

Prosopagnosia Across the Neurodiversity Spectrum

Cognitive foundations, autistic lived experience and implications for social care stability

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Abstract

Prosopagnosia, or face blindness, is a neurological or developmental condition characterised by impaired facial recognition. Although widely studied in cognitive neuroscience, its impact on autistic individuals, particularly those with higher support needs remains underexamined. This brief report synthesises current research on developmental and acquired prosopagnosia, outlines its neuroanatomical basis, and integrates first-person autistic accounts to illuminate the lived experience of face blindness.

Special attention is given to autistic individuals with greater dependency needs who rely on social care services, where prosopagnosia can significantly disrupt routine, increase distress, and contribute to placement instability or breakdown. Findings indicate that prosopagnosia is not merely a perceptual deficit but a social care vulnerability that requires targeted accommodations. Recommendations for practice include consistent staffing, visual identity supports, and training for care teams. Understanding prosopagnosia within the context of neurodiversity and social care is essential for improving outcomes and preventing avoidable crises.

Keywords: prosopagnosia, face blindness, autism, neurodiversity, social care, placement breakdown, developmental prosopagnosia, lived experience, cognitive neuroscience.

1. Introduction

Prosopagnosia is defined as:

“An impaired or absent ability to recognise faces”

Historically considered rare, recent research suggests it affects up to 2.5% of the general population, with significantly higher prevalence among autistic individuals. Despite growing awareness, the condition remains under-recognised in social care contexts, where its impact can be profound, particularly for autistic people with greater dependency needs, who rely on consistent care and support. This briefing integrates neuroscientific research, psychological studies, and autistic lived experience to provide a greater understanding of prosopagnosia and its implications for care environments.

2. Types of Prosopagnosia

Prosopagnosia has two forms. These are:

2.1 Developmental Prosopagnosia (Congenital)

Developmental prosopagnosia (DP) is the most common in neurodivergent populations and emerges without brain injury and often has a familial pattern. Research indicates that DP may be linked to atypical development of face-processing networks, with some individuals reporting lifelong difficulty recognising even close family members. One study found that *“35% reported being unable to reliably recognise their immediate family members out of context”*, highlighting the severity of condition.

2.2 Acquired Prosopagnosia

Acquired prosopagnosia follows neurological events such as stroke, traumatic brain injury, encephalitis, or neurodegenerative disease. A cohort study of 326 cases found 72.1% degenerative and 27.9% non-degenerative causes. Degenerative causes include posterior cortical atrophy and Alzheimer’s disease, while non-degenerative causes include infarcts, epilepsy, and tumours.

3. Neurological Basis

Neuroimaging consistently implicates the right fusiform gyrus, a region specialised for face perception. Oxford Academic reports that prosopagnosia *“has been linked to involvement of the fusiform gyri, mainly in the right hemisphere.”* PET and MRI studies show that degenerative cases often involve the temporal lobes, while non-degenerative cases frequently show focal lesions in the right temporal and occipital lobes. These findings support a distributed neural network for face recognition.

4. Prosopagnosia and Autism

4.1 Prevalence and Overlap

Autistic individuals report significantly more prosopagnosia traits. Some studies estimate that over one-third of autistic adults may meet criteria for face blindness. Conversely, individuals with DP often report elevated autistic features, suggesting overlapping cognitive profiles.

4.2 Heterogeneity in Autistic Face Processing

A 2023 study found that autistic face-processing differences form a continuous spectrum, not a distinct subtype. The authors note:

“ASD observers show a continuous and graded... heterogeneity that span a range of face processing skills including many with mild to moderate deficits.”

This suggests that prosopagnosia in autism reflects broader perceptual variability rather than a discrete category.

5. Autistic Lived Experience of Prosopagnosia

Autistic individuals frequently describe prosopagnosia as socially disruptive and emotionally taxing.

Here we pause to consider a case study within the workplace:

Jordan works as a data analyst in a busy office. He is autistic and has developmental prosopagnosia, which means he cannot reliably recognise faces, even those of people he sees every day. When he arrives at work each morning, he walks through the open-plan floor and sees colleagues chatting, moving between desks, and preparing for the day. Their faces blur into a set of features he cannot anchor to specific identities. He relies heavily on context, who usually sits where, what someone typically wears, or the sound of their voice, to figure out who is who.

One morning, as he is settling in, a colleague approaches him with a friendly “Morning, Jordan! Did you get a chance to look at the report?” Jordan’s mind goes blank. He recognises the voice as familiar, but he cannot place it. He glances at the person’s clothing, hoping for a clue, but it’s a generic office outfit that tells him nothing. He tries to respond without revealing his uncertainty, giving a neutral answer that he hopes fits the situation. Only when the colleague walks back toward a particular desk does Jordan realise it was Priya, someone he works with regularly. He feels a wave of frustration, not at her, but at the constant guessing game he must play.

