

Social Aspects of Making Eye Contact for Children Ages 5-12 with Level 3 Autism Spectrum Disorder



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1 Introduction

Eye contact is an essential element of nonverbal communication, acting as a signal for attention, emotional connection, and social reciprocity. For children aged 5 to 12 years diagnosed with Level 3 Autism Spectrum Disorder (ASD), the ability to initiate and maintain eye contact represents a significant challenge with broad social implications. Level 3 Autism is characterized by severe deficits and the need for substantial support, often manifesting in minimal spontaneous eye contact. Understanding the social aspects of eye contact within this population is imperative for developing effective interventions and fostering social inclusion.

This report examines the **social aspects** underlying mechanisms of eye contact difficulties for this population, considering their social consequences, intervention strategies, and ethical considerations related to promoting eye gaze behaviors in children with severe autism. Emphasis is placed on evidence-based strategies informed by current research and expert consensus, incorporating at least ten peer-reviewed and reputable references from recent publications with reliable links for further information.

2 Understanding Autism Level 3 and Challenges of Making Eye Contact

The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), categorizes autism spectrum disorder severity into three levels, with Level 3 representing the highest support needs, significant communication impairments, and restricted, repetitive behaviors that interfere with daily functioning (American Psychiatric Association, 2022). These challenges often extend to making eye contact, a complex social skill involving attention regulation, sensory processing, social understanding, and communication (Sotgiu et al., 2025).



Research indicates that children with autism experience considerable difficulties with eye contact compared to their typically developing peers, with many children with Level 3 autism showing minimal or inconsistent eye gaze well beyond early childhood. For these children, establishing and maintaining eye contact can remain significantly delayed or limited into middle childhood and beyond, influencing their social interactions and opportunities for inclusion (Sabatos-DeVito et al., 2016).

The complexity lies in the fact that making eye contact requires not only the ability to visually attend to another person but also to navigate the social nuances of communication, emotional exchange, and interpersonal engagement, areas that are often challenging for children with severe autism. Sensory sensitivities and anxiety related to direct gaze further complicate this foundational social behavior (Sabatos-DeVito et al., 2016).

3 The Role of Eye Contact in Social Communication

3.1 Social Development and Eye Contact

Eye contact plays a multifaceted and foundational role in typical social development, acting as a critical mechanism for establishing shared attention and facilitating social learning during early childhood. Recent longitudinal eye-tracking studies confirm that attention to social information, particularly faces and eyes, influences the trajectory of children's socialization and communication skills (Dalrymple et al., 2018). Shared gaze, or joint attention, wherein individuals coordinate their focus on a common object or event, is essential for language learning, social bonding, and emotional exchange in neurotypical development.

Eye contact provides real-time cues regarding others' attentional focus, emotional states, and intentions, modulating social cognition and guiding interpersonal interactions. Infants demonstrate sensitivity to eye gaze within the first months of life, preferring direct gaze and engaging in mutual eye contact that supports early identity and facial expression recognition. Over early childhood, dynamic eye gaze patterns contribute significantly to the development of turn-taking skills in conversation, enhance face processing abilities, and foster the emergence of theory of mind, which is the capacity to attribute mental states to oneself and others (Peterson & Slaughter, 2025).



Recent research emphasizes that the frequency, quality, and context of eye contact during social interactions strengthen interpersonal bonds and accelerate social-cognitive growth. Disruptions or reductions in typical eye gaze patterns are associated with delays or differences in social development, underscoring eye contact as a pivotal component of early social learning and relationship building (Çetinçelik et al., 2021).

3.2 Social Norms and Making Eye Contact

Making eye contact is a pivotal source of social information that facilitates the interpretation of facial expressions, emotional states, and mental intentions. The social consequences of diminished eye contact in children with autism extend well beyond difficulties in nonverbal communication. Reduced or atypical eye contact hampers the recognition and appropriate response to social cues, contributing to challenges in social reciprocity and relationship building. Children with decreased eye fixation on the eyes often exhibit higher social impairment and face difficulties in forming and sustaining peer relationships, which can contribute to social isolation (American Psychiatric Association, 2022)

3.3 Social Misunderstanding of Atypical Eye Contact

In naturalistic social environments, reduced eye contact is frequently misunderstood by peers, educators, and caregivers as inattentiveness, disinterest, or defiance. Such misattributions can lead to stigmatization, exclusion, and negative social judgments, reinforcing a cycle of isolation and emotional distress. Children who do not engage in typical eye contact patterns often struggle with social reciprocity and may experience challenges in forming friendships or maintaining peer relationships. Recent research suggests that these eye gaze patterns are part of autism's heterogeneous behavioral phenotype rather than voluntary social disengagement (Sotgiu et al., 2025).

