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Systematic Observation Of A Student With Hearing Impairment And Autism Spectrum Disorder: A Scientific-Analytical Approach

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Abstract: This article presents a scientific analysis of the systematic observation of a student with complex developmental disorders, specifically a combination of hearing impairment and Autism Spectrum Disorder. The study examines the learner’s developmental characteristics, educational needs, and appropriate correctional approaches. The observation was conducted using ADOS-2, CARS-2, PED, surdopedagogical monitoring, and behavioral analysis.

Keywords: ADOS-2, CARS-2, PED, surdopedagogical monitoring, and behavioral analysis.

Introduction: Children with multiple and complex developmental disabilities are individuals who simultaneously present with two or more developmental limitations, where the presence of one impairment significantly influences the manifestation and severity of the others. The combination of hearing impairment and Autism Spectrum Disorder (ASD) can intensify challenges such as reduced social interaction, restricted communication abilities, sensory processing disorders, cerebral palsy–related motor limitations, and behavioral stereotypies.

This article examines how these complex impairments manifest in a specific student and discusses corresponding pedagogical approaches. The study aims to provide a more comprehensive scientific analysis of long-term observations conducted by a special education teacher following the recommendations of the Medical-Pedagogical-Psychological Commission

(MPPC). Through this approach, the goal is to design more effective, individualized, and cognitively oriented instructional strategies that better support the student's educational development.

Purpose of the Study

The goal of this research is to scientifically identify Autism Spectrum Disorder–related characteristics in a student previously diagnosed with hearing impairment, cerebral palsy, and severe speech and cognitive delay. The study seeks to analyze the learner's communicative, social, cognitive, and behavioral developmental dynamics and to determine effective pedagogical strategies for working with such a complex-profile student.

Methods

The following scientific and pedagogical methods were employed during the observation process:

ADOS-2 Diagnostic Assessment – used to identify behavioral indicators associated with Autism Spectrum Disorder.

CARS-2 Rating System – applied to determine the severity level of autism.

Surdopedagogical Monitoring – assessment of residual hearing capacity, responsiveness to sound stimuli, and general audiological functioning. Applied Behavior Analysis (ABA) – evaluation of stereotypy, motivation, and levels of arousal and reactivity. Pedagogical Experimentation – observation of communication indicators and engagement during instructional activities. Video-Based Observation – used to analyze developmental dynamics over time.

Results and Observations

1. Social Interaction

The student prefers self-directed activities over social engagement.

Eye contact is brief, typically lasting only 2–3 seconds.

Shows interest toward familiar adults; however, initiations are rare and inconsistent.

2. Communication

Functional verbal speech is absent or extremely limited. Nonverbal communication is primarily expressed through gestures, hand-leading, or bringing objects to adults. Displays heightened irritability and tends to assert dominance over peers; frequently runs around the classroom. Reacts strongly to disorganized peer behavior or loud auditory stimuli by covering ears, screaming, or hiding under the table.Uses unclear vocalizations to express needs in a minimal and inconsistent manner. Responses to auditory cues (e.g., bells, calls) are delayed or selective.

3. Sensory Characteristics

Episodes of reduced sensitivity to sound were observed. Strong attraction to light sources and visually stimulating objects. Repetitive actions such as shaking, swinging, or manipulating objects with the hands were frequently noted.

4. Cognitive Processes

Performs tasks more effectively when clear visual prompts or structured visual supports are provided. Demonstrates the ability to use objects functionally; however, repetitive behaviors often dominate.Categorization, comparison, and grouping skills remain at an elementary level.

5. Behavior

Engages in stereotypic hand movements as a form of self-regulation.Experiences heightened anxiety when exposed to environmental changes or unpredictable situations.

Responds positively to reinforcement-based behavioral strategies.

Analysis

Findings of the study indicate that the interaction between autism and hearing impairment creates a mutually reinforcing effect that complicates the child's developmental profile. Limitations in hearing reduce opportunities for natural social communication, which in turn exacerbates autistic behavioral patterns and delays. Consequently, traditional surdopedagogical methods or autism-specific interventions alone are insufficient; instead, a comprehensive, integrated, and multidisciplinary approach is required to adequately support children with such complex developmental needs.

Video Observation — to analyze developmental dynamics over time.

