AUTISM @MANCHESTER

Winter Newsletter 2022

Welcome to the Winter 2022 edition of the Autism@Manchester newsletter. There has been lots of high-quality research in vision and friendships, in addition to interviews and events which are described in this addition of the newsletter.

CONTENTS

General News

News Round Up

- **August 2022**: The Body, Eye and Movement (**BEAM**) lab featured in the Psychologist magazine, talking about the value of co-production of research with academics and autistic people.
    - Read more by clicking this link: https://www.bps.org.uk/psychologist/theyre-able-see-things-i-dont

- **Summer 2022**: **Lucy**, our Autism@Manchester intern shares her experience of the role.
    - Read more in the Autism@Manchester Intern section of this newsletter or by clicking this link: https://blogs.manchester.ac.uk/beamlab/2022/09/08/lucy-our-autismmanchester-intern-shares-her-experience-of-the-role/

- **December 2022**: Lucy, our Autism@Manchester summer intern, interviewed **Dr Katie Twomey**, a Lecturer in Language and Communicative Development based at The University of Manchester. Together they have an entertaining and informative conversation touching upon Katie's research, misunderstandings around autism, autistic people in the workplace and what an autistic world would look like.
    - Watch the interview by clicking this link: https://www.youtube.com/watch?v=2IIi6MhXdQQ

Publications

Recent Publications

- **Sturrock, A., Guest, H., Hanks, G., Bendo, G., Plack, C. J., & Gowen, E. (2022) Chasing the conversation: Autistic experiences of speech perception. Autism Developmental Language Impairments, 7, 23969415221077532. doi: 10.1177/23969415221077532.**
  - Publication of the first academic paper directed to autistic people's experiences of speech perception.
  - Read the full paper here: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9620672/
- **Parmar, K. R., Porter, C. S., Dickinson, C. M., & Gowen, E. (2022). Investigating eye examination-related anxiety in autistic adults. Clinical & experimental optometry, 1–7. Advance online publication. https://doi.org/10.1080/08164622.2022.2065189**
  - Investigated anxiety in autistic adults as a barrier to accessing eye examinations.
  - Read the full paper here: https://pubmed.ncbi.nlm.nih.gov/35654474/
- **Poole, D., Casassus, M., Gowen, E., Poliakoff, E., & Jones, L. A. (2022). Time perception in autistic adults: Interval and event timing judgments do not differ from nonautistics. Journal of experimental psychology. General, 151(11), 2666–2682. https://doi.org/10.1037/xge0001203**
  - Investigated time perception in autistic adults that is proposed to underlie some of the behavioural and cognitive differences in the condition.
  - Read the full paper here: https://pubmed.ncbi.nlm.nih.gov/35467931/

Publications

- **Gowen, E., Poliakoff, E., Shepherd, H., & Stadler, W. (2022). Measuring the prediction of observed actions using an occlusion paradigm: Comparing autistic and non-autistic adults. Autism Research. https://doi.org/10.1002/aur.2716**
  - Provided preliminary results suggesting that autistic people's prediction ability (the ability to observe and predict the actions of others) may be different to that of neurotypicals.
  - Read the full paper here: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9543210/

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- **Huysamen, M., Kourti, M., & Hatton, C. (2022). A critical overview of how English health and social care publications represent autistic adults' intimate lives. Critical Social Policy, 0(0). https://doi-org.manchester.idm.oclc.org/10.1177/02610183221142216**
  - SAAIL (Supporting Autistic Adults' Intimate Lives) has published a new study that looks at how National Health and Social Care polices and guidance documents represent and prioritise support for autistic adults' intimate lives.
  - Read the full paper here: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9543210https://journals-sagepub-com.manchester.idm.oclc.org/doi/10.1177/02610183221142216/

Latest Findings

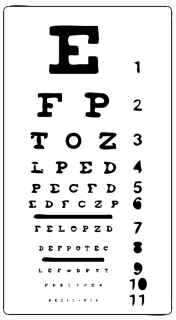
Investigating optometric and orthoptic conditions in autistic adults

Dr Ketan Parmar summarises the findings from his study where he conducted eye examinations on autistic adults. The researchers involved in the study were **Drs Emma Gowen** and **Catherine Porter** and **Professor Chris Dickinson**. The academic team collaborated with autistic individuals, Peter Baimbridge and James Pelham. This was part of a series of studies forming Ketan's PhD. For more information please visit our website.

