



**Sensory
Street**

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MEET THE TEAM



Cathy Manning

Principal Investigator and
Lecturer, University of
Reading



Catherine Woolley

Research and
Engagement Officer,
University of Oxford



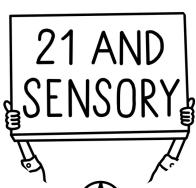
Becky Lyddon

Research Collaborator
and founder of Sensory
Spectacle



Keren McLennan

Research Collaborator
and Postdoctoral
Researcher, University of
Reading



Emily

Research Collaborator
and founder of
@21andsensory



Brett Heasman

Research Collaborator
and Senior Lecturer at
York St. John University



Jess Starns

Research Collaborator
and founder of Dyspraxic
Me



Raveen Rayat

Research Assistant,
University of Reading



**University of
Reading**



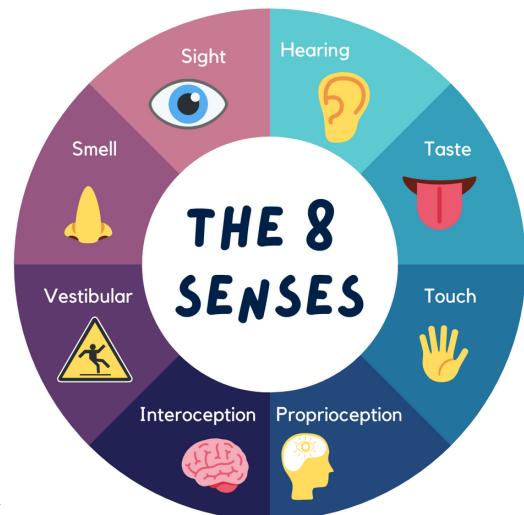
RESEARCH BACKGROUND

Autism is a neurodevelopmental difference in the way that people communicate and interact with the world around them. A recent research study identified that around one in 57 or 1.76% children in the UK are autistic (Roman-Urrestarazu et al, 2021). Other estimates have ranged from 1 in 44 (2.27%) in America (Maenner et al, 2018), 1 in 21 (4.7%) in Northern Ireland (Department of Health Northern Ireland, 2022), and 1 in 100 worldwide (Zeiden et al, 2022).

Autistic people commonly experience differences in the way that they process and respond to sensory information, which can be associated with distressing as well as enjoyable experiences.

Some autistic people may respond more to sensory information, meaning that they can find inputs, such as sounds or lights, to be painful and overwhelming. They may also respond less to sensory information, and may not notice inputs, such as someone touching their arm, or seek out certain stimuli, such as preferred smells or tastes.

Research has found that differences in processing sensory information are common in autistic people. The percentage of autistic children who experience sensory processing difficulties has been suggested to be as high as 69% - 95% (Hazen et al, 2014). Individuals with sensory processing differences can find certain places to be disabling, making some public places inaccessible for autistic individuals.



In 2021 the UK Government published its national strategy for autistic children, young people and adults: 2021 to 2026, which highlighted that autistic people can feel excluded from public spaces because of the impact of challenging sensory inputs and negative reactions from staff or members of the public. This paper highlights the need for people and businesses to learn and adapt to ensure that autistic people are supported and included within society. This has also been identified by the autistic community to be a key priority, and in reflection of this, Autistica, an autism charity which funds and campaigns for research to support autistic people, has recently made it one of their 2030 goals to learn more about sensory processing differences in autism.

However, research to date has often focused on characterising what sensory processing differences are for autistic people, as well as identifying what the person themselves could do differently to cope in more challenging environments. There is limited evidence exploring what environments can do differently to support autistic people and how these can make the world more enabling.

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ABOUT THE PROJECT

Over 2021 we ran seven online focus groups to explore what autistic people think about public spaces. In these groups we wanted to learn more about the sensory aspects of places such as supermarkets and what people thought made certain locations more or less enabling than others.

In the first set of focus groups we focused on learning about which locations people find easier or more challenging. Then in the second set of focus groups we asked people to explore the most commonly identified locations in more detail. After the focus groups had finished, we discussed the results we found with a feedback group of autistic people who helped us to refine the themes and ideas we found.

On our social media channels such as Twitter, Facebook and Instagram, we asked people a range of questions about what locations they find easier or more difficult and why. We also asked people to tell us about specific locations that people have reported can be challenging such as supermarkets and healthcare settings.

We analysed the data using content analysis as well as an approach called reflexive thematic analysis.

We have split our results into two sections, which explore both the locations that people find more challenging as well as what themes or principles seem to make certain spaces easier or harder than others. Each of these sections have a set of questions for businesses or organisations to help you start to think about adaptations that could support autistic people in different locations.

“

I think a common misconception is that... all autistic people are the same and have the same sensory triggers, which just isn't true. Like, what might affect someone pretty badly doesn't affect someone else at all...

what could affect an autistic person one time, doesn't bother them the next time because it depends on like what other stuff is going on for them... it's a lot more down to the individual and the circumstances at the time

”

SENSORY PROCESSING DIFFERENCES

People have eight different sensory systems that help us navigate the world around us. Differences in processing sensory information (such as the tastes of certain foods) can lead to people responding differently to certain stimuli. For example, a sound that one person can cope with may be overly loud or painful for someone else.

