Neurodivergence and Active Travel

SRP10

25/03/2025

To find out more, please contact: monitoring@sustrans.org.uk

Photo credit: Sustrans

We work for and with communities, helping them come to life by walking, wheeling and cycling to create healthier places and happier lives for everyone. www.sustrans.org.uk

Registered charity no. 326550 (England and Wales) SC039263 (Scotland).

Category	Details
Reference ID:	SUSR2336
Version:	2.0
Client:	Transport Scotland
Circulation status:	Client
Issue date:	25/03/2025
Author(s):	Katy Spencer & Melina Maiworm
Reviewed by:	Lisa Gallacher & David Corner
Signed off by:	Autumn Whitehouse-Wall
Accepted by:	
Contact:	monitoring@sustrans.org.uk

With thanks to all the interview participants who generously shared their time and insights to make this research possible.

Executive summary

Neurodivergence refers to ways of processing, learning and behaving which differ from what is considered 'normal' or 'neurotypical'. This research explores how neurodivergent people in Scotland experience and perceive active travel. Interviews were conducted to explore themes such as the impact neurodivergence has on travel choices and enablers of active travel for neurodivergent people.

The research builds upon an evidence review conducted as part of the Scottish Research Programme 9 and addresses a gap in existing evidence by generating primary research with a diverse sample of people with autism and/or ADHD. A total of 12 people with Autism and/or ADHD were interviewed to gain a detailed understanding of their experiences.

The report also presents a number of recommendations discussed by participants to improve the experience of active travel for those who identify as neurodivergent, as well as the wider population.

This project was funded by Transport Scotland through the Scottish Research Programme and carried out by Sustrans' Research and Monitoring Unit.

Key findings

The research found that neurodivergent people's travel choices are influenced by many of the same factors as the wider population: weather, cost, distance, convenience, health and environmental values. In addition, difficulties with driving, stressful public transport experiences and limited public transport provision can restrict transport options for many neurodivergent people, creating a push towards active travel.

A common theme identified during interviews is that neurodivergent people often minimise travel in response to

inaccessible and stressful travel environments, which has potential negative impacts on their wellbeing.

Interviewees felt that when active travel is fully accessible it offers a range of benefits relating to independence, health, enjoyment and speed and efficiency. Interviewees compared walking, wheeling and cycling with other modes, explaining that active travel gives them agency to control their route and speed, and escape overwhelming environments. The health benefits of active travel are also particularly important given the prevalence of co-occurring physical and mental health problems amongst neurodivergent people.

This study found that there are many barriers preventing neurodivergent people from fully accessing the benefits of active travel. Interviewees with ADHD and Autism shared that:

- Travelling can be a stressful experience. Careful planning of journeys is a common coping strategy but requires significant energy resources and is made difficult by limited information. It can also be a challenge for people with ADHD who struggle with time blindness.
- Travelling can create concerns about appearing visibly 'different' when moving through public spaces and they may adjust their travel patterns to avoid specific places or people.
- Sensory overwhelm can make walking or cycling through busy areas difficult and can exacerbate existing issues with spatial awareness and balance.
- Difficulty with wayfinding is another barrier, with neurodivergent people finding unclear signage and variations in street design confusing.
- While traffic-related safety concerns also affect the wider population, neurodivergent people are particularly vulnerable because of a range of difficulties with information processing, interpreting other road users' behaviours, maintaining focus and impulse control. This discourages many from cycling in particular.

Other aspects of people's identities intersect with neurodivergence to shape experiences of active travel.

Experiences of harassment have led many women to feel unsafe walking, cycling or wheeling at night, while a lack of public toilets, resting spaces and dropped kerbs creates a disabling environment for people with physical impairments and health conditions. The cost of cycles is also a barrier, with neurodivergent people more likely to experience transport poverty because of unequal access to employment opportunities.

Recommendations

The evidence review of SRP9, which this research builds upon, identified recommendations in six key areas to address the barriers that prevent neurodivergent people from engaging in active travel. These recommended areas were discussed with interview participants to strengthen the evidence through the inclusion of lived experiences. Interviewees also added their own ideas to the existing recommendations from the evidence review. Many of these recommendations would benefit everyone, including other marginalised or minoritised groups.

Mitigate sensory overwhelm

- Provide a choice of sensory environment in urban public space by incorporating quiet spaces with seating and sound dampening, sunshade and green and blue space
- Increase access to waterways
- Increase low traffic areas

Improve wayfinding

- Implement clear, simple and standardised signage
- Use colour coding to indicate specific routes or modes
- Use place names rather than route numbers
- Provide access to digital and paper maps
- Improve journey planning tools such as Google Maps

- Street layouts should be simple and consistent
- Improve markings and clarify rules for using shared use paths

Address physical accessibility

- Provide resting spaces in public spaces and increase the number of public toilets
- Widen pavements and improve path surfaces
- Install dropped kerbs, especially next to disabled parking
- Minimise street clutter
- Consider users of adapted cycles when designing both indoor and outdoor spaces

Enhance safety

- Create a network of continuous off-road cycle routes
- Install physical barriers to protect cycle lanes from traffic
- Segregate cyclists and pedestrians
- Increase designated crossings
- Reduce traffic volume and speed
- Redesign road layouts, especially junctions and roundabouts, to prioritise vulnerable users and make them more visible
- Install lighting on active travel routes
- Behaviour change and awareness campaigns

Address transport poverty

- Fund access to specialist cycles
- Provide ‘Try before you buy’ schemes
- Provide bike hire schemes
- Support communal bike storage

Include neurodivergent people in decision-making

- People with lived experience of neurodivergence should be included in decisions which will affect them
- Ensure representation in planning processes
- Make consultation materials accessible
- Use clear instructions and visual aids
- Provide multiple format options

Contents

1. Introduction

1.1 Scottish Research Programme

This research was funded by Transport Scotland and conducted by Sustrans' Research and Monitoring Unit as part of the Scottish Research Programme. The Scottish Research Programme carries out research that advances understanding of, and generates evidence relating to, walking, wheeling and cycling.

1.2 Aims and research questions

This research report builds on evidence from a previous round of funding from the Scottish Research Programme 9 (SRP9). The SRP9 conducted an evidence review to understand the connections between neurodiversity and active travel, focusing on the experiences of neurodivergent people (Sustrans, 2024). The report highlighted common travel experiences for neurodivergent people, as well as potential design and policy recommendations to alleviate the barriers neurodivergent people experience when travelling actively. It also identified a significant research gap within the broader literature on travel and disability, with very little existing primary data on neurodivergent people's experiences of active travel. A summary of the SRP9 can be found in section 1.3 of this report.

The overall aim of this research project is to shed further light on the themes highlighted in the SRP9 and to add to the evidence base on neurodiversity and active travel through a targeted sample of primary research. We hope that this research may help to shape active travel policies and infrastructure design to be more inclusive.

The specific objectives of this research project are to:

- Further understand neurodivergent people's mode choices and journey types and what influences these.
- Further understand the different ways neurodivergent people experience public space, urban environments, active travel infrastructure and their everyday journeys.
- Identify potential strategies and solutions which will address barriers neurodivergent people face when making active travel journeys and enable them to do more everyday journeys using active travel.

This research project explores the following research questions:

1. How does neurodivergence impact people's travel choices and travel experiences?
2. What enables neurodivergent people to travel actively?

1.3 SRP9 Neurodiversity and active travel

Through an evidence review of available literature, the SRP9 on neurodiversity and active travel highlighted some common experiences of active travel for neurodivergent people:

- Travel is often an overwhelming and tiring experience for neurodivergent people.
- Physical characteristics of some neurodivergent conditions make public space and travel environments inaccessible to some neurodivergent people.
- Further barriers to active travel are associated with poverty, safety concerns, and lack of input into communities and decision-making.
- Because of these and other barriers to travel, many neurodivergent people limit the amount they travel as a strategy to lessen the negative impact of travel on their lives. This limits neurodivergent people's access to opportunities, places, people, and services.

Furthermore, the SRP9 made six recommendations that may alleviate the identified barriers, including:

- Provide **sensory choice** wherever possible in public space and using design techniques to, for example, dampen sound or provide sunshade.
- Ensure the travel environment is as **physically accessible** as possible by, for example, improving pavements, eliminating pavement parking, and increasing the number of public toilets and rest areas.
- **Separate transport modes** to provide more space on the pavement for people walking and wheeling.
- Make travel environments **simple and consistent** with easy to access, and understandable, journey planning information.
- Introduce **more funding** for neurodivergent and other disabled people's transport as well as **expanding existing schemes**, such as the Disabled Person's Railcard and Motability, to cover neurodivergence.
- Give neurodivergent people **a role in decision making processes**, especially regarding decisions that impact them.

