Autistic children understanding of nonverbal gestures directed to a first and third person

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**Background**

- Joint attention is the mutual awareness of having attended to the same object or event between two (or more) individuals [1], allowing the exchange of information and goals in non-verbal cooperative activities without relying on verbal communication.
- Autistic children experience difficulties in joint attention [2], but the tasks used in the literature tend to focus on direct interaction that places additional cognitive demands such as tracking eye gaze and facial expressions. These requirements are demanding and sometimes even distressing to autistic children [3].
- Joint attention is understood in direct interaction, but it is not the only way children learn, it can be achieved when overhearing others [4].
- Autistic children find direct interaction challenging and traumatising [3], however whether autistic children would benefit more in joint attention in an overhearing than a direct environment remains to be tested.

**Aims**

- Assess the contribution of communicative environment to joint attention in a well-powered registered report lab study.
- Investigate whether joint attention in autistic children and neurotypical children differ when the task is in a direct environment and an overhearing environment.

**Analysis Plan and Expected Results**

2 (communication: direct, overhearing) x 2 (group: neurotypical and autistic) x 2 (intellectual disability: ID or no ID). General Linear Mixed model will be used on mean correct rate and inverse reaction times. Pearson’s correlation between Social communication questionnaire and direct overhearing object choice task.

We expect:
- Children with ID will perform worse at joint attention tasks without ID.
- Autistic children will perform better in the overhearing than in the direct condition.
- Children who are not autistic will perform better in the direct than in the overhearing condition.

**References**


Preprint for stage I RR available here: [https://osf.io/ctajh/](https://osf.io/ctajh/)