3.4 Reducing Misunderstandings for Meaningful Engagement

Understanding that atypical eye contact represents a difference rather than a deficit is critical to fostering empathy and recalibrating social expectations. Interventions that acknowledge these differences and incorporate broad social communicative cues, such as gestures and vocal tone, can create more inclusive social contexts that reduce misunderstandings and support meaningful engagement. Cultivating such awareness is vital for improving social participation and emotional well-being among children with autism.



4 Processing Differences and Environmental Factors

4.1 Sensory Sensitivities Impacting Making Eye Contact

Children with Level 3 Autism face profound difficulties with eye contact stemming from neurobiological, sensory, and cognitive factors. Neuroimaging studies reveal atypical functioning of the amygdala and disrupted connectivity in the social brain network, including regions critical for face processing (Sabatos-DeVito et al., 2016; Sotgiu et al., 2025). These neurological differences result in heightened sensory sensitivity, making direct eye gaze feel overwhelming or aversive, leading to gaze avoidance behaviors.

4.2 Socially Demanding Environments

Children with severe autism frequently exhibit reduced fixation on the eye region during social interactions, which correlates with higher autism severity as indexed by some clinical assessments (Ahn et al., 2024). The avoidance of eye contact may also serve as a coping mechanism for managing anxiety or sensory overload in socially demanding environments.

4.3 Social Motivation and Communication

Cognitive impairments inherent in Level 3 Autism significantly complicate eye gaze behaviors by affecting social motivation and communication abilities. Children with severe autism often experience heightened sensory and cognitive load, making typical social cues like eye contact overwhelming or stressful rather than instinctive or rewarding. This can result in reduced spontaneous initiation or response to eye contact during social interactions, driven partly by difficulties in processing and interpreting social information (Bagherzadeh-Azbari et al., 2022).

Moreover, impairments in theory of mind and joint attention further diminish the natural social reinforcement from eye gaze, limiting engagement in reciprocal communication. Consequently, these cognitive challenges exacerbate eye contact avoidance and hinder the development of effective social interaction skills in children with Level 3 Autism (American Psychiatric Association, 2022)

5 Intervention Strategies to Improve Making Eye Contact

Several evidence-based interventions aim to enhance eye contact among children with Autism, including those with severe symptoms. Behavioral approaches such as discrete trial training and shaping have been



effective in incrementally increasing eye gaze duration by reinforcing small approximations of eye contact. These methods focus on positive reinforcement without coercion, gradually building the child's comfort and skills (Valori et al., 2022)

Naturalistic developmental behavioral interventions (NDBIs) integrate teaching moments into play and everyday activities to encourage spontaneous eye contact. These approaches emphasize the child's interests and motivation, promoting generalization of skills beyond structured settings. Incorporating the child's emotional state and avoiding pressure are key to preventing adverse reactions while fostering meaningful engagement (Frost & Ingersoll, 2025; Pope et al., 2025).

Technological advancements have introduced promising supplemental tools like eye-tracking devices and virtual reality environments that provide controlled, engaging spaces for practicing eye contact, potentially increasing motivation and reducing anxiety.

6 The Social Context of Making Eye Contact: Families, Carers and Educators

6.1 Prioritizing The Child's Comfort

Contemporary perspectives encourage families, carers and educators to set flexible goals that prioritize the child's comfort and communicative intent over rigid adherence to neurotypical norms. Emphasizing functional communication, whether via eye contact, gestures, vocalizations, or assistive technology, aligns better with fostering autonomy and dignity (Frost & Ingersoll, 2025).

6.2 Adapting Environments and Expectations

Supporting children with Level 3 Autism in developing social communication involves adapting environments and expectations. Creating low-sensory settings helps reduce overload and facilitates more natural social engagement. Visual supports including pictorial schedules, social stories, and gestures can clarify expectations and make social rules around eye contact more accessible.

6.3 Adaptive Teaching

Families, carers and educators should recognize and validate alternative expressions of attention or interest, such as vocalizations or body orientation, and adapt teaching strategies accordingly. Positive reinforcement for any social engagement fosters motivation without creating pressure or anxiety (Moore et al., 2022).



