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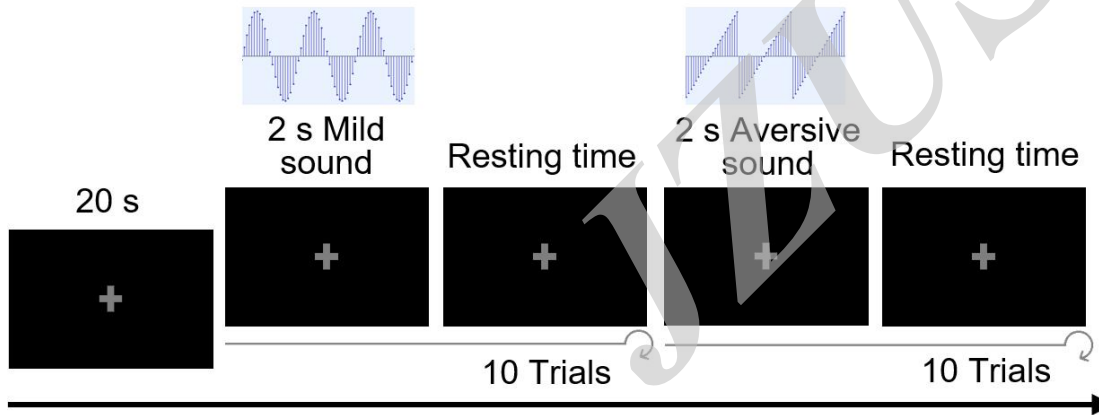
Pupillometry reveals hyper-arousal in response to auditory stimuli in autistic children

**Key words: Autism spectrum disorder; Arousal; Habituation;
Auditory; Pupillometry**

Research summary

This study measured the arousal level in response to different types of auditory stimuli and the dynamic change of atypical arousal level using pupillometry in autistic children

(a) Experiment 1



(b) Experiment 2

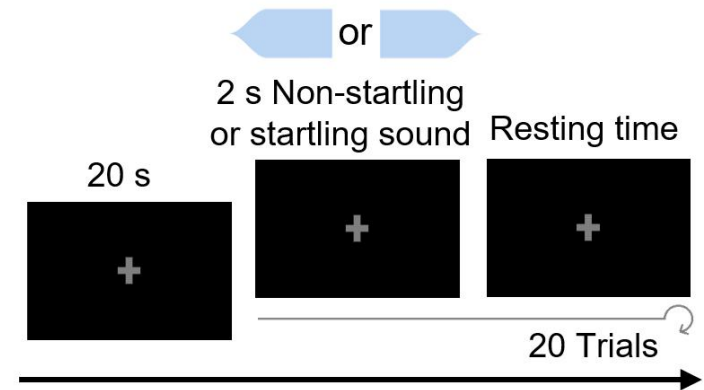


Fig. 1

Innovation points

- Measured arousal level in autistic children with pupillometry, which is robust and friendly to these children
- Examined which kind of sound stimuli would evoke hyper-arousal in autistic children