Hearing (Auditory Information)

- Auditory information is the sounds that we hear through our ears. These vibrations are processed by our cochlea and transmitted to our brain as electrical impulses.
- Someone under sensitive to auditory information may like noisy places or enjoy making loud sounds. They may also not acknowledge certain sounds.
- People who are oversensitive to sound may find it hard to cope with background noise as these sounds can be magnified and may be distorted. This can make it harder to focus on conversations in crowded places. Reducing external noise or providing ways to reduce the sound such as ear defenders or headphones can help.

Vestibular

- Our vestibular system controls our sense of balance and coordinating movement. This system in our inner ears tells our brain about our head position, how fast or slow we are moving as well as where we are in relation to other objects/people.
- Some people who are under sensitive to vestibular processing love to rock, swing, jump, bounce or spin. People who are over-sensitive can find it harder to control their movements, including having to stop suddenly and they may get car sick more easily.

Sight (Visual Information)

- We process visual information through our eyes, which includes colours, patterns, shapes, depth and contrasts.
- People with difficulties processing visual information may have poor depth perception leading to difficulties throwing/catching. Objects may appear dark or fragmented, with images appearing clearer in their peripheral vision. Increased sensitivity to light can make to go to sleep at night.

Taste (Gustatory Information)

- Our sense of taste (also known as gustatory information) comes from receptors in our tongue, which can detect different tastes such as sweet, salty and sour.
- When we are eating, our sense of taste works closely with our senses of smell and touch (to process the texture of food) to process different foods.
- Someone who is under sensitive to taste may like strong flavours or very spicy food. Some people also may eat non-edible items such as grass or stones (also known as pica).
- People who are over sensitive to taste can find certain flavours or foods too overwhelming, and certain textures may also be difficult to eat. This means that they may have a restricted diet, only eating foods with certain textures (e.g. crunchy or smooth foods) or limited tastes.

Touch (Tactile Information)

- The tactile system processes information gained through your skin. It processes and connects information about touch, pressure, temperature and pain.
- Someone undersensitive to touch may have a high pain threshold and may prefer certain textures or firm pressure. Others who are over sensitive to touch can find it painful or uncomfortable. They may find wearing certain clothing more difficult (especially labels) as well as washing and brushing hair. Difficulties with touch can also affect a person's enjoyment of certain foods due to their texture.

Proprioception

- Proprioception is the feedback we receive from muscles/joints in the body. It helps us understand where our body is in space as well as our movements and actions. This sense is important for coordinating movements of the body.
- People with proprioception difficulties can find it hard to judge personal space and distance from other people. This means they may bump into people/objects in rooms. Fine motor skills can be difficult e.g. tying shoe laces or using buttons.

Interoception

- Interoception is all about sensations that happen inside your body
- It is also known as the ability to feel what is happening inside our body, such as feeling hungry, thirsty, hot/cold, nauseous or even that you need to use the toilet.
- Interoception is most easily recognised through emotions. Many emotions are linked to physical sensations, such as a faster heart rate when you feel scared.
- Sometimes information from our other senses can disguise these or prevent us from recognising them easily at times. Someone who is over-responsive may feel inputs such as pain or hunger for longer periods than other people while others may not be aware of them until they are very intense.
- Some people can also find it harder to read these signals, meaning it can be harder to know where sensations are coming from or what they mean. This can make it harder to meet your body's needs or understand internal emotions.

Some people may be hyper-sensitive to inputs (e.g. the smell of coffee) or less aware of these than other people (hypo-sensitive). Each sense may be affected in different ways to different levels, and it can vary depending on the context. Other people may find it more difficult to distinguish between different stimuli, meaning that they may register two different inputs (e.g. different tastes) as the same.

Someone who knows first-hand what daily life is like with sensory processing difficulties is Emily, a member of our project team. She has Sensory Processing Differences and is Autistic.

'Sensory processing issues are a constant thing for me – my senses are ridiculously heightened at all times and totally out of my control. My mood can change so quickly if I become overwhelmed by something (e.g. loud noises, bright lights, strong scents, unexpected touch) as I cannot filter the information coming into my brain, and I cannot regulate my emotions or understand and label my own feelings. This means day-to-day it can be quite tiring being out in the world, and as a result, I've become very good at masking (hiding my true thoughts/feelings), and I can only really drop that mask when I am in a safe environment like my home. Both personally, and as a team, I think we feel that it's very important to create awareness of sensory processing difficulties as they are a key part of what makes the world quite a disabling and uninviting place for autistic people.'

Emily, @21andsensory

Sensory processing differences are part of what can make the world disabling for autistic people. Support often focuses on interventions for the individual. Our aim is to help the public learn more about sensory processing differences to encourage businesses to think about how their spaces could be changed to support all people who use them.

WHAT DO AUTISTIC PEOPLE WANT NEUROTYPICAL PEOPLE TO LEARN?

People explained that the response someone can have to an environment or a specific sensory input can vary over time. This means that one day someone can cope with a specific input or location while at other times it can be overwhelming (and this can change even during the day). People also highlighted how every autistic person is unique. Therefore, what one person might enjoy might be something another person finds more challenging.