Later in the day, he attends a meeting with a small project team. Everyone sits in a different seat than usual, which immediately throws him off. He recognises one person by their distinctive hairstyle, another by their deep voice, but the third person is a complete mystery. When that person begins discussing a task they had supposedly agreed on together last week, Jordan feels a spike of anxiety. He remembers the conversation, but he cannot connect it to the face in front of him. He nods along, hoping his confusion isn’t visible.

Throughout the day, these moments accumulate. Jordan must constantly track voices, clothing, and movement patterns to compensate for his inability to recognise faces. This extra cognitive load makes social interactions more draining than the technical work itself. He often worries that colleagues interpret his hesitation as disinterest or aloofness, when in reality he is working twice as hard just to identify who he is speaking to. For him, the challenge is not social skill but social certainty; something most people take for granted.

By the time he leaves the office, Jordan is mentally exhausted. He has completed his tasks well, but the effort required to navigate the social landscape has taken a toll. Prosopagnosia shapes every interaction he has at work, and because it is invisible, few people realise how much energy it demands. For an autistic person like Jordan, who already relies on predictability and clear cues, the added uncertainty of face blindness makes the workplace a complex and often overwhelming environment.

Jordan’s experiences in the workplace clearly reveal several underlying domain challenges that shape how developmental prosopagnosia and autism affect his daily interactions and overall working life:

Domain	Description of the Challenge
Social-Identity Recognition	Difficulty recognising colleagues’ faces, leading to uncertainty about who he is speaking to and reliance on contextual cues like voice, seating, or clothing.

Domain	Description of the Challenge
Communication and Interaction	Challenges following spontaneous conversations, identifying speakers in meetings, and confidently engaging in discussions due to uncertainty about who is addressing him.
Cognitive Load and Fatigue	Constant mental effort required to track voices, memorise patterns, and compensate for face blindness, resulting in significant daily fatigue.
Predictability and Routine Disruption	Changes in seating, meeting locations, or team arrangements disrupt his ability to identify people and navigate social situations, increasing stress.
Emotional and Psychological Impact	Anxiety about misidentifying colleagues, fear of appearing rude or incompetent, and reduced confidence in collaborative settings.
Task and Workflow Challenges	Difficulty recalling who assigned tasks, knowing who to approach for clarification, and coordinating with colleagues in dynamic environments.
Masking	Continuous effort to hide confusion, compensate for face-recognition difficulties, and appear socially competent, leading to emotional strain, fatigue, and reduced authenticity.

There are adjustments and accommodation that can be made within this example case study. The following recommendations made support Jordan within his workplace:

1. Consistent, Predictable Context Cues:

Jordan relies heavily on context to identify people. Workplaces can support this by keeping certain cues stable.

- ☐ Consistent seating arrangements in meetings or shared spaces
- ☐ Nameplates or desk identifiers that are easy to see
- ☐ Encouraging colleagues to introduce themselves verbally, even briefly ("Hi Jordan, it's Priya"). This reduces the cognitive load of guessing who he's talking to.

2. Communication Adjustments

Small changes in communication style can make a big difference.

- ☐ Colleagues can use their name when approaching him, especially in open-plan spaces
- ☐ Managers can send follow-up emails summarising verbal instructions
- ☐ Team members can announce themselves on calls, even if cameras are on. These adjustments help Jordan anchor interactions without needing facial recognition.

3. Environmental Supports

The workplace can make the environment easier to navigate.

- ☐ Clear signage for rooms, teams, and departments
- ☐ Photo boards with labelled names, ideally with contextual cues (e.g., 'Priya – Data Team – sits by the window')
- ☐ Colour-coded lanyards or badges for different teams. These supports help Jordan identify people and roles without relying on faces.

4. Social and Meeting Accommodations

Prosopagnosia can make social situations unpredictable. Helpful adjustments include:

- ☐ Structured meeting formats where people speak in order or introduce themselves
- ☐ Agendas with attendee lists
- ☐ Allowing Jordan to choose seating that helps him orient himself
- ☐ Avoiding last-minute room or team changes when possible. Predictability reduces anxiety and improves participation.

5. Managerial Support

A supportive manager can make the biggest difference.

- ☐ Regular check-ins to clarify tasks and expectations
- ☐ Permission to ask, "Who is speaking?" without judgement
- ☐ Understanding that hesitation is not disinterest
- ☐ Providing written instructions to supplement verbal ones. This creates psychological safety and reduces the fear of making social mistakes.

6. Optional Assistive Tools

If Jordan is comfortable, he might use:

- Digital calendars with photos and names
- Internal messaging apps with profile pictures and role labels
- Note-taking apps where he can record contextual cues about colleagues. These tools help him build a reliable internal map of his workplace.

