

**Title:** A Pediatric Eye and Developmental Case Study of a Child with Autism

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**Abstract:**

This case study presents a developmental and visual assessment of a 4-year and 4-month-old male child diagnosed with autism, speech delay, and communication disorder. The patient, R.C.H.V., presented for his first comprehensive pediatric eye and vision examination at the College of Optometry, Manila Central University. The child demonstrated behaviors commonly associated with autism, such as lack of eye contact, fascination with spinning or moving objects, and sensitivity to changes in routine. The clinical assessment incorporated visual behavior evaluation and a detailed developmental milestone analysis across five domains: cognitive, motor, language, self-help, and socialization. The results revealed significantly delayed abilities in all domains, especially in language and cognitive skills. The case emphasizes the critical role of pediatric optometric care in identifying and addressing visual and developmental challenges in children with autism. A comprehensive management plan was created, targeting improvements in visual integration and developmental progression, particularly in language development. This case reinforces the value of early, multi-disciplinary intervention to support the optimal growth of children with developmental disorders.

**Background/Objective:**

Children with autism spectrum disorder often present with developmental delays that impact multiple aspects of functioning, including language, motor coordination, social interaction, and visual processing. R.C.H.V., a 4-year and 4-month-old boy, was brought in for an initial pediatric optometric evaluation due to concerns over poor eye contact, close viewing of screens, and lack of interaction with peers. The child had been previously diagnosed by a developmental pediatrician with autism, speech delay, and communication disorder. The purpose of this case is to document the results of a comprehensive pediatric

vision and developmental milestone assessment to better understand how visual behavior interacts with broader developmental concerns. The objective was to establish a structured plan for the improvement of key developmental domains, with a primary focus on language development related to visual stimuli and behavior.

### **Methods:**

A detailed clinical evaluation was conducted in a pediatric optometric setting. The assessment process included both observational and interactive testing across the domains of visual behavior, motor skills, cognitive skills, language abilities, self-help, and socialization. The child's developmental level was evaluated through a milestone checklist, measuring his ability to perform age-appropriate tasks. Visual responses were recorded during target fixation, light stimulation, and free interaction with the environment. Specific behaviors such as hand-flapping, echolalia, and unusual viewing angles were noted. The assessment also included gathering developmental history from the child's primary guardian and observing his responses to various stimuli in a controlled setting. Physical measurements such as weight, height, and body mass index (BMI) were documented as part of the overall health evaluation.

### **Results:**

The developmental assessment showed that the patient exhibited delayed functioning in all five evaluated domains. He achieved only 12.5% of the expected motor skills, 9.09% of cognitive skills, 7.14% of language skills, 17.39% of self-help skills, and 22.22% of socialization skills. The most significant area of delay was in language development, where the patient was able to perform only 1 out of 14 age-appropriate language tasks. Visually, he demonstrated behaviors consistent with autism, including avoiding direct eye contact, looking at objects sideways, fascination with spinning or reflective items, and sensitivity to light and shadow. His responses during optometric testing revealed difficulty focusing on targets, repeated hand movements, and visual stimming behaviors. These findings suggest a strong correlation between his visual processing behavior and language development deficits, highlighting the importance of integrating visual therapy into his developmental intervention plan.

## **Conclusion & Recommendation:**

This case highlights the importance of early, comprehensive assessments in children with autism to identify not only developmental delays but also how visual behavior affects overall learning and interaction. The patient's most critical developmental need lies in language development, which appears closely linked to his visual sensory behaviors. The recommended course of action includes a tailored developmental program focusing on enhancing language, followed by cognitive, motor, self-help, and socialization domains. Interventions should involve collaboration with speech therapists, occupational therapists, and vision specialists to provide a holistic approach. Continuous follow-up and structured activities based on developmental checklists are essential to ensure steady progress. Given his diagnosis, it is also recommended that the patient's visual behavior be regularly monitored, and optometric interventions be integrated into his individualized education plan (IEP) to support visual integration and learning readiness.

## **Keywords:**

Autism spectrum disorder, pediatric optometry, visual behavior, developmental delay, language impairment, eye contact, sensory integration, early intervention, comprehensive assessment, child development