The Use of a Standardized Intellectual Assessment to Provide Adapted Intervention for Children on the Autistic Spectrum

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Introduction

The Autism Spectrum Disorder (ASD) figures within the most common neurodevelopmental disorders (Fombonne, 2006, 2010), it affects merely 1% of the population (Fombonne, 2006). ASD is typically characterized by social deficits, communication difficulties, stereotyped and repetitive behaviours and interests. 75% of children with ASD will also present cognitive delays (Rogé, 2003). These intellectual disabilities are diagnosed by using adaptive behaviour scales and cognitive evaluations. In this study, the Wechsler Preschool and Primary Scale of Intelligence, Third Edition (WPPSI-III) was used to measure the intellectual potential of children with ASD and to provide interventions adapted to their needs.

The WPPSI-III includes 14 subtests that provide information on children's verbal abilities (VIQ), non-verbal performance (PIQ), processing speed (PSIQ), general language skills (GL) and intellectual quotient (FSIQ). The results of the assessment allow psychologists to provide better recommendations and interventions that will help children reach their full potential. These can easily be integrated in the context of Applied Behavioural Analysis (ABA).

Objective

This study aims to present specific objectives based on children's strenghts and weaknesses to assure adapted interventions.

Methodology

- **Participants :**

The assessment was administered to 18 children with ASD. The younger version (Group 1) was administered to 5 children (Boys : n=4 ; Girl : n=1) aged between 36 and 44 months. The WPPSI-III for older children (Group 2) was administered to 13 children (Boys : n=11 ; Girls : n=2) aged between 48 and 72 months.

- **Instruments :**

An intellectual assessment (WPPSI-III) was administered to these children.

✔ Group 1 was administered the WPPSI-III for children aged between 2:6-3:11 months ;

✔ Group 2 was administered the WPPSI-III for children aged between 4:0-7:3.

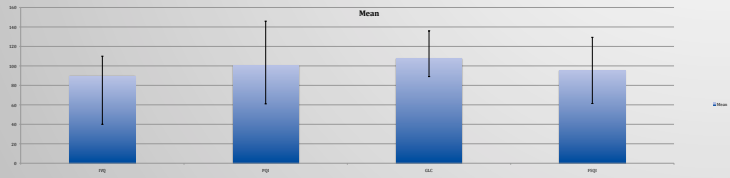
- **Analysis :**

This procedure hasn't been done in a experimental study. Participants were evaluated in order to receive intervention. Data were collected to show how an intellectual assessment can be used to better plan an intervention.

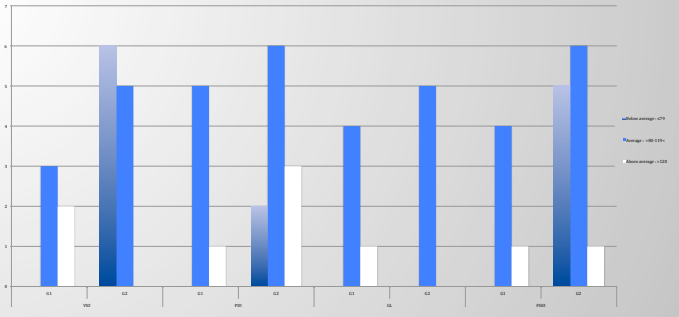
Results

All results

QI	N	Mean	Min	Max
VIQ	15	89,4	15	120
PIQ	18	100,56	61	146
GL	11	107,64	89	136
FSIQ	17	95,18	61	129



Frequencies



In general, the scores are in the average range for both groups except for the verbal scale where G1 obtained higher scores than G2.

Discussion

Verbal IQ

This scale appears to be the most difficult one for children with ASD partly because it requires good communication skills. Younger children obtained better scores than the older ones. This may be due to the increasing complexity of the presented items when comparing the two versions. Expressive language abilities can be improved with ABA by including expressive language programs such as naming pictures in a book or objects in the child's natural environment.

Performance IQ

This scale may be difficult for some children who lack visual and coordination abilities. To promote these abilities, the intervention plan can include block construction and imitation. Also, puzzles can be used and easily integrated at home as part of the generalization program.

Global Language

Children on the autistic spectrum usually succeed on this scale. This is probably due to the fact that it does not require advanced communication skills as children are asked to point to the image that correspond to a word. Incorporating various programs such as receptive and expressive language in the context of ABA therapy will help improve areas of weaknesses while using their strengths.

Full Scale IQ

This scale includes all the subtests. It provides the general IQ of children. It can be used to find out if the child presents cognitive delays. In group 1, four children are in the average range and one is above average. In group 2, five children are below average, six are in the average range and five are above. These results reflect the variations of cognitive profiles in children with ASD and support how important it is to provide early intervention to these children.

Conclusion

It appears that children with ASD have more success in non-verbal performance tasks. However, they show more weaknesses in verbal tasks, even more so when they are expressive ones. The results of these children's cognitive evaluation do correspond to the strengths and weaknesses normally observed in the ASD population. It is important to set objectives based on these results when developing an intervention plan for children following ABA therapy.

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