Over 86% of people who responded reported that they feel neurotypical people underestimate the impact of a negative sensory environments on an autistic person. Negative sensory inputs are not just 'annoying' but can be truly painful. People identified that neurotypical people often assume they are exaggerating and assume that autistic people can ignore or cope with difficult inputs in the way that they can.

On our social media posts, people highlighted that as well as pain, managing challenging sensory environments can lead to other physical responses. Some people reported that they can find it difficult to speak which others reported feeling sick. One person identified the negative consequences can be long lasting, reporting that even if they can cope in the short term, later it's a 'buildup of distress that makes me erupt later in my lonesome'.

For someone who does not experience strong physical responses to a sensory environment, it can be difficult to imagine the impact it might have on someone with who processes sensory information differently. These results show why it is important to talk to autistic people about their perspectives and for people to learn more about how sensory processing difficulties can impact on someone's experience of public places.

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What makes a supermarket challenging I think is... just the noise... you can just hear everything, so you hear people, you hear like beeping, you hear like people pushing stuff, like you just hear everything. It's very overwhelming.

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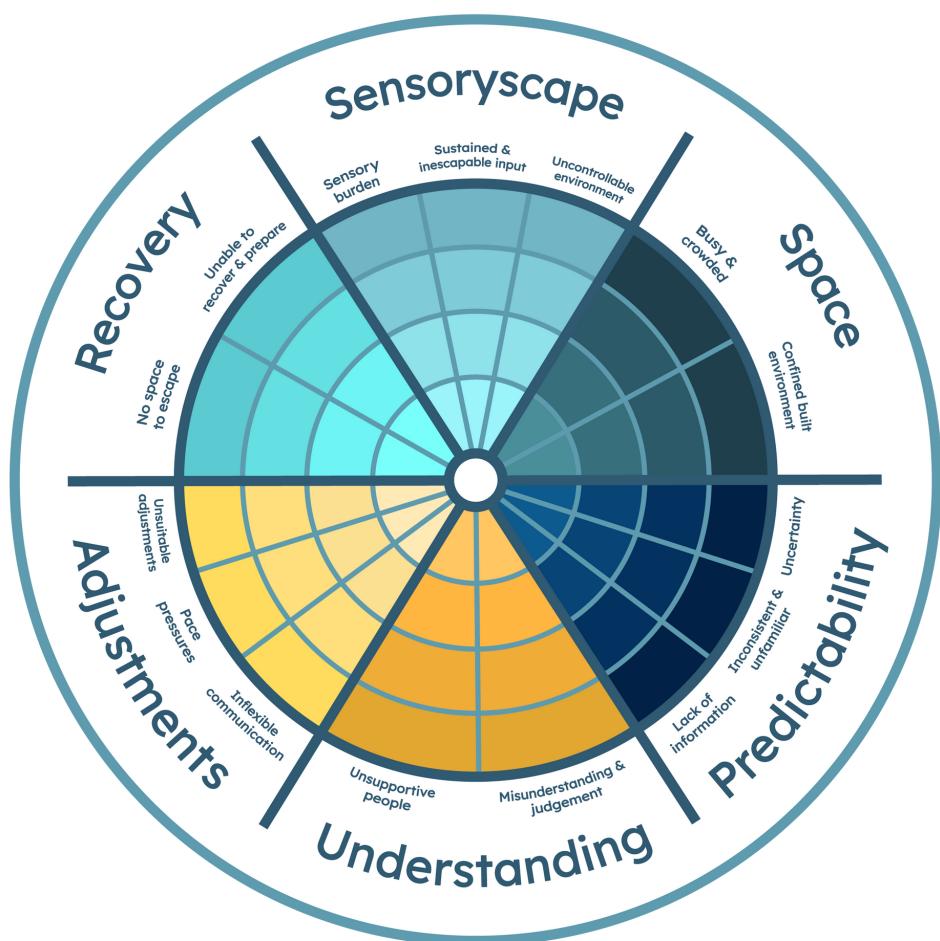
THE SENSORY WEB

"I always envisage it is a big spider web of things that might affect me in a sensory environment, and I want to say to people, it's about actually looking at all those little things that build up..."

Focus Group Participant

With the support of @21landsensory we designed a sensory web of the different principles that make environments more or less challenging. The outer edge of the web represents the more disabling end of the scale, whereas closer to the centre of the web represents the more enabling side.

People identified that different factors often overlap with one another which can make an environment more challenging. For each individual these factors may overlap in different ways to different extents. This means that each person's perspective of a public place may be similar but each will be slightly different depending on their own needs, interests and experiences.

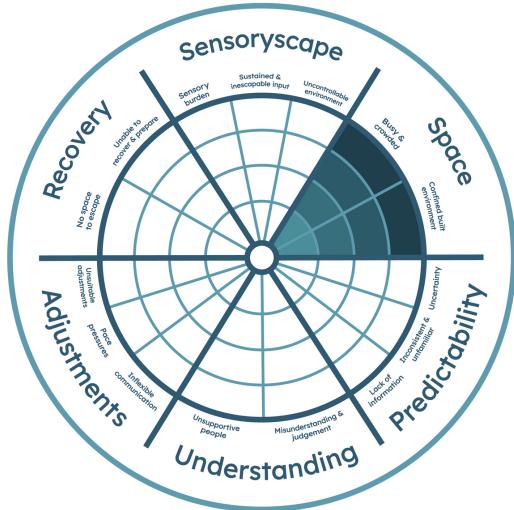


SPACE

People in our focus groups identified that environments which felt confining due to the lack of space could be more challenging compared to larger open spaces.