1.4 Our approach to the research

Up to 15% of adults in Scotland are thought to be neurodivergent (Rutherford, et al., 2023). To ensure focus, depth and a clear sample of the study, our research focused on participants who are autistic or have attention deficit hyperactivity disorder (ADHD).

To enable us to hear from as wide a range of people as possible, we included people who self-identify as being autistic or having ADHD in our research. The National Autistic Society (2025a) describes self-diagnosis, self-identification or self-ID as 'terms used when an individual identifies themselves as being autistic without having a formal clinical diagnosis'. Reasons for self-identification can vary, for example it may help people to

access informal support while overcoming barriers to a formal diagnosis (e.g. long waiting times). Diagnosis rates also tend to be low amongst women and ethnic minorities; excluding people without a formal diagnosis would have prevented us from achieving a diverse sample. The inclusion of self-identification when recruiting participants is common in literature surrounding autism and/or ADHD (for example, see Cooper et al. (2017), Pohl et al. (2020) and Lewis et al. (2020)). Further to this, a recent review by Overton et al. (2023) noted that across several studies, adults who self-identified as autistic had similar results to those who were formally diagnosed as autistic. Therefore, we expect that our results will be similar between those with a formal and self-diagnosis.

Recruitment of participants took place via an online sign-up survey in October 2024. Forty-five people signed up via the survey to take part in the research. Participants were screened to ensure they were over 18, live in Scotland and consider themselves to be either autistic or to have ADHD. To ensure a diverse and balanced sample, we then selected participants using a set of secondary sampling criteria based on questions in the sign-up survey as detailed in section 7.1.2.

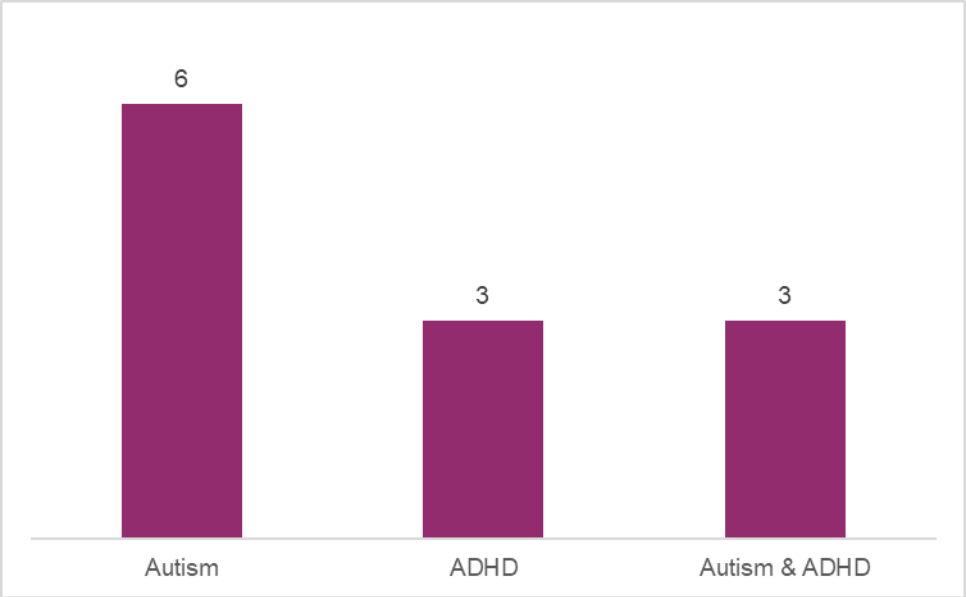
Interviews with 12 participants took place in November and December 2024. Interview transcripts were coded using a coding framework based on questions in the interview topic guide. Thematic analysis and synthesis took place after initial coding, to help us understand how the collected data answers the key research questions.

1.5 Who we heard from

We interviewed a diverse group of participants with varying neurodivergent characteristics. The sample included six autistic participants, three participants with ADHD and three participants with both ADHD and autism. The majority were either diagnosed late in life or self-diagnosed. Eight had a formal diagnosis, one of whom had formally diagnosed autism

and self-diagnosed ADHD. Two were self-diagnosed and two did not specify.

Figure 1: Breakdown of research participants with ADHD and/or Autism



Participants also shared that they had other neurodivergent conditions such as:

- Complex post-traumatic stress disorder (C-PTSD)
- Dyspraxia
- Dyslexia
- Dyscalculia

Many participants also described co-occurring health conditions and disabilities that commonly appear alongside autism and ADHD (University of Birmingham, 2025). These conditions significantly impacted their travel experiences and included:

Physical Health Conditions:

- Myalgic encephalomyelitis (ME)
- Fibromyalgia
- Widespread myofascial pain syndrome
- Hypermobile Ehlers Danlos Syndrome
- Hearing impairment
- Asthma

- Scoliosis
- Benign prostate enlargement
- Autoimmune condition

Mental Health:

- Generalised anxiety disorder

Figures 4-8 in section 7.5 shows a detailed breakdown of participant demographics.

1.6 Understanding neurodivergence

1.6.1 Neurodivergence

Neurodiversity refers to the natural diversity in human brains, while **neurodivergence** refers to ways of processing, learning and behaving which differ from what is considered 'normal' or '**neurotypical**'. This means neurodivergent people may communicate, socialise, move, sense and interpret things differently to the wider population.

While some neurodivergent people do not consider themselves disabled, neurodivergence is generally treated as part of the wider disability umbrella (Sustrans, 2024).

Neurodivergence incorporates a range of neurological conditions. This research focused primarily on autism and ADHD while acknowledging the broader spectrum of neurodivergent experiences.

1.6.2 Autism characteristics

Autism affects how people communicate and interact with the world. While it is formally defined by social communication and interaction differences, and restricted and repetitive behaviours and interests, there are many other characteristics associated with autism (National Autistic Society, 2025b).

Autistic participants told us that they experience:

- Differences in social interactions, including difficulty understanding and following unwritten social rules.
- Language and communication differences, including difficulty understanding facial expressions and body language.
- Sensory hypersensitivity
- Difficulties with executive functions, such as prioritising tasks and processing information.

1.6.3 ADHD Characteristics

ADHD (short for 'attention deficit hyperactivity disorder') is a neurological condition which affects a person's executive functioning skills. Current understanding recognises three subtypes of ADHD: hyperactive-impulsive (characterised by impulsivity and restlessness), inattentive (characterised by forgetfulness and distractibility) or combined type, which is the most common in adults (The ADHD Centre, 2023).

Our participants with ADHD reported experiencing:

- active and racing thoughts
- feeling overwhelmed by information overload
- difficulties with concentration and focus
- challenges with organisation and planning
- needing to be constantly busy and stimulated
- difficulty transitioning between or initiating tasks
- sensory sensitivity.

1.6.4 Other neurodivergent conditions

Two participants also had dyspraxia, primarily affecting their movement and coordination. This impacted their balance and spatial awareness (or **proprioception**), as well as their awareness of internal biological needs or emotions such as hunger or fatigue (or **interoception**).

Four participants reported having dyslexia or dyscalculia, which affect information processing. While dyslexia impacts reading and writing, dyscalculia creates difficulties understanding numbers and mathematical concepts (Dyslexia UK, 2024).

1.6.5 Diagnostic definitions

ADHD, autism and other neurodivergent conditions are often co-occurring, and many of their characteristics overlap (University of Birmingham, 2025). Several participants therefore challenged the way neurodivergence is currently categorised neatly into separate, distinct 'conditions'. One participant with multiple diagnoses instead referred to the set of interrelated characteristics as her *'neurodivergent profile'*.

Most participants also rejected pathologising language characterising their neurodivergence as a 'disorder' or 'deficiency', instead seeing it as a '*difference*'. We follow the same approach in our report, except where there is no widely accepted alternative wording (e.g. for ADHD).

> 'I feel we don't have numerous different disorders, as they like to be called, but we have a profile of challenges to do with our cognitive functioning and processing, etc. [...] There's so much overlap between the different categories.'

Woman with ADHD, autism, dyspraxia and dyslexia, aged 65+

1.6.6 Diversity of neurodivergent experience

Several participants highlighted the diversity of experiences amongst neurodivergent people. Not only are a range of characteristics grouped together under the 'neurodivergent' umbrella, but neurodivergence is likely to interact with other intersecting aspects of a person's identity to shape their experiences of the world. Each neurodivergent person has a unique perspective, and this small sample of interviews should not be interpreted as representing all neurodivergent people's experiences of active travel.

