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INVESTIGATING OPTOMETRIC AND ORTHOPTIC
CONDITIONS IN AUTISTIC ADULTS: *STUDY I*

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WHAT'S AN OPTOMETRIC AND ORTHOPTIC CONDITION?



Optometric conditions: eye conditions which can be corrected with lenses.



Orthoptic conditions: issues related to the coordination of the two eyes (considering they should work as a pair).



WHY IS THIS PROJECT IMPORTANT?

From a research angle

- Current vision-research is largely on perception and processing; the limitation lies in the early visual system.
- Current research has shown autistic children to have a greater need for spectacles and altered eye coordination.
- We can only assume from these results what the status is in adults. Some of these eye conditions could also be a result of other coexisting learning disability.



WHY IS THIS PROJECT IMPORTANT?

From a practical angle

- If autistic adults are, as children, at greater risk of optometric conditions they are more likely to visit an optometrist.
- Due to communication, social and sensory difficulties an autistic individual may find a visit to an optometrist stressful, resulting in avoidance or incorrect test results.
- Optometrists may have a poor awareness around autism so their services may not be very accessible.

STUDY I: AIMS

1. To characterise the visual issues and symptoms experienced by autistic adults.

2. To gain feedback on eye examinations.

- We conducted 4 focus groups, April – June 2019.
- A total of 18 participants: 6 females & 12 males, aged 25-67 years, all but one spectacle wearers, some participants had history of eye conditions and treatment.
- Researcher facilitated the sessions using 4 key questions.
- *Received ethical approval from UREC (2019-6025-9932)*



**WHAT WE
DID**



STUDY I: RESULTS

Q1: "DOES ANYBODY EXPERIENCE ANY VISUAL SYMPTOMS OR UNUSUAL VISUAL EXPERIENCES?"

VISUAL EXPERIENCES

- 1) *Visual sensitivity*
- 2) *Visual symptoms vary from person to person*
- 3) *Eye movements*

AUTISTIC INDIVIDUALS' VISION-RELATED KNOWLEDGE

- 1) *Degree awareness*
- 2) *Impact of awareness*

Q2: “DO YOU
FEEL YOU CAN
DO ANYTHING
TO IMPROVE
THESE
SYMPTOMS?”

COPING STRATEGIES

- 1) *Multisensory experience*
- 2) *Avoid visual clutter*
- 3) *Optical correction choices*
- 4) *Colorimetry*
- 5) *Light alterations*
- 6) *“Cope as best as you can”*

Q3: "HOW DO YOUR VISUAL ISSUES IMPACT YOUR DAILY ROUTINE?"

IMPACT ON PERSONAL WELLBEING

- 1) *Physical wellbeing*
- 2) *Mental wellbeing*
- 3) *Emotional wellbeing*

IMPACT ON DAILY LIFE

- 1) *Home life*
- 2) *Employment*
- 3) *Public places*
- 4) *Social life*
- 5) *Travel*

A POOR PUBLIC UNDERSTANDING OF SENSORY ISSUES IN AUTISM

Q4: "WHAT ARE YOUR EXPERIENCES OF AN EYE EXAMINATION?"

THE PRACTICE

- 1) Practice setting
- 2) Patient service
- 3) Booking appointments

TESTING TECHNIQUES

- 1) Subjective technique
- 2) Emotional response

PATIENT-PRACTITIONER RELATIONSHIP

- 1) Rapport
- 2) Practitioner continuity
- 3) Communication


PATIENT EDUCATION

- 1) Pre-eye examination education
- 2) Post-eye examination education

Booking online is preferred; don't like too much human interaction



No problem with objective test; just need clear information and questioning on subjective tests



The patient-practitioner relationship is upmost important



Pre- and post- eye examination education is equally helpful

KEY THOUGHTS

Many autistic adults are dissatisfied with their vision, and suffer a range of visual symptoms, but these vary from person to person.

Visual symptoms can occur alone or as part of a larger multisensory response, nevertheless, vision contributes to sensory overload and emotional responses.

These symptoms or experiences can have both positive and negative impacts on the lives of autistic adults.

Autistic adults employ a variety of strategies to overcome their visual symptoms, but the last resort is to endure these.

In terms of eye examinations, it is evident that these are currently not very accessible; improvements can be made in terms of the practice, the manner of the staff, the testing procedure and information provision to make these more “autism-friendly”.

STUDY 2

Conducted at The University of Manchester, currently on hold

- Comprehensive eye examinations provided for autistic adults @ The University of Manchester
- ~80 participants
- *To describe the range and type of optometric conditions in autistic adults and investigate if these are linked with visual experiences.*
- *To investigate the impact of treatment on vision, visual symptoms and quality of life.*
- **Email ketan.parmar@postgrad.manchester.ac.uk**

STUDY 3

Conducted online, currently live for participation

- Autistic adults are invited to complete a short online questionnaire, which asks about how they've felt when attending for an eye examination.
- This study is not linked to study 2.
- ~200 participants.
- **Can you help us? Complete the survey at <http://man.ac.uk/f3U4IH>**
- *To gain an understanding of eye examination-related anxiety in a UK autistic adult population.*
- *To provide further evidence for the need to develop “autism-friendly” guidelines for optometry practices.*

THANK YOU

Supervisors: Dr Emma Gowen, Prof Christine Dickinson, Dr Catherine Porter

Visit our project website: sites.manchester.ac.uk/autism-and-vision/

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