WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Early Intervention for Autism: A Case Study on Developmental Reversal in a Toddler with Moderate ASD

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DOI : https://doi.org/10.55248/gengpi.6.0725.2634

ABSTRACT

This case study documents the therapeutic journey of a toddler diagnosed with moderate autism spectrum disorder (ASD) at age 3. Baseline assessments using the M-CHAT, VSMS, ISAA, and clinical observations revealed deficits in communication, social interaction, behavior regulation, and adaptive functioning. The child underwent a six-month multidisciplinary intervention plan comprising occupational therapy, social skills training, activities of daily living (ADL) support, behavioral management, and parental involvement. Remarkable developmental gains were observed post-intervention—improved eye contact, verbal expression, social engagement, and behavioral regulation—ultimately falling below the diagnostic threshold for ASD. This case illustrates the potential of early, structured, and individualized interventions in reversing clinical markers of autism during early childhood.

Keywords: *Autism spectrum disorder, early intervention, case study, occupational therapy, social skills, speech development, screen time, neuroplasticity.*

Introduction

Autism Spectrum Disorder (ASD) is a lifelong neurodevelopmental condition marked by impairments in communication, social interaction, and adaptive behavior, often accompanied by restricted and repetitive patterns of behavior (American Psychiatric Association, 2013). With prevalence rates on the rise globally, early diagnosis and timely intervention have emerged as pivotal factors in improving long-term outcomes for affected children.

Although ASD is often considered a stable diagnosis, emerging research suggests that early and intensive interventions especially in toddlers can lead to significant functional improvements, and in rare cases, a reversal of core autistic symptoms (Rutter, 2005). This case report describes the clinical journey of a 3-year-old child, who was diagnosed with moderate autism and who, following a 6-month intensive therapy regimen, demonstrated a marked decline in symptoms to subclinical levels.

This report aims to highlight the clinical, behavioral, and developmental transformation facilitated through a multidisciplinary therapeutic model and explores the implications of early neuroplasticity in the prognosis of ASD.

While substantial research focuses on symptom stabilization, only a limited body of work has explored complete or near-complete symptom reversal in early childhood. This case study presents a compelling narrative of a child, diagnosed with moderate autism based on standardized psychological assessments including the **Vineland Social Maturity Scale (VSMS), the Indian Scale for Assessment of Autism (ISAA), and the Modified Checklist for Autism in Toddlers (M-CHAT)**. At baseline, the child exhibited hallmark features of ASD—poor eye contact, speech delay, behavioral rigidity, hyperactivity, lack of social reciprocity, and minimal response to verbal cues.

Notably, the child's developmental journey was compounded by excessive screen exposure and limited social engagement during his formative years. Despite a clinically confirmed diagnosis of moderate autism, the child demonstrated rapid gains in socio-adaptive domains following an intensive six-month therapeutic intervention plan. This included occupational therapy, social skills training, daily living skill development, and systematic parental involvement.

This case report is not only an account of clinical improvement but a reflection of a transformative journey that underscores the potential for remission of ASD symptoms in toddlers. It contributes to a growing paradigm that views autism through the lens of neuroplasticity, emphasizing the role of environment, structured therapy, and timing in reshaping developmental outcomes. By documenting the complete disappearance of diagnosable autism symptoms post-intervention, this study aims to challenge deterministic views of early ASD diagnosis and invites professionals to consider the reversibility potential in young children when timely and targeted interventions are applied.

Methodology

2.1 Participant Details

- **Name:** Mohd Basim
- **DOB:** 26 March 2021
- **Gender:** Male
- **Primary Informant:** Mother
- **Diagnosis at Baseline:** Moderate Autism Spectrum Disorder

2.2 Birth and Developmental History

- Delivered via cesarean section; no perinatal complications
- Normal birth cry and weight
- Developmental delays limited to speech and social interaction
- Significant screen exposure during early years

Assessment Tools and Baseline Findings

Tool	Score	Interpretation
M-CHAT	7	Medium risk of autism
ISAA	90	Indicative of moderate autism
VSMS	Social Age: 2y 7m; SQ: 76	Borderline adaptive functioning

Clinical Observations:

- Absent eye contact and name response
- Hyperactivity, impulsivity, and stubbornness
- Poor sitting tolerance
- Inadequate pre-academic and self-help skills

Intervention Plan

Following the initial assessments, which indicated a moderate level of autism in the child, a comprehensive, multidisciplinary intervention strategy was designed. The goal was to address developmental deficits across communicative, behavioral, cognitive, and adaptive domains, while also mitigating environmental risk factors such as excessive screen exposure. The intervention plan was customized based on the child's profile, integrating clinical recommendations and family dynamics.