Rationale and objectives

Sensory issues are common amongst autistic people. As a result, they can experience difficulties with bright environments, lights, patterns, colours and movements. Also, autistic children are more likely to require spectacles, have eye coordination problems (e.g., a turned eye) and develop a lazy eye. Based on this it can be assumed that autistic people will visit an optometrist regularly. Unfortunately, autistic people can face difficulties accessing healthcare, and have poor experiences of healthcare services.

Research up until now has focused on autistic children, many of whom also had a learning disability. We set out to investigate visual conditions in autistic adults without learning disabilities, who are currently underrepresented. We provided eye examinations for autistic adults to gain an understanding of presenting eye conditions in this group. We also conducted interviews with the participants to get more detailed information on the accessibility of eye examinations.



Latest Findings

What happened during the study?

Participants underwent a thorough eye examination which checked spectacle prescription, eye coordination and sensitivity to patterns (visual stress). At specific points during the eye examination, participants were asked questions about which eye tests they didn't like and why, which tests they liked and how the experience could be improved.

Upon completion, participants were dispensed new spectacles or eye exercises if required. They attended follow-up appointments to review these.

Additionally, at the beginning and end of this study, we asked participants to complete three questionnaires. These measured: autistic visual sensory experiences, how vision affected daily tasks, and the quality of vision when doing close work. We investigated whether providing new spectacles or treating eye coordination problems affected the outcomes of these questionnaires.

Who took part?

A total of 24 autistic adults without learning disabilities attended for an eye examination; 14 identified as male, 9 as female and 1 as non-binary.

The age range of the participants was 18-67 years. The majority of participants wore spectacles and had undergone an eye examination within the last 2 years. Some participants also wore tinted lenses.

What we found?

Participants presented with a wide range of optometric (spectacle related) and orthoptic (eye coordination related) issues, although they may not have necessarily been experiencing symptoms for these:

- 20 participants needed their spectacle prescription updating
- 15 participants had an eye coordination anomaly
- 6 participants had visual stress

Across the study, 19 participants (79.2%) needed new spectacles, and 8 (33.4%) required eye exercises. 1 participant was given tinted lenses. In total, 14 participants (58%) were successfully treated for their presenting eye conditions; the remaining participants were referred for continuing care, didn't complete the study or withdrew.

Latest Findings

Our findings suggest that autistic people are more likely to require frequent spectacle prescription updates than non-autistic people. Additionally, eye coordination and visual stress issues were more common in our participants compared to non-autistic people. Visual stress is usually managed with tinted lenses. We found that providing up-to-date spectacles or treating eye coordination problems reduced the need for tinted lenses.

There were no significant changes in the questionnaire results between the first and second time that participants completed. However, this may be due to the small number of participants taking part in this study, so more research is required to understand the effect of treatment on visual sensory issues.

This study provided useful information on how to make eye examinations more autism-friendly. Autistic people can experience sensory issues during eye examinations due to bright lights or instruments which make physical contact, to name a few. Tests requiring instruments or the optometrist being close felt intrusive and uncomfortable. Our participants appreciated an explanation and clear instructions before each test, and the opportunity to ask questions. They valued not feeling rushed during the examination and having optional breaks, as a result feeling relaxed and comfortable. Participants were sent an information document before the eye examination to help them prepare for the visit. The pictures, descriptions and videos of the different tests were useful to reduce their anxiety. To improve the eye examination, participants recommended rearranging the order of tests so that the more demanding ones are conducted earlier. Also, limiting bursts of background noise would be helpful to prevent distraction.