2. CARS-2 (Simplified Assessment)

Scoring Criteria:

1 – Normal

2 – Mild Impairment

3 – Moderate Impairment

4 – Severe Impairment

Assessment Results:

Social Relationship – 4

Imitation – 3

Emotional Response – 3

Body Use / Physical Contact – 3

Fear / Anxiety – 2

Type of Play – 3

Level of Speech – 4

Nonverbal Communication – 4

Adaptability of Behavior – 3

Repetitive Behaviors (Stereotypy) – 3

Sensory Sensitivity – 3

Unusual Object Use – 4

Response to Change – 4

Level of Understanding – 3

General Impressions (Specialist's Overall Rating) – 3

CARS-2 Score Interpretation; Total Score: 48

15–29 → No Autism Identified

30–36 → Mild / Moderate Autism

37 and above → Severe Autism

Recommendations and Practical Implications.

Schools and special education professionals should develop an Individualized Education Program (IEP) for students with this profile.

For the learner in this study, the following integrated approach is considered the most effective: "Structured visual instruction + sensory integration exercises + communicative language teaching + behavior management strategies (ABA)."

Conclusion

Choriyev Ulug'bek did not fully demonstrate his developmental characteristics during the examination conducted by the Medical-Pedagogical-Psychological Commission, which resulted in an incomplete identification of Autism Spectrum Disorder indicators. Subsequent classroom observations revealed persistent challenges in social communication and academic engagement, indicating a need for deeper, individualized, and systematically structured intervention.

In collaboration with the family and special educators, the inclusion of ABA therapy is recommended to enhance the effectiveness of instruction and support greater learning progress. This combined multidisciplinary approach is expected to significantly improve the student's developmental and academic outcomes.

References

1. Lord, Catherine, Michael Rutter, Pamela C. DiLavore, and Susan Risi. 2012.Autism Diagnostic Observation Schedule, Second Edition (ADOS-2).Los Angeles: Western Psychological Services.
2. Schopler, Eric, Mary E. Van Bourgondien, Glenna J. Wellman, and Steven R. Love. 2010.Childhood Autism Rating Scale, Second Edition (CARS-2). Los Angeles: Western Psychological Services.
3. American Psychiatric Association. 2013.Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Washington, DC: American Psychiatric Publishing.
4. Lord, Catherine, Somer Bishop Risi, Lauren Lambrecht, et al. 2000. "The Autism Diagnostic Observation Schedule–Generic (ADOS-G)." Journal of Autism and Developmental Disorders. 30 (3): 205–223.
5. Ozonoff, Sally, Beth L. Goodlin-Jones, and Marjorie Solomon. 2005. "Evidence-Based Assessment of Autism Spectrum Disorders in Children and Adolescents." Journal of Clinical Child & Adolescent Psychology 34 (3): 523–540.
6. Gotham, Katherine, Somer Risi, Andrew Pickles, and Catherine Lord. 2007. "The Autism Diagnostic Observation Schedule: Revised Algorithms for Improved Diagnostic Validity." Journal of Autism and Developmental Disorders 37 (4): 613–627.
7. Perry, Adrienne, Rhonda Condillac, Nancy Freeman, Jennifer Dunn-Geier, and Joanne Belair. 2005."Multi-Site Study of the Childhood Autism

Rating Scale (CARS) Reliability." *Journal of Autism and Developmental Disorders 35 (6): 791–803.

8. Мамайчук, И. И. 2019.Психологическая диагностика и коррекция детей с расстройствами аутистического спектра.Санкт-Петербург: Речь.

9. Стребелева, Е. А., and Г. А. Мишина. 2018.Психолого-педагогическая диагностика развития детей раннего и дошкольного возраста. Москва: Просвещение.

10. Fey, Marc E., J. Windsor, and Stephen F. Warren. 1995. "Comparison of Language Assessment Tools for Children with Developmental Delays." American Journal of Speech-Language Pathology 4 (2): 62–76.

11. Autism Speaks. 2022. "Diagnostic Guidelines and Toolkits for ASD." Accessed 2025.

12. Centers for Disease Control and Prevention (CDC). 2023. "Autism Spectrum Disorder (ASD) Clinical Overview." Accessed 2025.

13. World Health Organization. 2022.ICD-11: International Classification of Diseases 11th Revision.Geneva: WHO.