> 'If you meet one neurodivergent person, you've met one neurodivergent person.'

Autistic man, aged 45-5

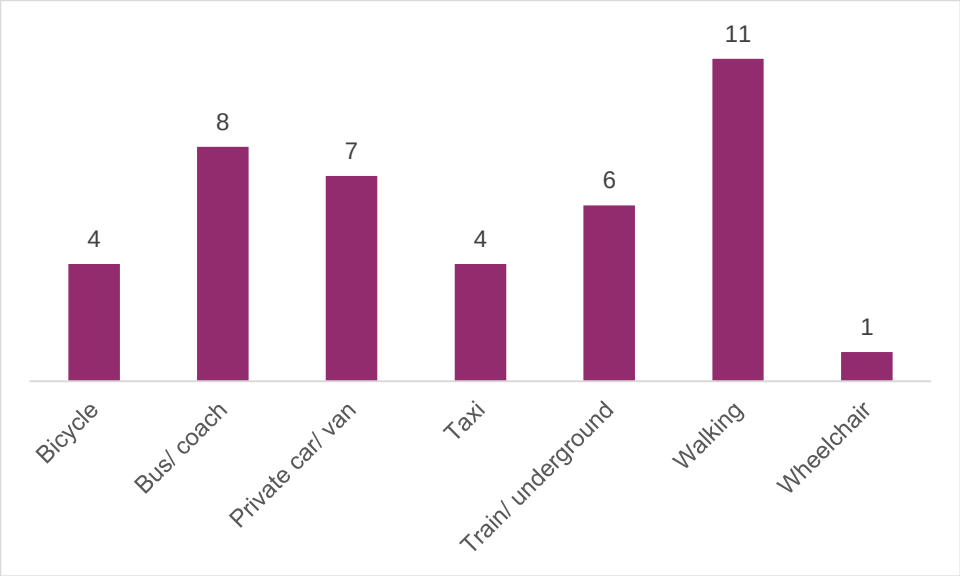
2. Findings: Travel choice and patterns

Our research examined how neurodivergent people make decisions about everyday travel and what influences their choices. Participants discussed journeys across multiple aspects of their lives: work commutes, education, volunteering activities, social visits, family care responsibilities, and leisure or exercise trips.

2.1. Transport mode usage

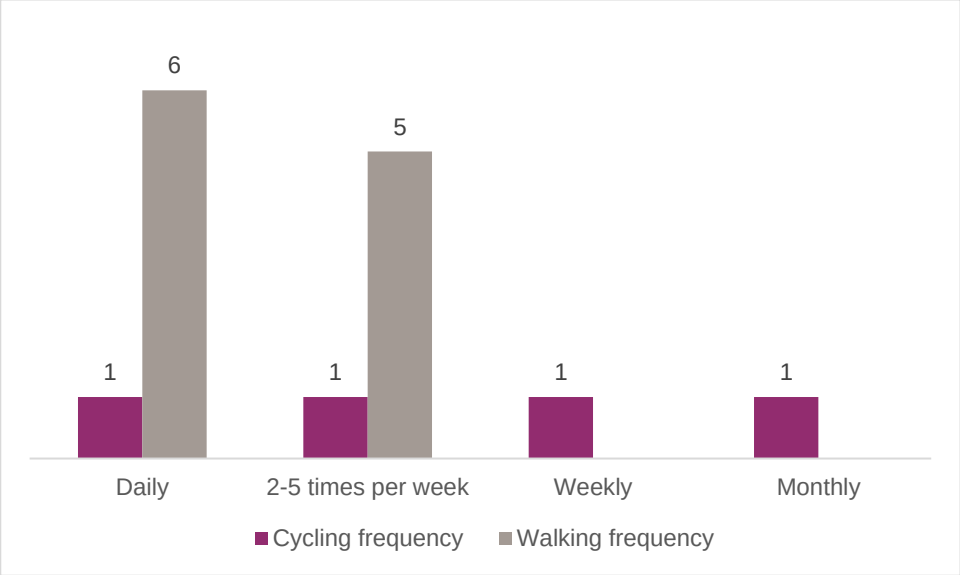
All participants said they had walked or wheeled at least once in the last month, and four participants said they had cycled. Of the other modes of travel, bus/coach was the most popular, followed by private car/van and train/underground. The least used mode of travel was taxi.

Figure 2: Modes of travel used by research participants in the last month (*'Bicycle' includes electric bike, cargo bike and adapted cycle)*



Of the participants who use walking as a mode of travel, six said they walk daily and five said they walk at least 2-5 times a week. Cycling frequency varied across participants between daily to monthly. One participant is a wheelchair user.

Figure 3: Walking and cycling frequency of participants



2.2 What influences mode choice?

Transport mode choices among neurodivergent people reflect both universal considerations and unique challenges. While factors like weather, cost, distance, convenience, health benefits and environmental values influence their decisions - similar to the wider population - neurodivergent individuals face additional complexities in their travel choices.

> 'I suppose it's like a hierarchy in your head, it's like how far away is the place? Do I need to do something else nearby? Do I need to take someone with me? If I'm just travelling on my own, what's going to be the ideal transport for that situation?'

Autistic man, aged 45-54

Walking was the preference for shorter journeys and was the main form of active travel for most people, while one participant

used a wheelchair because of a physical health condition. Participants mentioned walking to shops and work or volunteering opportunities; several said they needed to walk to improve existing health conditions, while others chose to walk for wider health benefits:

> 'I kind of make an excuse to walk which could be going to that specific shop that is quite far and the purpose is mostly for me to walk there so I get some movement in.'

Autistic woman, aged 18-24

For longer journeys, or when carrying heavy items such as shopping, many would drive or take the bus, although some said they would leave the bus early to have an opportunity to walk. Others preferred cycling and would only take the bus in bad weather.

Many of those who used public transport expressed a preference for trains or trams over buses, which were seen as slower and less '*predictable*'. In addition, sensory environments were a prominent factor in participants' choice of transport mode, with many avoiding buses because of the noisy environment and bright lighting.

> 'I'm particularly sensitive to noisy environments. So, that plays a big role in what transportation I pick. So, if I know ahead of time that if I'm going somewhere and it has to be noisy, I'll either try to avoid it or make it as least noisy as possible.'

Autistic man, aged 25-34

2.3 Limited transport choices

Many participants expressed a lack of choice over their mode of travel. Half of the participants we interviewed said they found driving difficult or stressful, because of a combination of information processing difficulties, attentional challenges,

difficulties anticipating other road users' behaviours and reduced spatial awareness. Some made an active decision not to drive for environmental reasons, in addition to the stress of driving, preferring to travel actively. Others felt forced into making long journeys by bus to work or education, which could be tiring and lead to burnout. For two participants from rural areas, the impact of this was further exacerbated by limited public transport provision, which pushed them towards other modes such as walking, cycling or using taxis, or meant they missed out on opportunities. Despite reluctance to drive, several who did drive felt like they had to, either due to a lack of transport options or the needs of their children, who were often neurodivergent themselves and struggled to use other modes of transport.

> 'I don’t really want to drive but I feel like I’m being forced into it [...] by the circumstances, that there isn’t enough public transport. "

Woman with ADHD, aged 25-34

2.4 Adjusting travel routes

Many participants developed sophisticated strategies for managing their journeys. Some adjusted their regular routes to avoid:

- Areas with heavy traffic
- Potentially unsafe locations
- Places likely to trigger unwanted social interactions
- Busy urban centres

For example, one participant described carefully timing their car journeys to avoid peak traffic, while several others modified their walking routes to prioritise traffic-free paths for both safety and enjoyment. These adjustments, while helpful, often

resulted in longer journey times. The impact of this will be discussed further in section 4.1.

> 'So, I usually make that adjustment of not going through the village or I'll go out when I know people are home, like if it's raining. [...] I like going out at dusk which is my favourite time, so that's also a good time because people don't really see you. And these align with my preferences and personality anyway. They are conscious choices. Sometimes I think at 3.00 it would be a nice time to go for a walk, I always feel like are you sure you don't want to wait till it's dark and no one can disturb you?'

Autistic person with dyspraxia, aged 35-44

2.5 The decision not to travel

A significant finding was that many neurodivergent people sometimes choose not to travel at all when faced with inaccessible travel systems. This creates what we term a **'transport accessibility gap'** where neurodivergent people make fewer trips than neurotypical people (Sustrans, 2024, p. 17). Almost half of participants said they would avoid making a trip if:

- it was too stressful
- they lacked sufficient information for advance planning
- the route involved unfamiliar elements.

