanes has made him gain significant knowledge of various airplane models and makes, from vintage to modern ones.

On the flip side, Riley's teacher report defines Riley as a disruptive child with difficulties sitting still. The teacher states that, in several instances, Riley tends not to conform to established classroom expectations. His inability to conform to established classroom expectations has contributed to some literacy difficulties, including the inability to effectively complete the assigned tasks unless closely supervised by the teacher. Nonetheless, the teacher notes that Riley is among the bright students in the classroom. Additionally, regarding Riley's overall social development, the teacher's report pointed out some concerns. One of Riley's major social problems is picking up on his peers' social cues. For instance, he would say socially inappropriate and offensive things to his peers. Despite doing this, he does not seem to notice the effects of his behavior on his peers. Generally, this has affected his friendships and relationships with his peers at school.

**Assessment and Presentation**

Riley’s neuropsychological assessment involved his parents and teacher. Most parts of the assessment flowed smoothly, with a little disturbance from the respondents. Throughout the assessment, Riley was polite and presented himself as a cooperative and polite child. As a result, he showed impeccable cooperation, with a motivation to complete his tasks effectively. Unexpectedly, Riley was not only pleasant and kind while responding to questions but also able to sit still through the presentation and complete most of the tasks comfortably.

However, near the presentation's end, Riley appeared to become fidgety and inattentive. It was during this period that we started evaluating his attention skills. To complete the assessment, we had to provide him with the required support and redirect his focus to complete the tasks effectively. Although Riley was remarkably distracted when dealing with tasks that entailed active listening, he generally showcased a positive attitude toward the exercise. He showcased his willingness to participate in the assessment despite losing focus towards the end. Overall, Riley's ability to maintain good attention in most parts of the assessment was exceptional.

**Test Data**

The following are the test results from the assessment. Under the WISC-4, the verbal comprehension Index was 105, the Perceptual Reasoning Index 113, the Working Memory Index 92, the Processing Speed Index 88 and the Full-Scale IQ of 101.

**Table 1: WISC-4 Results**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| IQ/WISC | Verbal Comprehension Index | Perceptual Reasoning | Working Memory Index | Processing speed index | Full-Scale IQ |
| Above 120 - Superior |  |  |  |  |  |
| 110-119 - High Average |  | 113 |  |  |  |
| 90-109 - Average | 105 |  | 92 |  | 101 |
| 80-89 - Low Average |  |  |  | 88 |  |
| 79 – Below Average |  |  |  |  |  |

**Table 2: Standard Measures and Classification Table (Memory, Attention and Executive Function)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Standard  Scores and  Classifications | Design Memory Immediate Recall | Design Memory Delayed Recall | Verbal Learning Immediate Recall | Verbal Learning Delayed Recall | Trail Making A time | Trail Making B time | Block Span Total Score | Contingency Naming Time | Contingency Naming Errors |
| Above 15 – Superior |  |  |  |  |  |  |  |  |  |
| 13-14 –  High Average |  |  |  |  |  |  |  |  |  |
| 8-12  Average | 12 | 10 |  |  | 8 |  |  |  |  |
| 6-7  Low Average |  |  | 7 | 6 |  |  | 7 | 6 |  |
| 5  Below Average |  |  |  |  |  | 5 |  |  | 5 |
|  |  |  |  |  |  |  |  |  |  |

**Table 3: Behavior Rating Inventory of Executive Function (BRIEF – Riley’s parents)**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BRIEF  Scores and Classification ns | Inhibit | Shift | Emotional control | Initiate | Working memory | Plan | Org of materials | Monitor | Behavioral Index | Metacognition Index | Global Executive Composite |
| Above 65- Clinically Significant | 67 | 69 |  |  | 69 | 70 | 71 | 72 | 67 | 70 | 69 |
| 55-64-  Sub-clinical |  |  |  |  |  |  |  |  |  |  |  |
| Below 55- Average |  |  | 53 | 51 |  |  |  |  |  |  |  |