Latest Findings

Future directions

Due to the COVID-19 pandemic, the number of people who could take part in this study was limited. Some of our conclusions need further evidence. We have suggested this study to be repeated on a larger scale.

We have developed guidelines for eyecare providers on how they can provide more autism-friendly services. These give recommendations related to the whole of an eye examination, from the point of booking the appointment through to dispensing any treatment. These guidelines have been published in an international journal.

We have produced resources for autistic patients to help them prepare for eye examinations. These include text descriptions together with images and videos of the various steps involved in an eye examination. These can be found on our website (link below).

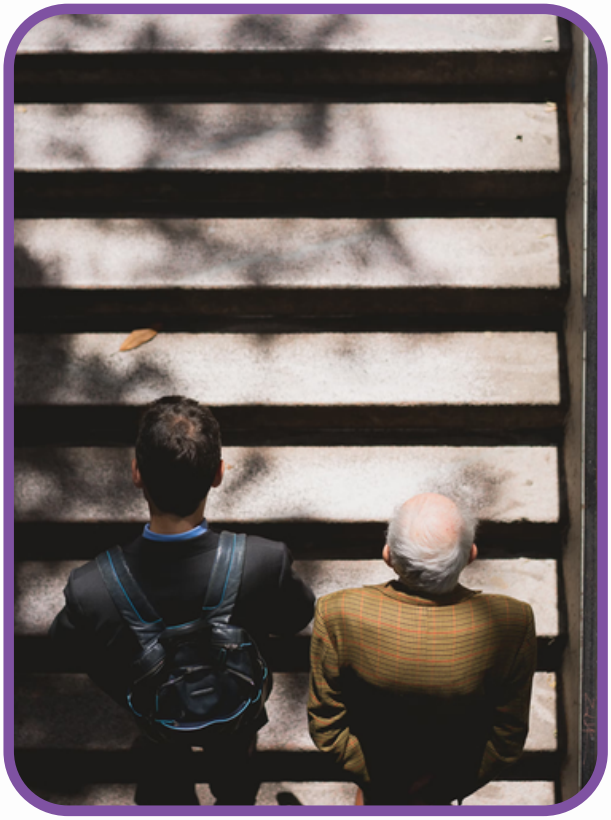
We will be giving talks, writing articles for other journals and creating training programmes for eyecare providers to disseminate our findings further.

Further information and the above patient practitioner resources can be found here

Awards

Autistic Adults' Perspectives on Growing Older

A team from the University of Manchester have been awarded £4000 from **Manchester Institute for Collaborative Research on Ageing** (MICRA) to carry out a study on Autistic Adults' Perspectives on Growing Older. The project will take place between January and July 2023 and is being co-produced with autistic and non-autistic team members - **Dr Kelly Birtwell**, **Dr Christine Rowland**, **Dr Donna Bramwell**, **Dr Laura Brown**, **Dr Emma Gowen**, and **Dr Emily Corsellis.**



Furture Events

Beyond Words

MANCHESTER 1824 The University of Manchester the Whitworth

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include engage create

Take part in a visual exploration of what it means to have communication difficulties as an autistic child

An exhibition of art depicting the experiences of autistic children, including short talks & interactive art workshop

The Whitworth gallery, Garden Studio: 25th March 2023, 10am-3pm

Booking not required. More information at:
https://www.facebook.com/BeyondWordsArtExhibition

The event is for autistic & non-autistic children, their families, & members of the autistic community

There will be break-out space & staff to support throughout the day

Some lunch is provided

https://www.whitworth.manchester.ac.uk/visit/gettinghere the garden studio is directly underneath the café, or can be accessed through the garden entrance

Previous Events

Experience in action: an art-science collaboration

Drs Ellen Poliakoff and **Emma Gowen** were awarded funding from The Manchester Institute for Collaborative Research on Ageing (MICRA) to work with artist, Dr Antony Hall to develop and use art-science experiential workshops to address sensorimotor processing in older adults autistic adults and people with Parkinson's.