This could lead to *'missed opportunities'* for employment, education, socialising and exercise, resulting in a negative impact on wellbeing. One participant noted that the normalisation of remote work following Covid lockdowns has provided welcome relief for many neurodivergent people, enabling fuller participation in public life without requiring stressful travel.

‘Routes that I don’t know well, it’s really hard and sometimes I just feel so anxious about getting there, that I just decided not to even bother going.’

Woman with ADHD, aged 25-34

'[I] minimise the amount of travelling I do, although that has a negative impact as well because it results in missed opportunities and missed exercise.'

Woman with autism and ADHD, aged 45-54

3. Findings: Benefits of active travel

When accessible, active travel offers numerous advantages that particularly resonate with neurodivergent people's needs and preferences. These benefits extend beyond the commonly recognized advantages of walking, wheeling, and cycling.

> ‘I’m very grateful for the power of my feet.’
>
> **Woman with ADHD, autism, dyspraxia and dyslexia, aged 65+**

3.1 Independence and agency

Participants identified freedom and independence as key benefits of walking, cycling and wheeling. Several participants did not drive and therefore relied on other people to transport them by car or public transport; active travel enabled participants to feel independent and gave them agency:

> 'Independence has to be the key term. That’s the only way I’m independent when I walk and if I could walk 50 miles to go to my appointments, I would.'
>
> **Autistic person with dyspraxia, aged 35-44**

Several participants contrasted this independence with feeling 'trapped' on public transport, where they had limited control over their sensory environment. Walking or cycling allowed them to quickly escape from noise or other stressful stimuli:

> 'When you’re walking it’s easier to get away from a noisy environment. If there’s a loud car, it’s just passing by. If you’re on the bus, you’re kind of stuck where you are.'

Autistic man, aged 25-34

Likewise, compared with driving, walking gives participants the freedom to stop where and when they want. Compared with passively waiting for a bus and having to sit still, cycling allows participants to be actively in control of their schedule. Participants liked being in control of their own journey and having the freedom to choose their own pace and route. This could include choosing to travel on a traffic-free path for safety and enjoyment, or changing their usual route to alleviate boredom:

> ‘For me, cycling or walking is a good way of travelling because you can adjust your route depending how it’s going. So, you might be like, actually I’m a bit bored of this, I might go up here for a bit.’

Woman with ADHD, aged 45-54

3.2 Speed and efficiency

Some valued the speed of cycling or their wheelchair, which they felt was more efficient than slower modes such as walking. They preferred being able to move fast, rather than waiting for a bus or being stuck in traffic. One participant with ADHD highlighted the benefits of being able to cycle fast when she was late for something or in a rush to get home.

> 'Most of the time I would cycle, and this is linked to ADHD – I am often running late and I suppose, with the bike, it feels like I’ve got a bit more control. I’m not having to wait for a bus and get stressed, I’m not having to walk and I’ve

got ten minutes for a 20 minute walk. I think it makes me feel like I can get places quicker.'

Woman with ADHD, aged 45-54

3.3 Enjoyment

Participants said they enjoyed exploring their local areas and discovering new routes or places by walking and cycling. Many enjoyed walking, particularly in natural environments and green or blue spaces such as canals. Some said it was their favourite activity and enjoyed going on long walks in the countryside. Some preferred walking alone, as they felt better able to absorb the details of their environment and more aware of their internal needs and emotions when they were not having to focus on their companion.

Those participants who cycled enjoyed the scenery, sunlight and feeling connected to their environment. One participant liked the fact that cycling enabled them to consume more sensory information than walking.

'I do enjoy walking and cycling very much. That's my favourite activity.'

Woman with autism and ADHD, aged 45-54

3.4 Health and wellbeing benefits

Many participants actively sought the health benefits of exercising through walking and cycling. For those with co-occurring health conditions such as hypermobility, walking was especially important for maintaining muscle tone and fitness. One participant also highlighted the wider public health benefits that active travel could offer through reductions in air pollution.

The mental health benefits of active travel emerged as particularly significant. Several participants described how walking helped them unwind and process information received during the day. They contrasted this calming effect with the stress of using public transport or driving. Walking and cycling offered opportunities to:

- Find mental clarity and calmness
- Process day-to-day experiences
- Take time away from screens
- Release beneficial endorphins and adrenaline
- Improve overall mental wellbeing

Given the prevalence of mental health challenges among neurodivergent people, these benefits held particular value for participants.

> 'Walking in particular I find really health giving and it's psychologically beneficial because it has a different energy to it. It's not as passive, it's quite active. You also have time out as well, you can relax a bit into yourself. You're not on all the time, you're not hyper vigilant.'

Autistic man, aged 55-64

4. Findings: Barriers to active travel

This section explores the barriers that prevent neurodivergent people from fully accessing the benefits of active travel outlined in the previous section. One participant highlighted how the barriers facing neurodivergent people are often overlooked, with policy makers and urban planners tending only to consider the needs of physically disabled people.

> 'Physical disabilities alone are not the only barriers to being able to move around in the community.'

Woman with autism and ADHD, aged 45-54

4.1 Travel-related stress

Many participants described travel as inherently stressful, regardless of mode, experiencing anxiety before, during, and after their journeys. This stress was particularly acute when:

- Traveling to new or unfamiliar places
- Attending important appointments
- Going to job interviews
- Navigating complex transport systems

The combination of detailed journey planning, social anxiety, sensory regulation needs, and the effort of 'masking' their neurodivergence significantly impacted energy levels. Without proper support and accommodations, this could lead to burnout over time.

'It takes a toll on the energy levels, definitely and over time that builds up [...] commuting was absolutely draining and then at some point, I ended up in burnout.'

Woman with autism and ADHD, aged 45-54

'I feel like that's really key to understanding the autistic experience when it comes to transport. It's not just about a journey, it's the amount of thinking and worrying that goes before it, during and after, and then while it's all happening, you also have to regulate the amount of input that you're receiving, and protect yourself through it or mask so you can go through it and be undetected.'

Autistic person with dyspraxia, aged 35-44

4.1.1 Preparation and planning

Autistic participants in particular described the effort they put into planning their journeys, as a strategy to cope with the stress and anxiety of travelling. This could include evaluating the necessity of a journey, assessing alternative transport options to best meet their needs, checking the distance to decide on the appropriate travel mode and locating bike storage at their destination in advance. Information could be difficult to find, leading to participants feeling more anxious, choosing a different travel mode or abandoning their journey altogether. Other participants mentioned needing to ensure their phone had enough battery to be able to check a map, and carrying safety equipment such as a whistle. Although planning in advance helped these participants feel more confident about travelling, this level of careful planning had a negative impact on spontaneity and required significant energy resources, which could contribute to burnout.

'So, I do calculate decisions. There's a lot of pre-thought, there's a lot of assessment of why I'm going somewhere, what's the point? Do I really need to go there? Is there an alternative? Is there another way of doing this? I wouldn't say I deny myself a lot of things or I miss out on anything. These are choices I make for comfort and my own feeling of security. I just build it around that.'

Autistic man, aged 55-64

4.1.2 Time blindness and task paralysis

Difficulty initiating tasks or transitioning between activities could be a barrier to leaving home to start a journey. Time blindness in people with ADHD also made it difficult to plan a journey and meant they would often set off late and end up rushing, or overcompensate by allowing extra time for a journey and arriving excessively early.

'You struggle to make a mental map of how long each stage of the journey takes, like how long it takes to get to the train station, how long you'll wait for a train, how long the journey itself takes, how long it takes to walk from a station to your destination. The time blindness makes it really hard to construct an overall journey plan beyond individual steps.'

Man with ADHD and dyslexia, aged 35-44

4.1.3 Visibility in public space

One participant felt that, despite attempting to *'mask'* their neurodivergence, many neurodivergent people are visibly *'different'* in the way they move and behave, which could make them a target for discrimination when travelling through public space. This made her feel anxious and unsafe, and she avoided walking in her local area as a result. In addition, she and others felt they were sometimes themselves perceived as a threat for behaving, moving and communicating differently to neurotypical people and could be viewed with suspicion by

security staff, for example when needing to lie down during or after travelling, or becoming upset because of disruptions to their journey.

> 'Adults like me have gone through an entire life masking that we are different, but that comes through in my opinion and I think it relates to this subject of transport. There are subtle differences that perhaps are not noticeable, by the way we move, by the way we look and I think when we're out and about in public, that can lead to negative experiences sometimes.'