This was influenced by:

- The business and proximity (distance) of other people around them
- How confined the space feels due to the built environment



People identified that they often preferred to go to places when they were less busy so that there were fewer people nearby and they could be more easily avoided. The architecture of the building itself could impact on their perception of space in public spaces, such as the height of ceilings/shelves or the width of pavements or walkways. Several people identified that they had appreciated the additional distance between tables in restaurants due to COVID restrictions increasing the space between them and other people.

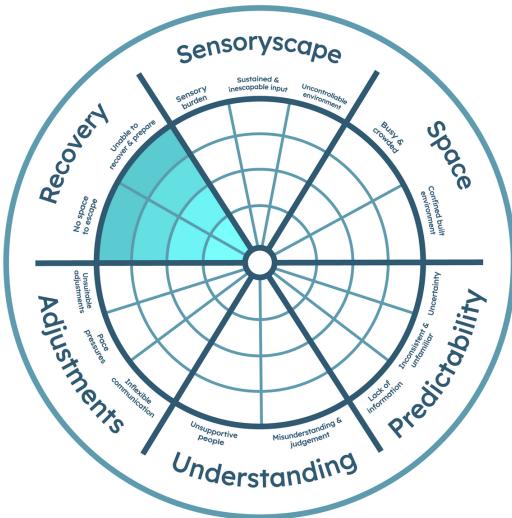
Questions to think about:

- How close together are the tables/chairs in the seating area of your location? Do you have any tables that are further apart or booths which people could choose/request to sit in?
- If you do have booths/tables in quieter spaces, it is possible to be able to book these specifically in advance?
- Can you identify 'quieter hours' when fewer people are booked to visit your spaces or when people tend to go less often? Is it possible to provide information about what times your space is less busy (such as on a website or social media)?
- How close together are aisles and walkways in your space? Is it possible to introduce a one-way system to reduce the amount of people walking in both directions at once?
- Is it possible to alter the space so that it feels less confining? For example, reducing the height of shelving units or spreading them further apart from one another?

RECOVERY

Across our focus groups people identified the importance of having time to recover from more challenging sensory environments. This included:

- Being able to take breaks away from overwhelming sensory input to recover and prepare
- The need for designated spaces in public places to escape from sensory input



People noted how being able to take short breaks to recover from overwhelming sensory environments and prepare to carry on can help to make more difficult locations more accessible. They described the challenges of feeling trapped in environments with sustained negative sensory input, and how helpful it could be for locations to have a place to sit which was quieter with fewer people to recover in.

Questions to think about:

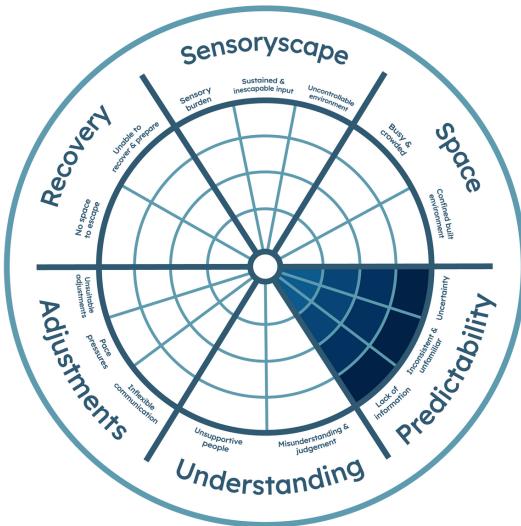
- Do you have a quiet/safe space that people can use? How can people access this space?
- Are these spaces clearly signposted/marked? If it is a larger space, are there multiple locations they can use?
- Are they able to continue to engage with the activity when in this space? For example, listening to the concert but at a reduced volume?
- Are people able to take short breaks and then return to your location? If in a larger space such as a museum, are they able to leave midway through by request and return to the same location or will they have to start from the beginning again?

If someone has to wait for something in your location (e.g. in a doctor's surgery) do they have to wait in your location? Is it possible for them to be able to go to another nearby location and be messaged (e.g. by text/phone call) when they need to return?

PREDICTABILITY

People identified that environments which are more consistent and familiar are more accessible. Environments are more overwhelming when people are uncertain about:

- How long they have to remain there
- What types of sensory input there will be in a space
- The intensity and duration of aversive sensory inputs
- The layout of the environment
- What procedures have to be followed (e.g. how to order food or request help)



Different branches of restaurants or shops can have different layouts or designs. Unexpected changes to the layouts within stores can also make these more difficult, such as changing where different items are stocked.

The more information available in advance (e.g. about the store layout), the easier it is to visit new environments as well as prepare for changes to existing locations.