The sessions took place at the Manchester Art Gallery and autistic adults or people with Parkinson's were invited to take part in a number of activities based around the Rubber Hand Illusion and discuss their experiences of movement. Researchers provided participants with instructions for each illusion and allowed them to experiment with different stimuli materials.
The different activities included: mirror hand experiments (left picture below), alien hands experiments – where participants place their hands under a flat-screen monitor and view someone else's hands (right figure below) and an autoscopic self-seeing experiment using a VR headset to view themselves in a third person perspective.

The sessions formed part of BEAM labs ongoing work exploring control of movement and related sensory processing of bodily information such as proprioception or kinaesthesia (the sense that helps us "just know" where our limbs are in space) in older autistic adults and people with Parkinson's. Motor coordination difficulties such as clumsiness and poor balance are increasingly recognised as an issue in autism. However, little research has explored these in older autistic adults. For those with Parkinson's, movement problems are a primary symptom, yet the factors which may improve movement and how this relates to bodily perception are not well understood. Thus, in both conditions, it is important to understand how movement is affected and under what conditions it may be improved to inform support and future interventions.

Previous Events

Research also suggests that there is a higher rate of Parkinson's Disease in autistic people and that some of the motor coordination difficulties in autism share similarities with those in Parkinson's. Therefore, comparing movement and bodily perception could help us to understand more about the two conditions.

The workshops created lots of in-depth discussions around the movement experiences of those attending and generated lots of ideas and questions for possible future investigations.
More details about the activities used at these workshops can be found on Dr Antony Hall's blog:
https://antonyhall.net/blog/experience-in-action-work-in-progress/

Autism@Manchester Intern

A Student Experience Internship is a Superbly Interesting Experience

Lucy Porte, a 2nd year Computer Science student completed an 8 week summer internship with us. The internship is jointly organised by Autism@Manchester and The University of Manchester's Career Service and aims to allow autistic students to experience working in an autism research lab. Here Lucy shares her experience of the role.

Before

Getting diagnosed with autism is not fun. There is a bench in Whitworth Park that I can't sit on anymore because a phone call on it was the start of 6 months of searching for answers, constant questioning and self-doubt. Luckily researchers are quite good at finding answers to questions and there was an opening at the Autism@Manchester lab this summer, so I put an application in and was really happy to be accepted. It was one of a number of autism-centered groups I joined this year in a bid to meet more people with the condition and find out more about it.

Now

I was introduced to the Autism@Manchester group by Dr Emma Gowen, who told me about the emphasis on collaboration with autistic people and experimentation with engagement activities such as movement classes and artist-led workshops. The research takes place at the BEAM (Body Eyes and Movement) lab in the Carys Bannister building, pleasingly situated next to a beautiful quadrangle full of flowers and PhD students with questionable opinions ("What's the one word you'd use to describe McDonald's? Refreshing.") Over the course of the internship, I was lucky to be busied with a range of tasks, such as blogging about a visit from collaborators from The University of Toronto, designing a graphic, helping with some filming for Manchester Science Festival and preparing a podcast (to continue the series of interviews from the A@M newsletter). I was pleased to apply my computer science studies to some video editing tasks where I was able to automate face blurring (participant anonymisation) in 10 hours of research study footage.

Autism@Manchester Intern

After

The end of the internship does not mean the end – I am planning to use the lab's datasets to help me with my 3rd-year project which I would like to be on computer vision. I remain firmly subscribed to the BEAM lab's mailing list and will be looking out for updates on their Twitter for any upcoming studies, meetings, or conferences. I am excited to find more groups in Manchester which support members of the autistic community, and to continue supporting research in the field.