Woman with autism and ADHD, aged 45-54

Some participants expressed a dislike of being seen by others when out in public, having a preference for *'anonymity'* and *'invisibility'*. This was linked to social anxiety, which could add to the stress of travelling through public space. One described themselves as an *'introvert'* and a *'loner'* who tried to avoid unwanted social interaction by adjusting the route and timing of their walks, which could use additional energy. Another participant said she would have felt safer riding a tricycle because of her dyspraxia but was self-conscious about being visibly identifiable as disabled. Some would avoid engaging in active travel as a result, to the detriment of their physical and mental wellbeing.

> 'Stress and anxiety and social phobia can be a developing situation. It accumulates and you get to a point where it becomes a bit of a struggle to encounter the outside.'

Autistic man, aged 55-64

4.2 Sensory processing challenges

Many participants experienced hypersensitivity to sound, light or smell. While this often made public transport challenging, particularly buses with bright lighting and crowds, the street environment could also prove overwhelming due to:

- Loud traffic noise
- Construction work sounds
- Strong exhaust fumes
- Refuse odours
- Visual overload from busy areas

Several participants modified their walking routes to avoid busy and built-up areas, even when this meant longer journeys.

> ‘I get sensory overload very easily in very busy environments. [...] I will walk along the coastal path and through the park and it might be slightly longer in terms of miles or whatever, but it’s a lot less stressful than trying to walk along the main road where there’s lots of traffic passing and noise. The natural environment is a lot easier to process than the built or artificial environment.'
>
> **Woman with ADHD, autism, dyspraxia and dyslexia, aged 65+**

4.2.1 Spatial awareness and balance

Four autistic participants, two of whom also had dyspraxia, described how sensory overload could exacerbate difficulties with balance and spatial awareness. This sometimes resulted in tripping over obstacles while walking or feeling less able to balance on a bicycle. The two participants with dyspraxia avoided cycling for this reason as they felt it would make them unsafe.

'One of the things I notice when I'm walking any distance is this inclination to have an accident, like stumble or sprain my ankle occasionally, kerbs. Apparently this is a thing with autism. [...] sometimes I think it's just concentration in certain areas, being distracted by having to pay too much attention to what's going on around me.'

Autistic man, aged 55-64

'If there's lots of movement and traffic and other things going on, which I have to process, then my ability to balance and feel less affected in terms of like this… so, I feel less safe around… in busy environments.'

Woman with ADHD, autism, dyspraxia and dyslexia, aged 65+

4.3 Wayfinding

Wayfinding emerged as a significant challenge, with many participants reporting difficulties with:

- Understanding complex street layouts
- Interpreting unclear signage
- Processing route numbers versus place names
- Reading maps effectively
- Maintaining directional awareness

Many participants said they found navigation difficult and often got lost. Several mentioned difficulties with map-reading or understanding directions such as left and right, which may be particularly likely to affect people with dyslexia.

'A big factor with me is just such a terrible sense of direction. Again, I think that plays into the ADHD a bit because I don't really have great orientation. Despite living here for close to a decade now, I still have very little idea in my mind of the actual layout of geography and what's north, east, south and west and all that.'

Man with ADHD and dyslexia, aged 35-44

4.3.1 Unclear signs

Signs on walking and cycling routes can be confusing and unclear, for example using route numbers rather than familiar directions or place names. One participant with ADHD felt signage often contained too much detailed information which was difficult to process quickly when she was in a rush. Some relied on using their phones for directions even when walking or cycling around a familiar city, as they found it difficult to create a *'mental map'* using only street signs.

'I'm always rushing. I generally am not going to look for detail unless I'm lost and need it. And even then some of the detail won't make sense to me. It would be better if it just said north or something. You know when it sometimes has really detailed, like route 31, it's like, I don't know where route 31 is.'

Woman with ADHD, aged 45-54

4.3.2 Variations in street design

Several participants found unclear and inconsistent street designs and behavioural norms confusing. This included inconsistencies in road layouts, as cycle lanes could be on varying sides of the road, and confusion around the rules for pedestrians and cyclists using shared paths.

'You have to try and remember what's the rules. And that's hard for a person with ADHD anyway, what's the rules when I'm this track versus that track? [...] But also the inconsistent rules, that this is a two-way and this is a one-way.'

Woman with ADHD, aged 45-54

4.3.3 Communication

Communication difficulties could also exacerbate navigational challenges. Some participants said they had a tendency to misunderstand instructions and signals from other people, or struggled to make themselves understood. This made tasks associated with active travel, such as asking for directions, difficult.

'I often misunderstand things which are communicated to me and similarly, I don't always understand what I need to include in what I tell people for them to understand what I want. So, even simple things like asking me for directions can be difficult.'

Woman with ADHD, autism, dyspraxia and dyslexia, aged 65+

4.4 Traffic-related safety

Traffic safety concerns took on particular significance for neurodivergent travellers. While these issues affect the general population, our participants faced additional challenges related to:

- Processing delays when judging vehicle speeds
- Difficulty anticipating driver behaviours
- Challenges with maintaining focus in busy environments
- Problems with impulse control
- Reduced spatial awareness

Many participants were particularly reluctant to cycle as a result, expressing fear for their safety. Several participants who were not originally from the UK also said they found it difficult to get used to traffic travelling on the left. While these barriers also affect neurotypical people, the risks are likely to be exacerbated by difficulties with executive function and communication.

> ‘So that’s a big barrier for cycling. I would like to do it but the roads around me don’t feel particularly safe.’

Man with ADHD and dyslexia, aged 35-44

4.4.1 Information processing

Information processing delays could also make participants feel particularly unsafe when walking or cycling in areas with busy traffic where there is lots of information to process, or crossing roads, as they may find it difficult to judge vehicle speeds or anticipate driver behaviours. Some also avoided walking on shared paths because of difficulties hearing cyclists or processing their speed. This meant having to be *'hyper-vigilant'*, potentially using more energy than a neurotypical person to navigate public space.

> 'And as a person who processes information a bit slower, by the time I get that there is a person cycling really fast, I might not have the time to move and it might hit me. And for that reason, sometimes I might not walk on the cycle paths.’

Woman with autism and ADHD, aged 45-54

4.4.2 Interpreting others’ behaviour

Some also had difficulty anticipating or interpreting driver or cyclist behaviours when they were walking, which may be related to challenges around communication and interpreting body language. This added to confusion around directions and the rules for shared paths, with one participant saying she

didn’t know where she was meant to go when cyclists rang their bell at her. For others, uncertainty around drivers’ intentions contributed to difficulties with judging when is safe to cross a road.

> 'Specifically with traffic, I can feel very unsure with like, if a car pulls up in front of where I want to cross, I can kind of freeze in the moment and be like, okay, is he going to drive now? Is he going to just stay there and wait for me to pass? That little bit of anxiety it kind of decides the routes that I do take.'

Autistic man, aged 25-34

4.4.3 Attentional differences and impulsivity

For participants with ADHD, difficulties with impulsivity and maintaining focus were mainly a barrier to driving or waiting for a bus. However, one participant also found walking too slow if she was tired or late, preferring cycling. She felt that cyclists with ADHD might be more likely to break road rules because of impulsivity, putting themselves in danger.

> 'I think ADHD cyclists might be a bit more impulsive; they might be a bit more confident; they might take more risks.'

Woman with ADHD, aged 45-54

4.5 Intersectional barriers

Neurodivergence intersects with other aspects of identity to create compound barriers to active travel including such factors as gender, sexuality, ethnicity and class.

4.5.1 Gender and safety

Several women participants reported avoiding walking, wheeling, or cycling at night due to safety concerns. One

participant described how anxiety around personal safety as a woman walking at night could be exacerbated by overthinking. One had been shouted at by a group of men while cycling, and another said she felt excluded by a male-dominated culture around cycling.

> ‘I’ve had quite a lot of males say things and […] it’s not generally really offensive but I asked my husband about it and he’s like, no one ever shouts at me. It must be the way you’re cycling and I’m like, no, it’s not. They're just passing by and shouting at me.’

Woman with ADHD, aged 45-54

> 'Being a young female wheelchair user, I would not wheel around the streets at night by myself. That just doesn’t seem very safe to me and there’s not great lighting in some areas.'

Autistic woman, aged 35-44

4.5.2 Physical accessibility

Five participants with additional physical disabilities or health conditions described being disabled by poorly designed street environments. Issues included:

- Narrow pavements
- Lack of dropped kerbs
- Limited resting spaces
- Insufficient public toilets
- Poor surfaces for wheelchair users

A wheelchair user expressed uncertainty around how she would move around once she reached her destination if she were to travel by adapted cycle and was unable to transport her wheelchair.

A lack of public toilets or resting spaces could also prevent participants with dyspraxia or other conditions known to co-

occur with ADHD and autism from engaging in active travel. This was sometimes a bigger barrier to active travel than barriers experienced in relation to their neurodivergence.