Questions to think about:

- Do you have images and/or videos of your space available online to look at in advance? Do you have any information about the layout (for example, a map of the different aisles in a supermarket)? Is the information up to date?
- Do you have information online about sensory inputs that some people may find more challenging?
- Do you have any information online about the expectations within your space? For example, how to order food/drink or pay for products or how long certain processes are expected to take?
- If you are going to make a change to your location, such as altering the layout, can you make this information available online to prepare people for it? Is it possible to provide dates for when this is expected to happen?

UNDERSTANDING

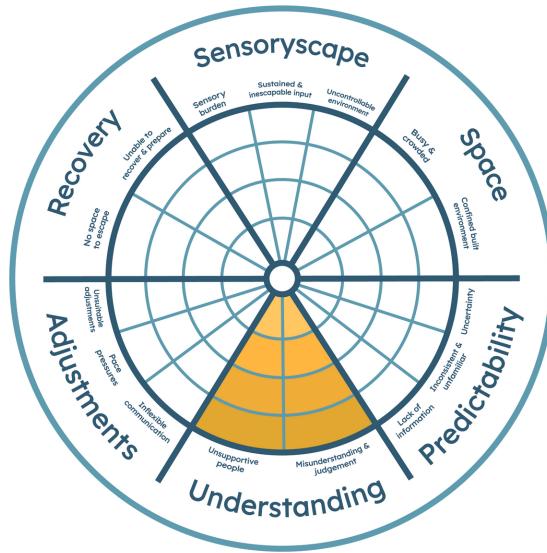
People reported that staff in public places lacked knowledge of sensory processing differences and autism. This led to individuals facing judgement, misunderstanding, and stigma from staff and the public.

This can prevent people feeling comfortable asking for help in challenging environments. Some reported they would try to camouflage their sensory challenges and coping mechanisms (such as stimming or using fidget toys) which could make these public places more difficult. Some people identified that they work hard to 'appear normal' even when feeling overwhelmed, not wanting to be perceived as being 'difficult' for their additional needs.

People felt that staff would benefit from having additional training in autism so that they can be more understanding and supportive of autistic people.

Questions to think about:

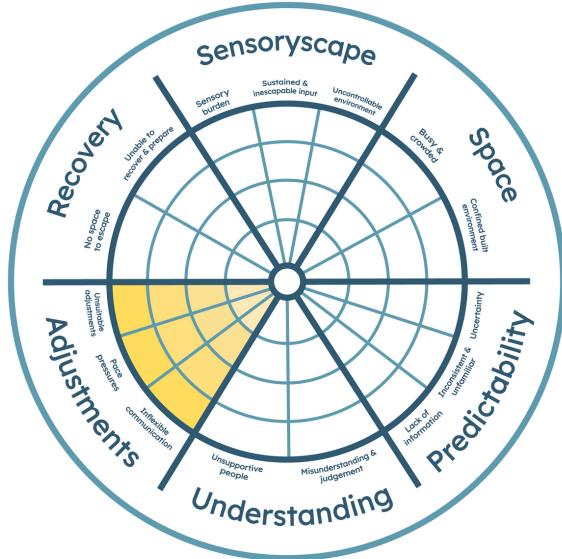
- Do you and your staff currently receive training about autism and sensory processing difficulties? Is this training generic or tailored to your location (e.g. identifying specific sensory inputs that people might find more challenging in your space)?
- Do staff feel confident in knowing what accommodations they can make to support autistic people? (e.g. seating them in different locations within a restaurant or using alternative methods of communication)?
- Do you have a way that individuals who visit your space can indicate whether they may need additional support for their sensory needs? Can staff recognize this?
- Are staff aware of national schemes such as the Sunflower Lanyard and what these represent?



ADJUSTMENTS

People in our focus groups identified that the lack of suitable adjustments can make places with challenging sensory environments more inaccessible. They described the importance of:

- Supporting an individual's communication needs/preferences
- Being able to reduce the pressure and pace of interactions
- Ensuring that adjustments aren't tokenistic



Most public places expect people to use spoken language to communicate, which can be anxiety provoking and challenging, especially if someone feels overwhelmed by the sensory environment. Using technology such as ordering food through apps can make this easier. Existing approaches such as 'quiet' hours or the Sunflower Lanyard scheme can be inconsistent or misunderstood. The best environments are ones where support can be tailored to a person's needs.

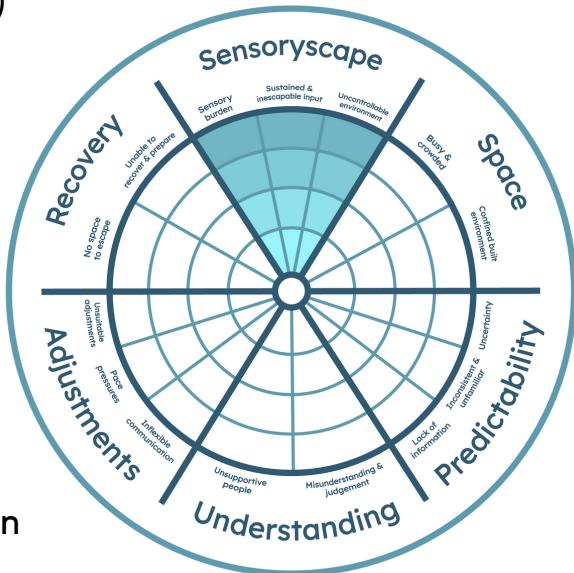
Questions to think about:

- Can information about any potential accommodations that can be made online so that people are aware of these in advance?
- Are staff aware of any potential adjustments (e.g. sitting away from a speaker) they can make to support people?
- Do you have a way that individuals who visit your space can indicate whether they may need additional support? Can staff recognize this? Can people give this information when making a booking in advance?
- Are there ways people can communicate non-verbally such as using an app? Are any of your staff trained in basic Sign Language/Makaton?
- Is there adequate signing for people to be able to navigate your location? Are locations such as toilets easily identifiable?
- Does your location have 'autism friendly' hours? Are these times easily accessible for most people?