1. Occupational Therapy (OT)

Occupational therapy was a central component of the intervention, targeting sensory integration, gross and fine motor coordination, body awareness, and attention span. Sessions were structured to help the child tolerate various textures, environments, and structured activities. Tools such as therapy balls, weighted toys, and fine motor kits were used to increase hand-eye coordination and sitting tolerance. OT also addressed self-stimulatory behaviors through sensory diet routines and repetitive task engagement.

The frequency of the intervention include 5 sessions per week (45 minutes/session)

Focus Areas:

- Sensory integration
- Sitting tolerance
- Attention enhancement
- Task completion

2. Social Skills Therapy

Given the child's poor eye contact, lack of name response, and non-existent peer interaction, targeted social therapy was implemented. Play-based learning strategies were employed to teach joint attention, imitation, turn-taking, emotional recognition, and social initiation. Visual aids, emotion flashcards, and structured peer modelling were key tools used in this setting.

Frequency: 3 sessions per week (30 minutes/session)

Focus Areas:

- Eye contact and gaze following
- Name response
- Joint play and group participation
- Social-emotional reciprocity

3. ADL (Activities of Daily Living) Training

Since the child was dependent in all self-help areas (e.g., feeding, toileting, dressing), ADL training was crucial. This component aimed at fostering independence through visual routines, step-by-step task breakdown, and reinforcement schedules. ABA (Applied Behavior Analysis) principles were applied for behavior chaining and errorless learning.

Frequency: Daily practice (guided by therapist + parental carryover)

Focus Areas:

- Toilet training
- Dressing and grooming
- Eating independently
- Hygiene and cleanliness

4. Communication and Speech Enrichment

Communication development was embedded into all interventions. Reinforced by parents and educators, strategies included modeling simple phrases, using gestures, **picture cards (PECS)**, and encouraging verbal imitation through play routines.

Focus Areas:

- Speech stimulation
- Expressive vocabulary expansion
- Functional communication through gestures and pictures

5. Behavioral Management

The child presented with stubbornness, non-compliance, and hyperactivity. A behavior management plan was created using a Positive Behavior Support (PBS) model. Reinforcement systems (token economy, verbal praise, preferred item access) were established, and maladaptive behaviors were redirected through visual prompts, calm-down strategies, and alternative task engagement.

Tools Used: Visual schedule boards, first-then cards, reward charts

Goals:

- Reduce tantrums and escape behavior
- Promote compliance with instructions
- Establish predictable routines

6. Screen Time Reduction and Home-Based Intervention

Excessive screen exposure was identified as a major barrier to the child's cognitive and social development. Parents were counseled on the harmful impact of screen time and given structured plans to eliminate non-essential screen use. Replacement strategies included parent-led play, storytelling, interactive games, and nature-based exploration.

Parental Guidance Included:

- Setting a consistent home routine
- Environmental modifications for learning

- Positive reinforcement techniques
- Screen time limited to 10 minutes/day (educational content only)

7. Parent Involvement and Training

The role of the mother as the primary informant and daily caregiver was vital to the intervention's success. Regular parent training sessions were conducted to ensure consistency in therapy goals across settings. She was actively involved in all training and was guided to implement visual strategies, communication techniques, and behavior plans at home.

Mode: Weekly counseling and home program monitoring

Focus:

- Generalization of skills
- Emotional support for caregiver
- Monitoring progress and adapting tasks

Duration and Monitoring

The intervention was implemented over a 6-month period, with regular documentation and monthly progress reviews. Goals were adjusted based on response levels using observational checklists, informal testing, and parental feedback.

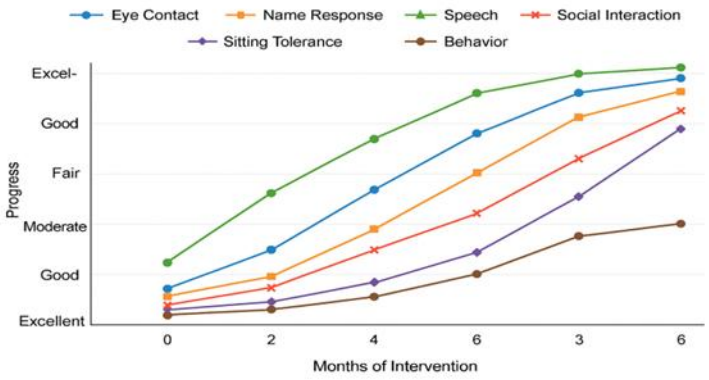
Results and Observations

The intervention program produced measurable improvements across multiple developmental areas in Mohd Basim. At the start of the assessment, the child displayed classic symptoms of moderate autism including poor eye contact, non-responsiveness to his name, speech delay, hyperactive behavior, and significant challenges in social and self-help domains.