> 'One of the things that prevents me from walking as much as I need to do is there are no resting spaces anywhere around here.'

Autistic person with dyspraxia, aged 35-44

4.5.3 Transport poverty

The cost of cycles, particularly specialist equipment like electric or adapted bikes, created significant barriers. This impact was heightened by the '**disability employment gap'** and additional costs associated with disability (Sustrans, 2024, p. 32), with one third of participants unemployed or on sick leave. Lack of secure storage and the effort required for hilly routes were also cited as barriers to cycling.

5. Findings: Recommendations

The SRP9 evidence review identified design and policy recommendations across six key areas that may alleviate barriers to active travel for neurodivergent people (Sustrans, 2024) (see section 1.3). As part of this research, participants were asked to share their thoughts on the likely effectiveness of these recommendations in enabling them to access the benefits of active travel. The following section presents the opinions of participants on the six recommendations. In addition, many participants also offered their own recommendations for addressing barriers to walking, cycling and wheeling for neurodivergent people. While the recommendations presented in the following sections seek to address the barriers faced by neurodivergent people specifically, many of the suggestions listed here would be beneficial for everyone, including other marginalised or minoritised groups.

5.1 Mitigating sensory overwhelm

Participants agreed that they would appreciate streets being re-designed to improve the sensory environment for active travel. Participants wanted to have a choice of sensory environments, and said they would find the following design features helpful:

- Quiet spaces with seating and sound dampening
- Sunshade
- Incorporating green and blue space through planting and water features

Others also mentioned that expanding access to waterways would be beneficial, and that the implementation of low traffic areas helped to reduce noise.

'I feel like concrete jungles are really quite difficult for some neurodivergent people, especially around the visual processing, and so introducing natural elements into those environments, whether it's water features and green spaces and trees, help to break up that concrete jungle.'

Woman with ADHD, autism, dyspraxia and dyslexia, aged 65+

5.2 Improving wayfinding

Participants agreed that active travel environments should be simple and consistent, with accessible information available for planning their journeys.

5.2.1. Signage and information

Many participants discussed the need for clear and standardised signage on active travel routes, similar to standardised road signage. Signage should be simple and not contain unnecessary detail but needs to cater to a variety of accessibility needs. Using colour to indicate specific modes or routes would also be helpful for people with difficulty processing written information. This could include painting coloured lines onto a path surface to indicate a specific route. Some participants also suggested using place names or directions rather than route numbers on National Cycle Network signage, and including timings or distances to help with journey planning.

Some participants said they would find it helpful to have access to digital or paper maps showing walking and cycling routes in their local area, with information on the accessibility of each route. Apps such as Google maps could also be improved, for example by offering safe and accessible route options for walking or cycling which avoid busy roads, roundabouts and hills. Improving journey-planning tools would help to reduce the travel-related stress and fatigue that many neurodivergent people experience.

5.2.2. Consistent street design

Participants also discussed the need for simple and consistent street layouts. This includes improving markings and publicising the rules for using shared paths.

> ‘So, for people with ADHD colour can help them because they don’t always read detail of words, so colour can help them know where to go and where not to go.’

Woman with ADHD, aged 45-54

5.3. Mitigating physical accessibility barriers

Many participants agreed that improving the physical accessibility of travel environments could help remove barriers to active travel, particularly for people with dyspraxia or additional physical conditions. Participants suggested the following recommendations:

- Provide resting spaces which are screened from view and not directly next to paths
- Increase the number of public toilets
- Widen pavements and paths
- Improve path surfaces
- Install dropped kerbs, especially next to disabled parking
- Minimise street clutter to avoid trip hazards
- Consider users of adapted cycles when designing both indoor and outdoor spaces.

While many of these are already covered in existing guidelines for accessible street design, they need to be fully implemented in order to make active travel more accessible.

'When you're resting, it shouldn't be in the middle of people who are being active. And so, having benches that are not straight onto a path, maybe in a little nook like a few metres away. Just a simple thing like that or where they've got a few shrubs around, just to shield.'

Autistic person with dyspraxia, aged 35-44

5.4. Addressing safety concerns

Participants agreed that dedicated space for cyclists and pedestrians would make active travel safer. This included creating a direct and well-connected network of continuous, off-road cycle routes. Some participants compared their experience of cycling in Scotland with other countries they had previously lived in or visited and felt had better infrastructure provision, such as Sweden or the Netherlands. Participants emphasised that painted markings to indicate the boundary of a cycle lane are not sufficient, with physical barriers needed to protect cyclists from traffic.

Participants also agreed that pedestrians and cyclists should be segregated to reduce risk of collision; however, clear and consistent rules, layout and signage are needed for this to work well, as discussed earlier (see section 5.2). One participant suggested fines for drivers or cyclists who break rules, for example by parking in cycle lanes. Several also agreed that more designated crossings are needed to overcome barriers related to processing vehicle speed and anticipating driver behaviours, which made crossing roads difficult.

Participants also suggested other ways to facilitate active travel by addressing personal safety concerns and traffic-related safety more broadly:

- Measures to reduce volume and speed of traffic
- Redesign road layouts, especially junctions and roundabouts, to prioritise the safety of vulnerable users and make them more visible

- Install lighting along active travel routes
- Funding to access helmet cameras
- Behaviour change campaigns to increase driver and cyclist awareness of other road and path users
- Cultural messaging to promote the idea that cycling is for everyone

> ‘But continuous segregated cycle routes, like you have in the Netherlands, for example, I think that would make things easier for everyone, not just neurodivergent people, because I believe there are lots of people who, for different reasons, will need them.’

Woman with autism and ADHD, aged 45-54

5.5 Addressing transport poverty

Recommendations to address the systemic causes of transport poverty among neurodivergent people extend beyond this report’s scope and were not widely discussed by participants.

We instead asked participants for their views on funding for schemes to provide neurodivergent people with access to cycles and other equipment necessary for active travel.

Participants told us they would value:

- Funding to access cycles, especially for more expensive specialist cycles such as adapted, folding, cargo or e-bikes
- Access to a ‘try before you buy’ scheme
- Access to cycle hire schemes, although some participants questioned whether the risk of vandalism and theft would affect deliverability
- Funding for secure communal cycle storage

'Yeah, if I hired cargo bikes, that would open up my world to do so many more things.'

Man with ADHD, autism, dyslexia and dyscalculia, aged 45-54

5.6. Including neurodivergent people in decision-making

Participation in decision-making is fundamental to the disability rights principle of ‘nothing about us without us’ and is key to addressing the barriers discussed in this report. There was widespread consensus among participants that neurodivergent people should be included by default in all levels of decision-making around active travel policy and design. Participants emphasised the importance of hearing from people with lived experience of neurodivergence about how decisions will affect them. They told us there were currently limited opportunities to influence decisions, or that decision-makers relied on the same small panel of citizens for consultations. Neurodivergent people want to have the opportunity to share their input and have their views listened to, and several expressed appreciation for the opportunity to contribute to improving active travel for neurodivergent people through their involvement in this research.

Participants highlighted that consultation events and materials need to be accessible to people with ADHD, autism and other forms of neurodivergence such as dyslexia. Surveys should have clear, simple instructions, short questions and visual imagery or symbols. They should also be provided in multiple formats to suit different needs.

'We need to consider people who have physical impairments but there are other aspects that maybe people don't pay heed to, or it's not seen as such a big deal. So I suppose even the survey itself is quite a nice thing to have done, to actually ask people what are your views on transport because no one's ever asked me before.'

Autistic man, aged 45-54

6. Undertaking further research

The high response rate to our sign-up survey (45 responses) indicates substantial interest from neurodivergent people in this research topic. This presents several opportunities for future research:

Methodological expansion

- Conduct walk-and-talk interviews with participants in different environments
- Implement larger scale quantitative studies
- Examine if identified themes apply more broadly across Scotland

Additional research areas

- Explore experiences of other forms of neurodivergence
- Investigate rural vs urban differences
- Study intersectional impacts in more detail
- Evaluate effectiveness of implemented recommendations

7. Methodology

7.1 Recruitment of participants and sampling criteria

7.1.1 Recruitment

We used a sign-up survey to recruit participants for this research project. To be eligible, survey respondents had to confirm they:

- Were over the age of 18
- Currently lived in Scotland
- Considered themselves to be either neurodivergent, autistic or to have ADHD

The sign-up survey collected additional information about:

- Mode of travel used within last month
- Frequency of walking, cycling and wheeling
- Reasons for wanting to take part in the research
- Demographic characteristics including age, gender, disability, ethnicity, employment status and geographic location

To reach as wide an audience as possible, we:

- Identified and contacted neurodivergent charities and groups across Scotland
- Asked organisations to distribute the survey via their networks
- Advertised in social network (Facebook) support groups
- Encouraged sharing through community channels

7.1.2 Sampling and screening

We received 45 responses to the survey. During screening, we identified five responses that appeared potentially non-genuine based on:

- Repetitive answers
- Limited detail
- Multiple submissions in very short succession

We followed up with one of these survey responses requesting additional screening information. Their email responses confirmed they were not eligible to participate in the research.