SENSORYSCAPE

The sensory landscape (or sensoryscape) of an environment describes all the different sensory inputs in that space such as the smells or sounds. People identified that the sensory burden of a public place occurs in two main ways:

- Environments that have multiple layers of different sensory inputs happening at once
- Environments that have particular intense sensory inputs such as sudden loud noises or very bright lights



People also identified that the sensoryscape of an environment is more difficult if the different sensory inputs are sustained over time and if they are unavoidable. How challenging an environment is can also be affected by how much control an individual has over that environment. For example, is it possible to reduce the volume of the sounds in the space or block them out such as with noise cancelling headphones?

Questions to think about:

- Are you aware of what may be potentially challenging stimuli in your environment? Have you discussed it with autistic people in your area to identify what they can find more difficult?
- Is it possible to reduce some of the more challenging sensory inputs, such as having strongly scented products available on request?
- Could there be times when potentially challenging inputs could be reduced such as by removing the background music? Are these times available to book and is information about it available on your website?
- Is it possible for people to make any changes in your setting such as turning off the voice on a self-checkout or self-scanner?
- Can people make personal accommodations such as wearing ear defenders or sunglasses? Are any of these available on request? Are staff aware of these?

“

I think that having like a quiet room can apply to like so many different places, even places like concerts... I think a lot of people might think, well, if you have these sound sensitivities then why would you be going to a concert. But I think that we should have, like the equal opportunity to still like enjoy those things, but also have kind of, a backup area if we get overwhelmed

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LOCATIONS

Both the focus groups and social media posts found that supermarkets and eateries (such as pubs, cafes, and restaurants) were the two most challenging public spaces to be in (see the table below for details). While the other locations are in slightly different orders, we can see a lot of similarities between both groups. It makes sense that these locations are ones people wanted to talk about as they are places that most people visit regularly and can make those experiences more difficult. These results highlight which places autistic people often find difficult to visit and where would benefit the most from making changes to support autistic people's sensory needs.

Focus Groups	Social Media Posts
Supermarkets/Grocery Shops	Supermarkets/Grocery Shops
Eateries	Eateries
High Streets & City/Town Centres	Retail Shops/Shopping Centres
Healthcare Settings	Public Transport
Public Transport	High Streets & City/Town Centres
Retail Shops/Shopping Centres	Healthcare Settings
	Education Settings

Both groups identified the same most enabling location: outdoor green spaces such as (botanical) gardens, public parks and forests/woodland. It's interesting that the focus groups had retail shops as both one of their most disabling and enabling locations depending on the kind of shop. In the focus group people identified that specific shops such as Flying Tiger are easier to visit than others while people on social media talked about enjoying visiting bookshops.

SUPERMARKETS

Supermarkets can be a highly multi-sensory environment, which often has bright, unnatural lighting. The floor can be highly reflective and shelves may be tall and overwhelming. Noises in supermarkets can be overwhelming such as from trolleys, checkouts and other customers.

The lack of personal space can make them less accessible and people identified that they find them easier when they are less busy. Supermarkets often change their layouts which can make it more difficult to plan ahead.

The benefits of quiet hours were identified, but people reported the need for these to be at more widely accessible times. It can be difficult to escape/take a break to recover in supermarkets, as often the barriers designed to prevent theft can make it more difficult to leave if needed.

People identified that they can feel rushed at the checkouts, and having to communicate verbally with the staff can add additional pressure. It was identified that staff lack an understanding of autism and sensory processing and would benefit from additional training in these areas.

Questions to Consider:

- Is it possible to have a layout of the store available in advance? Can people be warned when there are going to be changes to the layout?
- Is it possible to put information online about which times are the most busy or quietest in the store?
- Can aisles be widened or one way systems introduced to reduce the number of people walking around the aisles?
- Are there alternative means to pay to reduce the communication load such as self-service checkouts or scan as you go?
- Is it possible to alter the sensory environment to make it more accessible? For example, can you reduce the volume of certain machines?
- If the above changes cannot be implemented all the time, are there quieter times in the day where these can occur? How can autistic people learn about these times?

HEALTHCARE SETTINGS

During our focus groups people talked about the sensory challenges present both in GP surgeries and hospitals. While some people have had accommodations built into their care plan, others identified that some staff find it difficult to understand the negative emotional impact of certain sensory triggers and how these could make their stay more challenging.