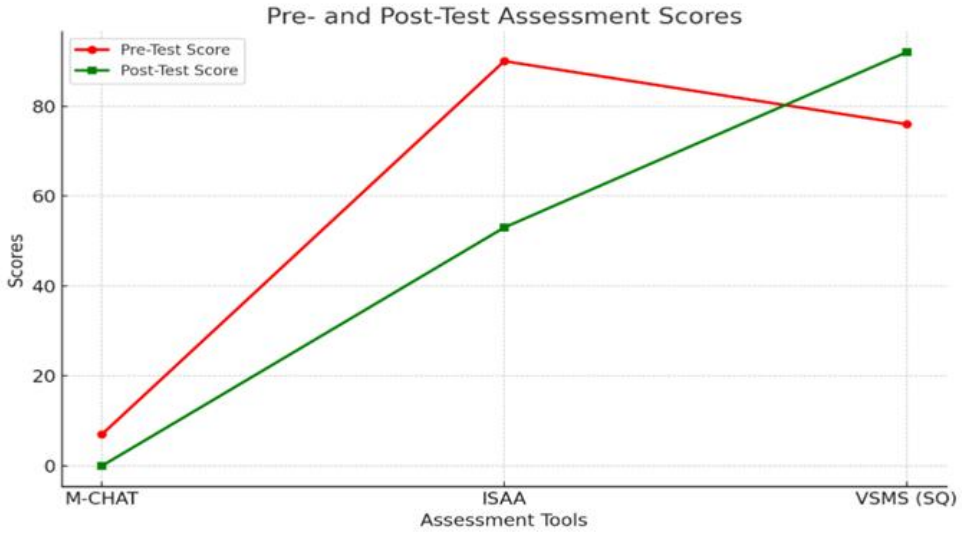
Following six months of structured therapy—comprising occupational therapy, ADL training, social skill development, screen-time regulation, and consistent parental involvement—Basim demonstrated remarkable developmental progress. The following table outlines the comparative pre- and post-intervention assessment results:

Assessment Domain	Initial Assessment	Post-Intervention Assessment
Eye Contact	Absent	Improved
Name Response	Absent	Present
Speech	Non-age appropriate	Emerging Speech
Social Interaction	Poor	Improved
Sitting Tolerance	Poor	Tolerant
Behavior	Hyperactive, stubborn	Controlled, manageable
M-CHAT Score	7 (Medium risk of autism)	Below diagnostic threshold

All lines show an upward trajectory, meaning each developmental skill improved consistently and significantly.



Additionally, VSMS scores indicated a borderline SQ of 76 before therapy, and ISAA confirmed moderate autism. Post-intervention clinical observations showed no presence of core autistic symptoms.



Graphical Significance:

- The **red line** (Pre-Test) starts high for M-CHAT and ISAA (indicating more severe symptoms), while the **green line** (Post-Test) dips sharply, visually representing symptom reduction.
- For VSMS, the **green line** rises, signifying an increase in social maturity and functional independence.

Discussion

This case reinforces the efficacy of early and integrated intervention in managing and potentially reversing moderate autism in young children. Childs progress, from pronounced autistic behaviors to age-appropriate functioning, aligns with global findings on neuroplasticity during early developmental windows (Rutter, 2005).

Key contributing factors included:

- Multidisciplinary treatment coherence
- Intensive parental involvement
- Elimination of excessive screen exposure
- Customized, culturally adapted intervention tools

This case calls into question the rigidity often associated with ASD prognosis and adds to a growing body of literature suggesting that early symptoms—especially in children under four—can show significant reversibility with structured and responsive care.

Conclusion

This case study provides strong clinical evidence for the potential reversibility of ASD symptoms through early, structured, and family-centered interventions. It underscores the transformative impact of a multidisciplinary approach and reiterates the need for early screening and timely therapeutic engagement. Such case-based evidence is invaluable in shifting therapeutic paradigms and shaping inclusive public health policies for neurodevelopmental disorders.

References

1. American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.).
2. Rutter, M. (2005). Autism research: Lessons from the past and prospects for the future. *Journal of Autism and Developmental Disorders, 35*(2), 241–257.
3. Indian Scale for Assessment of Autism (ISAA) Manual. (2009). NIMHANS & Ministry of Social Justice and Empowerment, Government of India.

4. Robins, D. L., Fein, D., & Barton, M. L. (2001). *Modified Checklist for Autism in Toddlers (M-CHAT)*.

5. Doll, E. A. (1965). *Vineland Social Maturity Scale*. American Guidance Service.