To ensure a balanced and diverse sample, we screened participants using multiple criteria:

- Other neurodivergent conditions
- Other conditions and disabilities
- Gender representation
- Ethnic diversity
- Age distribution
- Geographic spread
- Employment status
- Travel mode usage and frequency

7.2 Interview topic guide

The interview topic guide was developed based on findings and recommendations from the SRP9 neurodiversity and active travel review. It covered five key areas:

1. Background and Experience

- Participants' background
- Personal experience of neurodivergence
- Impact on daily life

2. Travel behaviours

- General travel patterns
- Mode choices

- Regular journey types

3. Neurodivergence impact

- Influence on travel choices
- Impact on travel experiences
- Specific challenges faced

4. Enablers of active travel

- Personal strategies
- Helpful infrastructure
- Supportive factors

5. Recommendations

- Views on SRP9 recommendations
- Additional suggestions
- Priority improvements

This structured approach helped ensure consistency across interviews while allowing flexibility to explore emerging themes.

7.3. Data collection methods

We used semi-structured qualitative interviews as a data collection method for this research project. Qualitative semi-structured interviews allow the interviewer to ask further questions on topics arising during the interviews, producing a rich and in-depth dataset. The interviewer can also tailor to the language used by the interviewee.

All interviews were conducted between November and December 2024. To ensure accessibility and full participation, we:

- Shared questions in advance with participants
- Offered closed captions
- Provided breaks as needed
- Conducted sessions via Microsoft Teams
- Scheduled 45-60 minute timeframes
- Recorded sessions with permission

- Provided £40 supermarket vouchers as appreciation

7.4. Data analysis

All interviews were recorded on Microsoft Teams and then transcribed by an external transcription company. Sustrans' Research and Monitoring Unit undertook thematic analysis, following a coding process. We adjusted the coding framework after initial testing.

7.5. Sample composition

Figures 4 to 8 in this section show a detailed breakdown of age, gender, geographic location, employment status and ethnicity.

Figure 4: Age profile of research participants

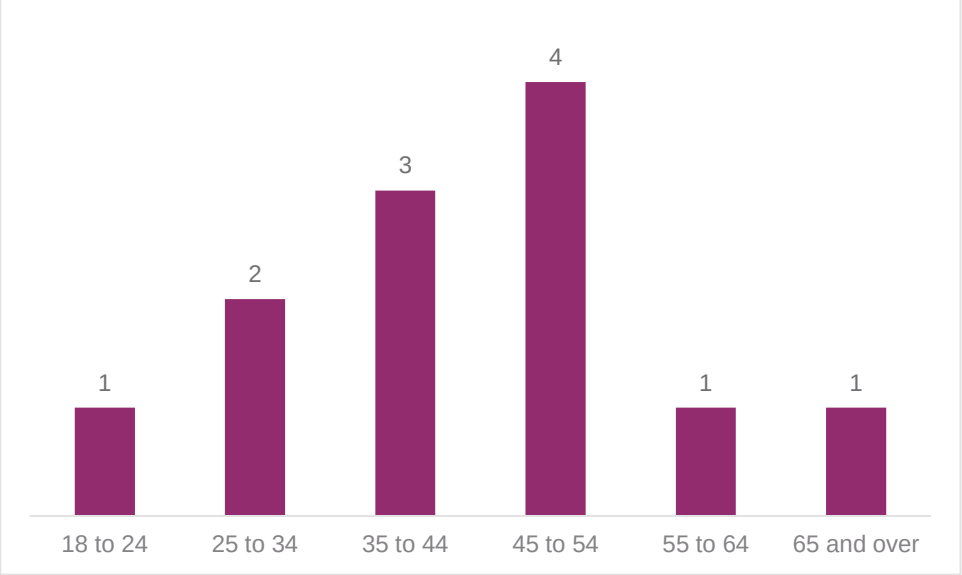
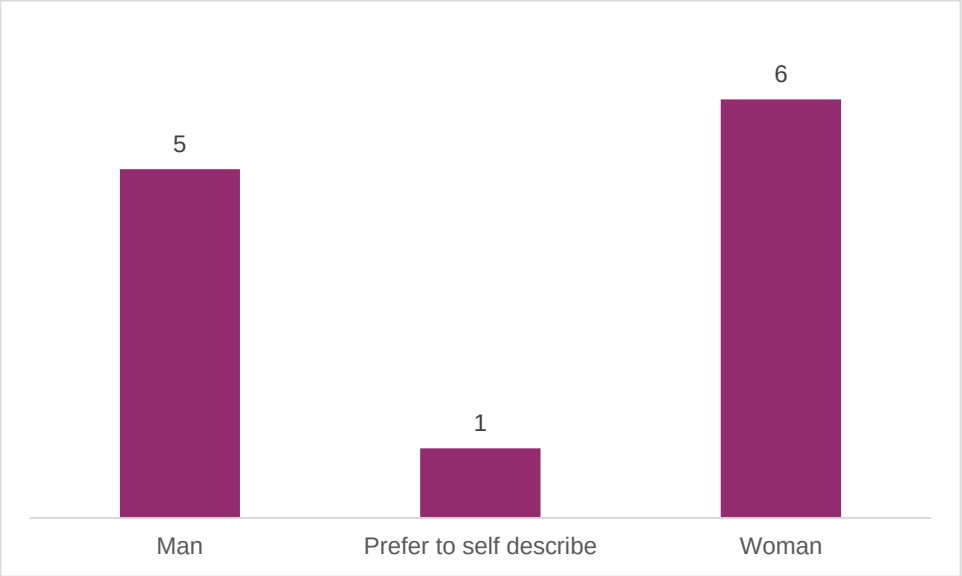
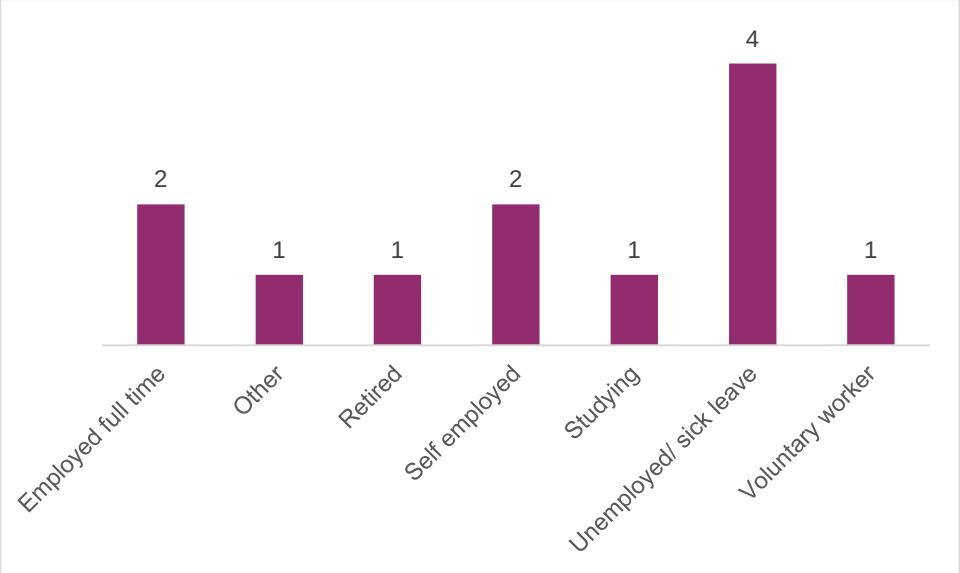


Figure 5: Gender of research participants



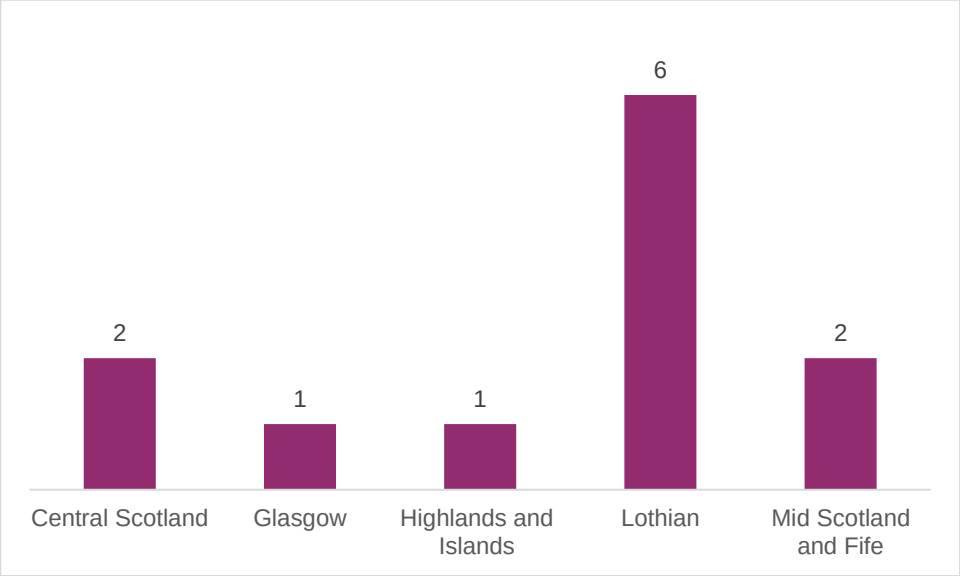
The participant who prefers to self-describe identifies as agender.