People identified that the brightness and sound of fluorescent lighting can be overwhelming as well as food/chemical smells and the level of constant background noise which can make it harder to focus on a specific person or sound. Healthcare settings can be unpredictable and these unknown delays (such as waiting past an expected appointment time) can raise people's anxiety and make these spaces more challenging.

People identified that locations which support non-verbal communication methods (such as being able to sign in via a touch screen) were often more accessible. Other helpful accommodations included being able to access a quieter, separate room while waiting for an appointment.

Questions to Consider:

- In a waiting room, do you have a quieter space that people can use? How can people access this space? Can they request to use this in advance?
- Alternatively, could they sign in then go to another nearby location and be messaged (e.g. by text/phone call) when it is their turn?
- Can people communicate non-verbally, such as checking via a touch screen or using writing, sign language/Makaton?
- Do you have a way that people can indicate whether they may need additional support for their sensory needs? Can staff recognize this?
- Have staff had training about autism and sensory processing difficulties? Are staff aware of the potential accommodations they can make?
- Have you discussed a person's sensory needs with them and identified any adjustments that could be made to make their stay more comfortable? Can these be included within any health plans so staff are aware of them in advance?

HIGH STREETS AND TOWN/CITY CENTRES

People identified that city/town centres can be challenging due to the intense multisensory input. There are often many random and overlapping layers of noise such as people talking, street sellers, street musicians, noises from nearby shops/eateries and construction work. Smells and high levels of visual information (e.g. shopfronts) can also be challenging, especially if these are unexpected.

These areas are often unpredictable, busy and crowded. Our focus groups identified that wider streets can help to make these areas more accessible by reducing the volume of people in a confined space. Increasing the predictability of locations can make them more accessible, such as with maps, signage and help/information points. People also identified it can be difficult to escape from the sensory input in town/city centres and high streets. People reported that locations with designated quieter, safe spaces to be able to recover in can help to make these spaces more accessible.

Questions to Consider:

- Do you have a quieter and/or shaded space that people can go if they are feeling overwhelmed?
- Are there dedicated times street musicians perform? Is it possible to share this in advance so people can avoid certain areas at these times?
- Do you have information available online about the location of different shops, eateries and other services? How often is this updated? Are people able to find out about events that might be happening on certain dates such as festivals, protests, construction work and food markets?
- Is there information available for people to access when in the location such as signs, maps and help desks?
- Are there certain systems such as one-way systems in the area? Are these clearly marked for people to use?

PUBLIC TRANSPORT

People identified that the timetables of public transport can be inconsistent and delays are not always communicated. While train stations are more likely to have information about changes to arrival times or cancellations, it can be more difficult to learn this information when at a bus stop or in advance.

When on public transport, it can be difficult to avoid sitting near other people which can be challenging. Seats may be covered in litter which can come with challenges such as certain smells, while others identified that the textures of the seats can also be uncomfortable and they can also be too hot.

Due to the nature of public transport, it can be difficult to escape from any negative input. People identified that public transport often lacks adjustments for people with sensory processing difficulties, such as spaces for hidden disabilities or alternative means of communication. Some identified how they felt judged by others when using their coping strategies such as wearing headphones or using fiddle toys, and that staff would benefit from training in how to support autistic people.

Questions to Consider:

- How do you communicate delays or cancellations? Are these available online in advance (if known)? How can people learn more about expected arrival/departure times while waiting?
- Do you have quieter carriages or spaces where people with autism/sensory processing difficulties can sit? Are people able to book or request these spaces specifically in advance?
- Have staff received training about autism and sensory processing difficulties? Are staff aware of the potential accommodations they can make to support autistic people?
- Do people have to communicate verbally to purchase a ticket or request a specific stop? Could they use any non-verbal approaches (e.g. having a touch screen where people can choose their options)?

EATERIES

Eateries (e.g. restaurants, pubs and cafés) can be challenging due to the layered and multisensory inputs such as from coffee machines, bright lighting or background noise. Places where there is more space between the tables or there are booths can be more accessible as it can reduce the intensity of the nearby sounds. Having information in advance (e.g. menus or photos of the layout) can also help as can information about how the venue works (such as how to find a table, order food or pay the bill).

People identified that the predictability of food and drinks is important and can make certain venues more accessible. Some people can find certain tastes, textures or temperatures challenging which makes ordering new foods more challenging as well as when the ingredients in established items changes. They may feel worried about being judged by staff for being a 'picky eater' or 'awkward' due to their sensory needs, especially if they don't have someone with them who can support them or help to explain.

Eateries are often fast paced locations which can make it hard for people to take their time to process different information. People suggested that it might help if eateries had a way to indicate you may need extra help for sensory difficulties or other ways to communicate such as through an app.

Questions to Consider:

- Do you have any tables that are further apart or booths which people could choose to sit in? Is it possible to book these spaces in advance?
- Do you have information online about what a person can expect to do in your venue (e.g. how to order food) and a menu?
- If you change the ingredients or items on your menu, is this information available online?
- Do staff feel confident in knowing what accommodations they can make to support autistic people? Could they have any training about this?
- Are there times when your location is more accessible for autistic people? Can people book these specifically? Is information about these online?
- Do you have a way that people can indicate whether they may need additional support for their sensory needs? Can staff recognize this?