7. Workplace Culture Adjustments

The broader team can help by:

- Normalising the idea that not everyone recognises faces easily
- Encouraging clear, direct communication
- Avoiding assumptions that someone is rude or aloof if they don't recognise a colleague. This reduces stigma and makes the environment more inclusive.

8. Emotional and Cognitive Support

Prosopagnosia can be exhausting. Helpful supports include:

- Flexible breaks when social fatigue builds
- Quiet spaces to decompress
- Understanding that social navigation takes extra effort. This helps Jordan manage the cognitive load of the workday.

6. Developmental Prosopagnosia – Functional Impact Assessment (Workplace-Focused)

A workplace screening non-clinical screening tool may help identify patterns of difficulty with face recognition challenges. Here are some self-help questions to consider:

Section 1: Identity Recognition Difficulties

How often do you experience the following?

- I struggle to recognise colleagues unless they speak first.
- I rely on clothing, hairstyle, or context to identify people.
- I often fail to recognise people outside their usual environment (e.g., seeing a colleague in a shop).
- I confuse people who have similar features (hair colour, glasses, height).
- I have difficulty recognising people I interact with regularly.

Response scale: Never / Rarely / Sometimes / Often / Always

Section 2: Social Interaction Challenges

Indicate whether these statements apply to you:

- I avoid greeting people because I'm unsure who they are.
- I feel anxious in group settings because I cannot track who is speaking.
- I hesitate to ask questions because I'm unsure who assigned a task.
- I worry that others think I'm rude or uninterested when I don't recognise them.
- I rely heavily on voices to identify people.

Response scale: Strongly disagree → Strongly agree

Section 3: Workplace Functioning

How often do these situations occur at work?

- I cannot identify colleagues when they change clothing or hairstyle.
- I struggle in meetings when people sit in different places.
- I lose track of who contributed what in discussions.

- I feel overwhelmed in open-plan environments because I cannot identify people quickly.
- I avoid spontaneous conversations due to uncertainty about who I'm speaking to.

Response scale: Never / Rarely / Sometimes / Often / Always

Section 4: Compensatory Strategies

Which of the following strategies do you use regularly?

- Memorising people's walking patterns or posture
- Using distinctive accessories (e.g., glasses, jewellery) to identify people
- Listening for voices before responding
- Waiting for contextual clues before engaging
- Asking others to identify people for me
- Masking confusion to avoid embarrassment

Response options: Never / Occasionally / Frequently / Constantly

Section 5: Emotional and Psychological Impact

How strongly do you relate to the following?

- I feel anxious about misidentifying people.
- I feel embarrassed when I fail to recognise someone.
- I experience social fatigue from trying to keep track of people.
- I worry about being judged negatively because of recognition difficulties.
- These challenges affect my confidence at work.

Response scale: Strongly disagree → Strongly agree

Section 6: Masking and Cognitive Load

Reflect on the following statements:

- I pretend to recognise people even when I don't.
- I use vague language to hide uncertainty about who I'm speaking to.
- I feel mentally drained from constantly compensating for recognition difficulties.
- I rehearse social interactions to avoid mistakes.
- I feel I must work harder than others to appear socially competent.

Response scale: Never / Rarely / Sometimes / Often / Always

Section 7: Impact on Daily Life (Optional)

Beyond work, do you experience:

- Difficulty following films or TV shows because characters look similar
- Trouble recognising neighbours or acquaintances
- Anxiety in social gatherings
- Difficulty recognising people in photographs
- Challenges recognising family members in unexpected contexts

Response scale: Never / Rarely / Sometimes / Often / Always

This tool is intended only as a non-clinical screening framework to help identify patterns of difficulty that may be consistent with developmental prosopagnosia, particularly in workplace or educational settings. It cannot diagnose prosopagnosia, autism, or any other neurological or psychological condition.

If the results suggest significant challenges in face recognition or related social-cognitive areas, the individual should seek a formal clinical assessment from a qualified professional. A clinical evaluation can provide an accurate diagnosis, rule out other causes, and guide appropriate support or intervention.

7. Social and Psychological Impact

Prosopagnosia affects interpersonal relationships, employment, and mental health, and these impacts can be more pronounced for autistic individuals due to existing communication differences and social-processing demands.

Misrecognition in everyday interactions can easily be misinterpreted by others as disinterest, avoidance, or rudeness, which may lead to social exclusion, damaged workplace relationships, or conflict.

Over time, repeated misunderstandings can erode confidence and contribute to anxiety, hypervigilance, or withdrawal from social situations. For autistic people, who may already work hard to navigate social expectations, the added uncertainty of not recognising colleagues or acquaintances can intensify feelings of isolation and increase the emotional labour required to participate in daily life.