Figure 6: Employment status of research participants



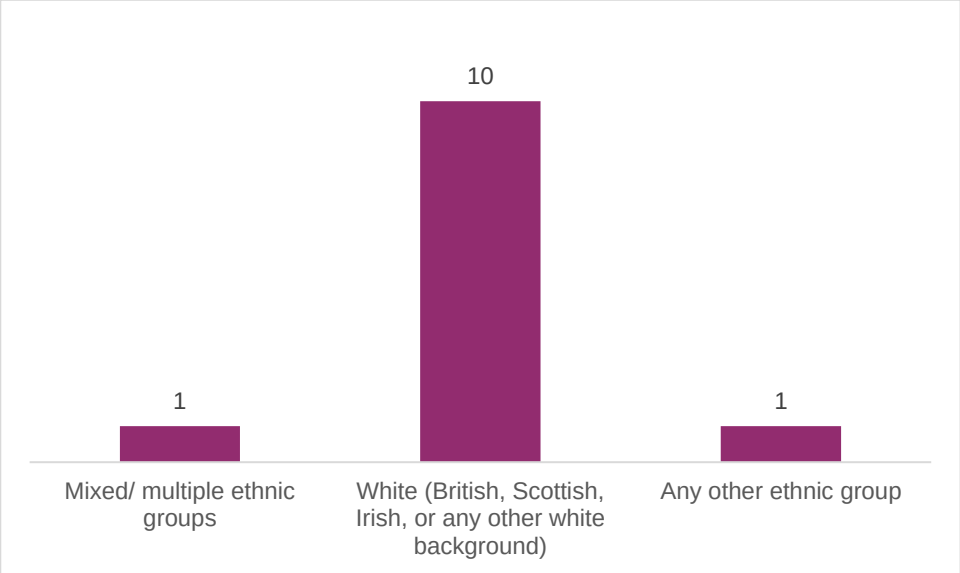
The participant who selected ‘Other’ is an unpaid carer.

Figure 7: Geographic location of research participants



Two participants mentioned living in a village or the countryside, while seven mentioned a town or city (the remainder did not specify).

Table 8: Ethnicity of research participants



The participant under ‘any other ethnic group’ is Latin American. The sample did not include any Black or Asian participants. Although all participants currently lived in Scotland, half of the sample were originally from other countries within the UK, Europe and South America.

Appendix A: Key terms

Term	Description
ADHD	Short for ‘attention deficit hyperactivity disorder’, a neurological condition which affects a person’s executive functioning skills.
Autism	A neurodevelopmental condition defined by social communication and interaction differences and restricted and repetitive behaviours.
Disability employment gap	The difference in employment rates between disabled and non-disabled people.
Dyscalculia	A neurological condition affecting understanding of numbers and mathematical concepts.
Dyslexia	A neurological condition affecting reading and writing.
Dyspraxia	A neurological condition affecting movement and coordination. Also known as developmental co-ordination disorder (DCD).
Executive functions	A set of cognitive processes and skills necessary to set, execute and complete tasks. These include planning, problem-solving and impulse control.
Interoception	The internal sensory system responsible for interpreting and regulating physical and emotional states.
Masking	Process by which neurodivergent people seek to appear ‘neurotypical’ by limiting expressions and behaviours that make their neurodivergence visible.
Neurodivergence	Refers to a range of neurological conditions and ways of processing, learning and behaving which differ from what is considered ‘normal’ or ‘neurotypical’.
Neurodiversity	Refers to the natural diversity in human brains.
Neurotypical	Refers to people who are not neurodivergent and could be seen to have ‘normal’ or ‘standard’ ways of processing, learning and behaving.
Proprioception	The sense responsible for identifying where your body is in space.
Sensory sensitivity	Refers to hyper-sensitivity to sound, light, textures or smells, which can cause distress and discomfort.

Term	Description
Task paralysis	Refers to feeling overwhelmed and unable to start or complete a task.
Time blindness	Refers to difficulty sensing the passing of time.
Transport accessibility gap	Refers to disabled people (including neurodivergent people) taking fewer journeys than non-disabled people as a result of travel systems being inaccessible.

References

Cooper, K., Smith, L. G., & Russell, A. (2017). Social identity, self-esteem, and mental health in autism. *European Journal of Social Psychology, 47*(7), 844–854. Available at: https://doi.org/10.1002/ejsp.2297

Dyslexia UK. (2024, December 16). *Exploring the Similarities and Differences Between Dyslexia and Dyscalculia*. Retrieved January 24, 2025, from Dyslexia UK: https://www.dyslexiauk.co.uk/exploring-the-similarities-and-differences-between-dyslexia-and-dyscalculia/

Hemingway, S. L., Cameron, E. C., & Jacquin, K. M. (2021). College students who believe they have ADHD report more neuropsychological deficits than non-ADHD peers. *Journal of American College Health*, *71*(7), 2160–2167.

Lewis, L. F., Ward, C., Jarvis, N., & Cawley, E. (2021). “Straight sex is complicated enough!”: the lived experiences of autistics who are gay, lesbian, bisexual, asexual, or other sexual orientations. *Journal of Autism and Developmental Disorders, 51*, 2324–2337. https://doi.org/10.1007/s10803-020-04696-w

National Autistic Society. (2025a). *Deciding whether to seek an autism assessment*. Retrieved January 24, 2025, from National Autistic Society: https://www.autism.org.uk/advice-and-guidance/topics/diagnosis/before-diagnosis/deciding-whether-to-seek-an-autism-assessment

National Autistic Society. (2025b). *What is autism?* Retrieved January 24, 2025, from National Autistic Society: https://www.autism.org.uk/advice-and-guidance/what-is-autism

Overton, G.L., Marsà-Sambola, F., Martin, R. et al. Understanding the Self-identification of Autism in Adults: a Scoping Review. Rev J Autism Dev Disord 11, 682–702 (2024)

Pohl, A. L., Crockford, S. K., Blakemore, M., Allison, C., & Baron-Cohen, S. (2020). A comparative study of autistic and non-autistic women's experience of motherhood. *Molecular Autism, 11*(3), 1–12. Available at: https://doi.org/10.1186/s13229-019-0304-2

Rutherford, M., Boilson, M., Johnston, L., MacIver, D., Curnow, E., & Utley, I. (2023). *Adult Neurodevelopmental Pathways: Report on Actions, Outcomes and Recommendations from Pathfinder Sites in Scotland.* Scottish Government. Retrieved from https://www.gov.scot/binaries/content/documents/govscot/publications/research-and-analysis/2023/03/nait-adult-neurodevelopmental-pathways-report/documents/adult-neurodevelopmental-pathways-report-actions-outcomes-recommendations-pathfinder-sites-scotland/

Sustrans. (2024). *Neurodiversity and Active Travel – an evidence review.* Scottish Research Programme 9.

The ADHD Centre. (2023, April 18). *Understanding ADHD: The 3 Different Types and Their Symptoms*. Retrieved January 24, 2025, from The ADHD Centre: https://www.adhdcentre.co.uk/understanding-adhd-the-3-different-types-and-their-symptoms/

University of Birmingham. (2025). *Co-occurence*. Retrieved January 24, 2025, from The Department of Disability Inclusion and Special Needs (DISN): https://www.birmingham.ac.uk/schools/education/departments/disability-inclusion-special-needs/resources/understanding-neurodivergence/co-occurence