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“I think neurotypical people don't realise that when we're trying not to show a sensory environment is affecting us, because we don't want to be perceived to be “difficult” about asking for the lights to be turned off or for the radio to be turned down, it really drains us”

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LINKS BETWEEN THE EXPERIENCES OF AUTISTIC CHILDREN AND ADULTS

As well as learning about how the sensory aspects of public places can affect autistic adults, we also wanted to learn about the potential impact on autistic children. We were lucky to link with the Queensmill Trust who support a range of children across Greater London. We identified that several of our themes about autistic adults from the focus groups resonated with autistic children.

Both groups identified environments can have challenging sensory inputs such as loud noises. However, one of the main challenges in public places is that inputs can be unpredictable which can make children more anxious about being in certain spaces. When they are given time and space to explore new inputs themselves they may find these less challenging or even enjoy it.

Again people highlighted the importance of understanding and empathy from others. Negative attitudes from staff and the general public due to a lack of understanding of autism and sensory processing can lead to situations becoming more challenging and reducing a person's enjoyment of a space.

People in both groups also identified the importance of increasing accessibility and ensuring that existing schemes actually benefit autistic people. This includes considering the placement of sensory rooms or spaces to recover so that they can be easily accessed within venues. It also includes ensuring that 'quiet hours' in supermarkets and relaxed performances are actually at times that people can easily attend.

We identified that public spaces need to focus on making changes to both the physical and social environments and to consider how different factors may overlap and interact with one another. Changes to support autistic people need to take in a diverse range of reactions and perspectives into account to ensure that adaptations are not tokenistic.

LINKS BETWEEN OUR SOCIAL MEDIA POSTS AND FOCUS GROUPS

While there were differences in the order that different locations appeared and the exact places people discussed, we saw the same places being mentioned over and over again both on social media and in our focus groups.

Both the focus groups and social media posts found that supermarkets and eateries (such as pubs, cafes, and restaurants) were the two most challenging public spaces to be in. They also both identified outdoor spaces such as public parks, gardens and forests/woodland are the most easily accessible location.

While we didn't find evidence of every subtheme from the focus groups, we found that every theme we identified resonated with the experiences and views of people who answered questions on our social media pages.

Both groups identified that the sensory landscape (or sensoryscape) of a location can impact on how easy a space is to be in. Places with multiple overlapping inputs such as different smells and sounds are often particularly difficult to cope with. Locations can often be unpredictable and may change layout or products without warning, and this disruption to people's routines can also make these spaces harder to cope with.

Across our discussion group, focus groups and social media posts people highlighted a lack of understanding about autism/sensory processing difficulties in the general public. They also identified that adaptations and adjustments can often feel tokenistic rather than helpful. It shows that changes to support autistic people need to take into consideration what autistic people really want and to ensure that these changes reflect people's diverse experiences and perspectives.

LIMITATIONS AND FUTURE RESEARCH

As with all research projects, this one has its limitations. Holding our focus groups online meant that we could talk to people safely during the COVID-19 pandemic. It also meant that we could have people from across the UK (and beyond!) involved in focus groups at the same time and it gave people a range of different ways to express their views through either video or using the chat function.

However, it relies on people having access to a device such as a tablet, laptop or phone. It may have made it more difficult for autistic people with additional learning difficulties to be involved as they might need extra support to be involved online. We found that 70% of the people involved in our research project were female and most were under the age of 35. The fact that most people were under 35 may reflect the fact that we primarily advertised the event online through social media.

Interestingly, we found that most of the people in our focus groups and on social media talked about the challenges of being hypersensitive to sensory inputs in public places. This means that they are more affected by certain stimuli than other people, such as loud noises or bright lights.

Some autistic people are hyposensitive, meaning that they do not respond as much to stimuli such as strong smells as other people. We wonder if we had fewer people tell us about their experiences of hyposensitivity because it is much harder to notice and talk about the absence of something. As people who are hyposensitive often like to seek out stronger stimuli/feedback (e.g. louder sounds or fast movement), it may be that they also do not find the same places challenging as people who are hypersensitive, or they experience them in a way our research didn't capture.

All autistic people's experiences of public places are unique and may differ at different stages in their life or even during the same day. This means that adjustments which may help one person might not be as helpful for someone else. It is important for future research to continue to explore the sensory experiences from as diverse a group of people as possible to ensure that a range of people's views and experiences are represented.

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"I can handle a lot of sensory stimuli even when it bothers me I can just ignore it but then later on I end up collapsing because of it.

Sometimes I try casually to explain my SPD [Sensory Processing Differences] and NTs [Neurotypical People] will be like "I agree that is so loud/ bright/ etc!" and I dont think they understand its a buildup of distress that makes me erupt later in my lonesome"

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THANK YOU

Thank you to all our participants who engaged with both our social media posts and were involved in our series of focus groups. We would also like to thank those who were involved in the feedback groups for our research project, event and booklet design for their contribution.

We would also like to thank PEARL (Person-Environment-Activity Research Laboratory, UCL) for this support in creating and hosting our immersive event in August 2022.

Contact Us



<https://sensorystreet.uk/>



sensorystreet@psy.ox.ac.uk



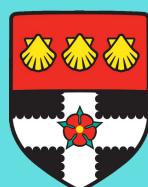
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