**Table 4: Behavior Rating Inventory of Executive Function (BRIEF – Riley’s Teacher)**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BRIEF  Scores and Classification ns | Inhibit | Shift | Emotional control | Initiate | Working memory | Plan | Org of materials | Monitor | Behavioral Index | Metacognition Index | Global Executive Composite |
| Above 65- Clinically Significant | 75 | 66 | 66 |  | 72 | 77 | 70 | 73 | 71 | 73 | 72 |
| 55-64-  Sub-clinical |  |  |  |  |  |  |  |  |  |  |  |
| Below 55- Average |  |  |  | 49 |  |  |  |  |  |  |  |

**Table 5: Strengths and Difficulties Questionnaire (Riley’s mother)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Results** | **Score** | **Normative Range** | **Comments** |
| Total Score | 15 | 0 – 13 | Borderline |
| Emotional Symptoms Scale | 1 | 0-3 | Normal |
| Conduct Problems Scale | 3 | 0-2 | Borderline |
| Hyperactivity Scale | 8 | 0-5 | Abnormal |
| Peer Problems Scale | 3 | 0-2 | Borderline |
| Pro-social Scale | 7 | 6-10 | Normal |

**Results**

1. **Attention Skills**

Based on the presented data, it is evident that Riley's sustained attention level is below the normative range of his age mates. Riley can only sustain attention for a short while as his attention on auditory declines as he continues listening. Ideally, the limited attention level places Riley at risk of missing out on important information at home and in school.

There are possible interventions that can help Riley cope with the poor attention span he exhibits. One possible intervention is practicing positive reinforcement, especially in the classroom. In this case, Riley's teachers can reward him with praise and other forms of rewards for sustained attention. Besides, adopting an individualized education plan can help Riley cope with a poor attention span. Through this plan, Riley's parents can work with his teachers and create a plan that incorporates extended time for assignments, preferential seating position as well as assistive technology. For instance, Riley can be made to sit close to the teacher to limit the effects of a lower attention span. Riley's parents should also seek professional support for the child. He can be subjected to a cognitive training program. These programs, guided by professionals, can help improve Riley's attention skills.

**2. Memory Skills**

Based on the test results, Riley’s visual memory abilities are advanced. Indeed, this showcases one of the areas of strength for Riley. For instance, Riley has a score of 12 in the Design Memory Immediate Recall. Although this is an average score, it indicates that Riley can remember slightly above Average what he sees. Similarly, the Design Memory Delayed Recall is 10, which is also on average. However, the test results indicate that Riley has poor verbal memory recall. Riley's Verbal Learning Immediate Recall score is seven, and the Verbal Learning Delayed Recall score is 6. These test results are below average, indicating Riley has poor verbal memory recall. The challenges with verbal memory recall can be limited by encouraging Riley to have enough sleep and engage in regular reading and exercises to stimulate his brain.

**3. Executive skills**

Riley's executive tests were analyzed based on the questionnaires and qualitative observations. In reference to the normative range, Riley's executive skulls were average. For instance, his parents' executive function scores were above Average except for the Initiate and Emotional control, which were below average. This was similar to his teacher's executive scores, where only the Initiate was below average. These executive test results illustrate that Riley showcased a relatively better quality in school as compared to when he is around his parents. Additionally, in the strengths and difficulty questionnaire completed by his mother, Riley had a score of 15. This is slightly above the normative Average, indicating that Riley is in the borderline range.

**Formulation**

Riley, a 10-year-old child, presents with challenges in social development and learning. The neuropsychological assessment illustrates that his cognitive abilities are average compared to his peers. Despite showcasing exceptional executive skills, he has a poor score in verbal memory recall. This explains his poor auditory attention, as his parents and teacher mentioned in the preliminary report. Therefore, it is evident that listening to auditory information in class is one of the major challenges that Riley is experiencing. To mitigate this challenge in the future, it will be appropriate for Riley to engage in visual learning that includes visual presentations besides being subjected to an individualized education plan. Additionally, professional help, such as cognitive training, will also be effective in enabling Riley to cope with his poor attention span. Through these viable interventions, Riley can have a relatively easy time at school and home.