8. Prosopagnosia in Autistic People Greater Dependency Needs: Implications for Social-Care Settings

8.1 The Importance of Familiarity

Autistic individuals with higher support needs rely heavily on predictable routines and consistent care support. Prosopagnosia disrupts this foundation. One autistic adult explains:

"If I don't recognise the person in front of me, my brain treats them as a stranger, even if I've known them for years."

For individuals with limited communication, this can trigger meltdowns, fight-or-flight responses, or refusal of care.

8.2 Staff Turnover and Agency Staffing

Social care environments often involve rotating staff and agency workers. A support worker in a UK study noted:

“Every time a new agency worker arrived, he reacted as if a stranger had walked into his home, because to him, that’s exactly what was happening.”

This mismatch between neurological reality and staffing practices can escalate into crisis.

8.3 Prosopagnosia as a Risk Factor for Placement Breakdown

Prosopagnosia can contribute to placement instability through:

- escalating distress
- behavioural incidents rooted in fear
- misinterpretation by staff
- inappropriate restrictive practices
- emergency placement moves

Safeguarding reviews have documented cases where autistic adults were moved repeatedly because services misunderstood fear-based reactions as aggression.

9. Clues That May Indicate Prosopagnosia in People with Greater Dependency Needs

Section1: Difficulty Recognising Familiar Staff or Carers

People may:

- appear unsure or anxious when a familiar staff member approaches
- fail to respond to their name being called by someone they know
- treat familiar and unfamiliar people similarly
- show delayed recognition until the person speaks

Why it matters: If someone cannot recognise faces, they rely on *voices, routines, or context*. Without these cues, they may seem confused even around well-known carers.

Section 2: Over-Reliance on Non-Facial Cues

Look for individuals who identify people by:

- voice
- clothing
- hairstyle
- accessories (glasses, jewellery)
- where the person usually stands or sits

Clue: If a staff member changes clothes, hairstyle, or position, the person may suddenly not recognise them.

Section 3: Distress or Confusion in New Environments

People with prosopagnosia may:

- become anxious in unfamiliar settings
- struggle to follow group activities
- cling to one staff member for reassurance
- avoid eye contact or social engagement

Reason: New environments remove the contextual cues they rely on to identify people.

Section 4: Difficulty Following Group Activities

Signs include:

- not knowing who to look at when someone speaks
- responding to the wrong person
- appearing “lost” in group conversations
- copying others’ behaviour to mask confusion

Interpretation: They may not be able to track who is who when multiple faces are present.

Section 5: Misidentifying People

This may look like:

- approaching the wrong staff member for help
- confusing two people with similar builds or hair
- showing affection or familiarity to the wrong person
- ignoring the correct person because they don’t recognise them

Important: This is often misinterpreted as “challenging behaviour” or “non-compliance.”

Section 6: Anxiety Around Transitions

Particularly when:

- staff change mid-shift
- new staff are introduced
- people wear masks, hats, or uniforms
- routines change unexpectedly

Why: Transitions remove the stable cues they depend on.

Section 7: Avoidance Behaviours

Some individuals may:

- withdraw socially
- avoid eye contact
- stay close to one trusted person
- become distressed when approached unexpectedly

Possible explanation: They may be masking confusion or trying to avoid social mistakes.

Section 8: Difficulty Recognising People in Photos or Videos

If the person is able to engage with images, clues include:

- not recognising themselves in photos
- not recognising family members
- confusing characters in TV shows or films

This is a strong indicator of face-processing differences.

How staff can support identification

Staff can help by observing patterns over time:

- Does the person recognise people better by voice than by face?
- Do they struggle more when someone changes clothing or hairstyle?
- Do they rely heavily on routines to identify people?
- Do they become distressed when familiar people appear in unfamiliar contexts?

These patterns can strongly suggest prosopagnosia, especially when combined with autism.

Why this matters

For people with higher dependency needs, prosopagnosia can easily be mistaken for:

- learning difficulties
- behavioural issues
- attachment problems
- social avoidance
- lack of engagement

Recognising the underlying cause allows staff to provide appropriate support, reduce anxiety, and prevent misinterpretation of behaviour.

Section 9: Reasonable Adjustments

Evidence-based adjustments include:

- consistent staffing teams
- staff wearing clear photo ID
- colour-coded uniforms
- verbal self-identification
- visual staff boards
- social stories explaining staff changes

These supports significantly reduce distress and behavioural incidents.

10. Conclusion

Prosopagnosia is a complex neurological condition with profound cognitive, emotional, and social implications. Its impact is especially significant for autistic individuals, whose perceptual differences and need for predictability can amplify the challenges of face blindness.

For autistic people with greater dependency needs, prosopagnosia can directly affect safety, wellbeing, and placement stability. When misunderstood, it can contribute to behavioural crises and placement breakdowns. When recognised and accommodated, it becomes a manageable aspect of neurodiversity rather than a barrier to stable care.

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