



The Impact of Autism Spectrum Disorder on Society: A Perspective Study

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Abstract

Autism Spectrum Disorder (ASD) is a complex neurodevelopmental condition characterized by persistent deficits in social interaction and communication, alongside restricted and repetitive patterns of behavior, interests, or activities. The manifestations of ASD vary significantly among individuals, making it a spectrum disorder with wide-ranging levels of severity and functional impact. This review explores the clinical presentation of ASD, its classification into subtypes, the current understanding of genetic and environmental etiologies, and available interventions. While there is no known cure, early diagnosis and tailored therapeutic approaches have proven effective in improving adaptive functioning and quality of life for individuals with ASD. The paper also addresses emerging perspectives in autism research and advocacy, including the neurodiversity movement and the importance of inclusive support frameworks.

Introduction

Autism Spectrum Disorder (ASD) is one of the most complex and multifaceted neurodevelopmental conditions of the modern era. Over the past few decades, both the prevalence and awareness of autism have increased significantly, prompting greater scientific inquiry, policy development, and public discourse. According to recent global estimates, approximately 1 in 100 children is diagnosed with ASD, though this number varies by region and is likely influenced by increased awareness, broader diagnostic criteria, and better screening tools.

ASD is not a single condition but a spectrum of closely related neurodevelopmental disorders that share common features, particularly in the domains of social communication and behavior. The term "spectrum" underscores the wide variability in symptom presentation, severity, intellectual ability, language development, and adaptive functioning observed among individuals diagnosed with the condition. Some individuals may be nonverbal and require lifelong support, while others may lead fully independent lives and excel in specialized fields such as technology, music, or mathematics.

Clinically, ASD is characterized by persistent challenges in reciprocal social interaction, impairments in verbal and non-verbal communication, restricted interests, and repetitive patterns of behavior. These symptoms typically manifest in early childhood and persist across the lifespan, though their expression may evolve with

age and intervention. Sensory sensitivities—such as extreme responses to sounds, textures, or visual stimuli—are also commonly reported, further affecting daily functioning and quality of life.

The etiology of ASD remains an area of active investigation. Although no single cause has been identified, research points to a complex interplay of genetic predispositions and environmental influences that affect early brain development. Genetic studies have uncovered mutations in several key genes involved in synaptic function and neural signaling, while prenatal and perinatal risk factors—including maternal infections, metabolic conditions, and exposure to environmental toxins—are also believed to contribute to the condition's onset.

Diagnosing ASD requires a careful and multidisciplinary approach, as the symptoms often overlap with other developmental and psychiatric disorders. Standardized tools such as the Autism Diagnostic Observation Schedule (ADOS) and the Autism Diagnostic Interview–Revised (ADI-R) are commonly used to ensure accurate identification. Importantly, early identification followed by timely intervention has been shown to greatly improve developmental outcomes, particularly in language acquisition, social skills, and adaptive behavior.

Despite the absence of a definitive cure, numerous interventions—ranging from behavioral therapy and speech-language therapy to occupational and educational support—have demonstrated efficacy in managing symptoms and enhancing quality of life. In addition, the growing neurodiversity movement is reframing autism as a natural variation in human cognition rather than a disorder to be "fixed," advocating for acceptance, accessibility, and empowerment of autistic individuals.

This review aims to provide a comprehensive overview of Autism Spectrum Disorder by examining its clinical features, subtypes, causes, risk factors, diagnostic approaches, and therapeutic interventions. Furthermore, it highlights the need for a holistic, individualized, and inclusive approach to care, aligned with evolving social perspectives and scientific advancements. In doing so, the article seeks to foster a deeper understanding of autism—not only as a medical condition but also as a unique expression of human diversity.

Clinical Features of Autism Spectrum Disorder

Core Symptoms

ASD is primarily defined by the following core domains:

- **Social communication deficits:** Individuals may have difficulty initiating or maintaining conversations, interpreting facial expressions and body language, and forming peer relationships. Eye contact, gestures, and reciprocal emotional engagement are often limited.
- **Restricted and repetitive behaviors:** These include motor stereotypies (e.g., hand-flapping, rocking),

insistence on sameness, ritualized patterns of behavior, and highly focused interests.

- **Sensory processing differences:** Many individuals exhibit hypersensitivity or hyposensitivity to sensory input such as sounds, lights, textures, or smells.

Developmental Course

Symptoms of ASD typically emerge in the early developmental period. In some cases, children demonstrate developmental delays from infancy, while others appear to develop typically and then experience regression between 18 to 36 months—losing previously acquired language or social skills.

Associated Cognitive and Behavioral Profiles

ASD is associated with a wide range of intellectual functioning. Some individuals exhibit profound intellectual disability, while others possess average or even superior cognitive abilities. Strengths may be observed in areas such as pattern recognition, memory, music, or mathematics, often alongside difficulties in language and executive function.

Subtypes and Diagnostic Classifications

Although the current **DSM-5** (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition) classifies all autism-related conditions under the umbrella of ASD, prior diagnostic frameworks recognized several subtypes, which remain useful in clinical descriptions:

Kanner Syndrome (Classic Autism)

First described by Dr. Leo Kanner in 1943, this subtype is characterized by early-onset language delays, profound social withdrawal, ritualistic behaviors, and strong resistance to change.

Asperger Syndrome

Children and adults with Asperger Syndrome generally do not have delays in language development or intellectual functioning but struggle significantly with social interaction and non-verbal communication. Their speech may be overly formal or pedantic, and they often exhibit restricted interests and repetitive behaviors.

Pervasive Developmental Disorder – Not Otherwise Specified (PDD-NOS)

This diagnosis was previously used for individuals with some but not all features of autism or Asperger Syndrome. These individuals show developmental challenges that do not neatly fit into other diagnostic

categories.