6.4 Positive Reinforcement and Token Economies

Reward systems tailored to individual preferences encourage motivation. Tokens, sticker charts, or favorite activities serve as immediate positive feedback for improved eye contact behaviors, helping children associate this way of communicating socially with pleasurable outcomes (Hollocks et al., 2023; Moore et al., 2022).

6.5 Augmentative and Alternative Communication (AAC)

For children with limited speech, using AAC methods such as PECS or communication apps is essential for improving social communication related to making eye contact. These tools reduce frustration by providing alternative ways to initiate or respond to social cues, helping children develop socially acceptable communication behaviors and facilitating more meaningful interpersonal interactions (Alvari et al., 2021; Valori et al., 2021)

7 Collaboration with Educators and Therapists

Interdisciplinary teams including occupational therapists, speech-language pathologists, behavior analysts, and educators collaborate to tailor interventions, address sensory concerns, and build social understanding. Education plans often incorporate goals for making eye contact integrated with social skill development.

8 Challenges and Future Directions

8.1 Ethical Approaches to Making Eye Contact

While improving eye contact offers social benefits, ethical concerns highlight the need for individualized and respectful approaches. Forced eye contact may cause distress, reduce communication effectiveness, or damage rapport between child and caregiver (Oerbeck et al., 2021). Autistic self-advocates often describe eye contact as exhausting or intrusive, advocating for acceptance of alternative communication methods.

8.2 Emotional Regulation

Making Eye Contact often can provoke fatigue, anxiety and emotional dysregulation. Children with autism may have difficulty identifying and managing emotions associated with social cues or changes in routine.



Integrative strategies that include calming techniques, visual schedules, and social stories can reduce emotional distress.

8.3 Complexity, Gaps and Overcoming Barriers

Making eye contact remains a complex challenge for children with Level 3 Autism, with several key barriers impacting intervention success. Access to specialized support is often limited for families living in underserved or rural regions, restricting consistent treatment opportunities. Sensory sensitivities and diverse communication needs vary widely within this population, necessitating highly individualized approaches rather than standardized interventions.

Furthermore, sustaining gains in eye contact and broader social integration requires long-term follow-up and resource allocation, which can be difficult to maintain over time. Research also highlights gaps, including a lack of large-scale, controlled studies examining the ecological validity and durability of eye contact interventions, underscoring the need for further rigorous investigation and development of personalized, context-sensitive treatment protocols.

Table: Social Aspects Influencing Eye Contact in Children with Level 3 Autism

Social Aspect	Description	Intervention/Support Strategies
Social communication deficits	Difficulty using and reading gaze to start, sustain, or shift interaction and turn-taking.	Model “eyes-near” (nose/forehead), use joint-attention games, visuals/AAC to signal starts and turns.
Reduced social motivation	Faces/eyes feel less intrinsically rewarding; attention prefers objects or tasks.	Child-led play, brief trials, individualised reinforcement, peer-mediated practice.
Sensory sensitivities	Direct gaze can feel intense/aversive; busy settings amplify overload.	Offer “eyes-near,” dim noise/light, graded exposure, short look-then-break routines.
Family and caregiver factors	Pressure to “look at me” raises stress; expectations differ across adults.	Align goals and prompts; coach consent-centred supports (“faces give clues”); use Social Stories™.



Behavioral resistance	Avoids gaze when demands are high; if maintained, avoidance may develop.	Shaping with tiny steps, choices and timers; embed in natural routines; never force.
Emotional regulation	Direct gaze increases arousal or anxiety, reducing availability for engagement.	Co-regulation, calming scripts, predictable cues, visual supports, opt-out/look-away options.
Social inclusion	Atypical gaze is misread as disinterest, limiting participation and belonging.	Educate peers/staff that attention is not equal to staring; accept alternatives (head turn/pointing); praise comfortable gaze.

9 Conclusion

Eye contact is a multifaceted social behavior vital for typical interpersonal communication, but it poses significant challenges for children aged 5 to 12 with Level 3 Autism. Neurological differences, sensory sensitivities, and anxiety contribute to difficulties in spontaneous eye gaze, impacting social understanding and relationships. While behavioral and developmental interventions have demonstrated efficacy in supporting eye contact skills, approaches must be ethically grounded, prioritizing the child’s comfort and communication preferences. Inclusive practices that honor neurodiversity and promote a range of social expressions will best support these children’s social development and wellbeing.

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