Childhood Disintegrative Disorder (CDD)

A rare and controversial form of ASD, CDD involves normal development for the first two years followed by significant regression in communication, motor skills, and social abilities. Its prevalence is extremely low.

Rett Syndrome

Though no longer classified under ASD in DSM-5, Rett Syndrome is a genetic neurodevelopmental disorder that primarily affects females and includes autism-like features such as social withdrawal, repetitive hand movements, and loss of motor skills. It is linked to mutations in the **MECP2** gene.

Etiology and Risk Factors

Genetic Contributions

ASD has a strong genetic basis. Twin and family studies suggest heritability rates exceeding 80%. Numerous genes have been implicated, including **SHANK3**, **NRXN1**, **CHD8**, and **MECP2**. Some cases are associated with single-gene disorders or chromosomal abnormalities (e.g., Fragile X syndrome, Tuberous Sclerosis).

Environmental Risk Factors

Although genetics play a primary role, environmental influences during prenatal and perinatal periods can also increase the risk of ASD. These include:

- **Maternal infections** (e.g., rubella, cytomegalovirus)
- **Prenatal exposure to teratogens** (e.g., valproic acid, alcohol, pesticides)
- **Maternal metabolic conditions** (e.g., obesity, diabetes)
- **Air pollution and heavy metal exposure**
- **Advanced paternal or maternal age**
- **Fetal growth restriction or preterm birth**

It is important to emphasize that **vaccines do not cause autism**, a myth that has been debunked through extensive scientific research.

Diagnosis and Assessment

ASD is diagnosed based on behavioral observations and developmental history. There are no laboratory or imaging tests for definitive diagnosis. Commonly used tools include:

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- **Autism Diagnostic Observation Schedule (ADOS)**
 - **Autism Diagnostic Interview – Revised (ADI-R)**
 - **Social Communication Questionnaire (SCQ)**

A multidisciplinary team—consisting of pediatricians, psychologists, speech-language pathologists, and occupational therapists—is often involved in assessment and diagnosis.

Intervention Strategies

Behavioral Interventions

- **Applied Behavior Analysis (ABA):** Focuses on reinforcing positive behaviors and reducing challenging ones. Widely used and evidence-based.
- **Early Start Denver Model (ESDM):** Combines ABA with developmental and relationship-based strategies for children under 5.

Educational and Social Interventions

- **Individualized Education Programs (IEPs):** Tailored learning plans for school-aged children.
- **Social Skills Training:** Helps children and adolescents learn appropriate peer interaction.

Speech and Occupational Therapy

- Enhances communication abilities, motor coordination, and adaptive skills.

Pharmacological Treatment

- Medications may be used to manage associated symptoms such as irritability (e.g., risperidone), anxiety, hyperactivity, and sleep disturbances.

Family Support and Counseling

- Parent training and support groups are essential components of holistic autism care.

Role of Multi-disciplinary Intervention

The management of Autism Spectrum Disorder (ASD) benefits most when it is approached through a **multi-disciplinary team (MDT) model**, as no single therapy addresses the full range of challenges associated with the condition. A coordinated effort among healthcare professionals, educators, therapists, and families ensures holistic care tailored to the individual's needs.

Key Components of a Multi-disciplinary Team:

- **Medical Professionals (Pediatricians, Neurologists, Psychiatrists):** Oversee diagnosis, monitor comorbidities, and prescribe medications when required.
- **Psychologists and Behavioral Therapists:** Implement evidence-based behavioral interventions such

as ABA and cognitive-behavioral strategies.

- **Speech-Language Pathologists:** Support development of communication, language, and social reciprocity.
- **Occupational and Physical Therapists:** Address sensory processing issues, motor delays, and functional independence in daily activities.
- **Educators and Special Education Experts:** Develop and adapt Individualized Education Programs (IEPs) that integrate therapeutic goals into academic learning.
- **Social Workers and Counselors:** Provide family support, access to community resources, and advocacy for educational and workplace accommodations.
- **Family and Caregivers:** Actively participate in goal-setting, therapy reinforcement, and long-term support strategies.

Benefits of Multi-disciplinary Intervention:

- Promotes consistency across clinical, educational, and home settings.
- Ensures comprehensive care addressing social, cognitive, behavioral, and functional aspects.
- Reduces caregiver stress by providing structured support networks.
- Enhances long-term outcomes in adaptive functioning, independence, and quality of life.

By leveraging the expertise of diverse professionals, a multi-disciplinary approach maximizes developmental gains and creates a supportive ecosystem for individuals with ASD.

Prognosis and Quality of Life

Outcomes for individuals with ASD vary. While some may require lifelong care, others achieve independence, employment, and strong social relationships. Prognosis is generally better for those who develop language skills by age five, have average or higher IQ, and receive early intensive intervention.

Sociocultural Perspectives and Neurodiversity

The growing **neurodiversity movement** challenges the notion of autism solely as a disorder, instead framing it as a variation in human neurology. Advocates emphasize acceptance, inclusion, and the value of cognitive differences. This has contributed to a shift toward strength-based and person-centered approaches in education, employment, and healthcare.

Conclusion

Autism Spectrum Disorder is a multifactorial condition with diverse presentations and needs. Advances in genetics, neuroscience, and developmental psychology continue to enhance our understanding of ASD. While there is no universal cure, early diagnosis, individualized therapies, and family-centered care are key to improving life outcomes.

As awareness and advocacy efforts grow globally, it is critical to foster inclusive environments that respect neurodiversity and support the full potential of individuals with autism. Future research should focus on bridging gaps in access to care, understanding biological mechanisms, and refining interventions that empower people across the spectrum to lead meaningful lives.

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