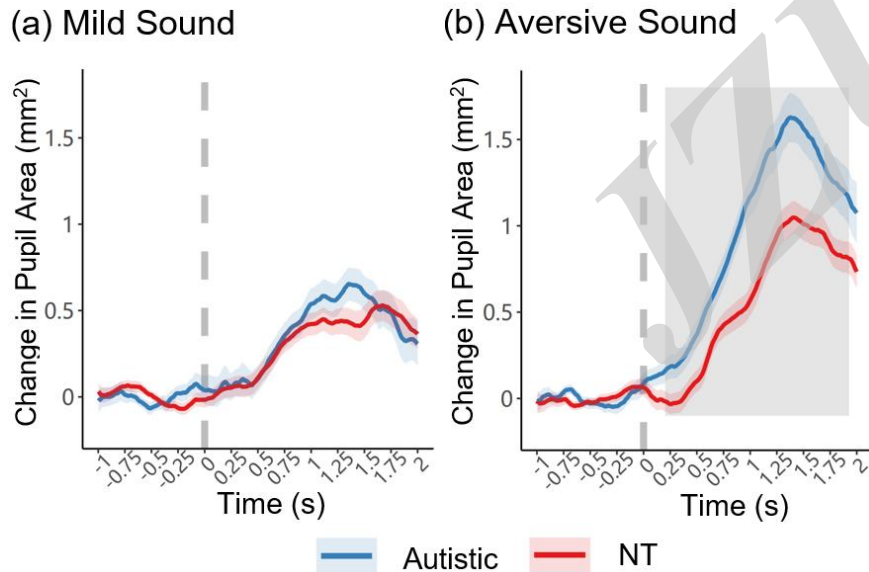


Fig. 2

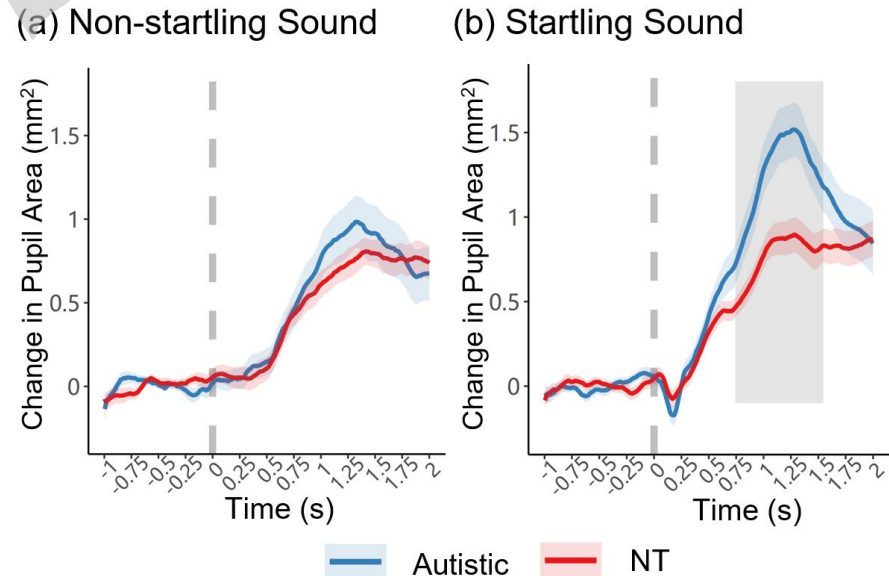
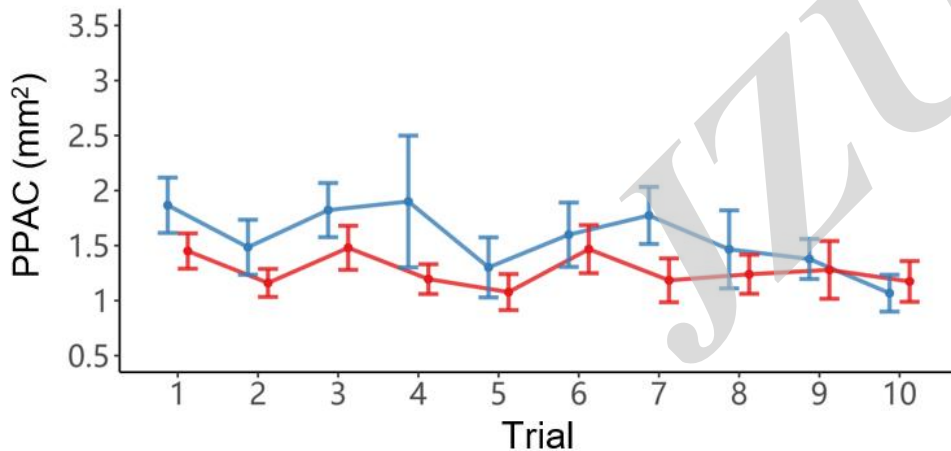


Fig. 3

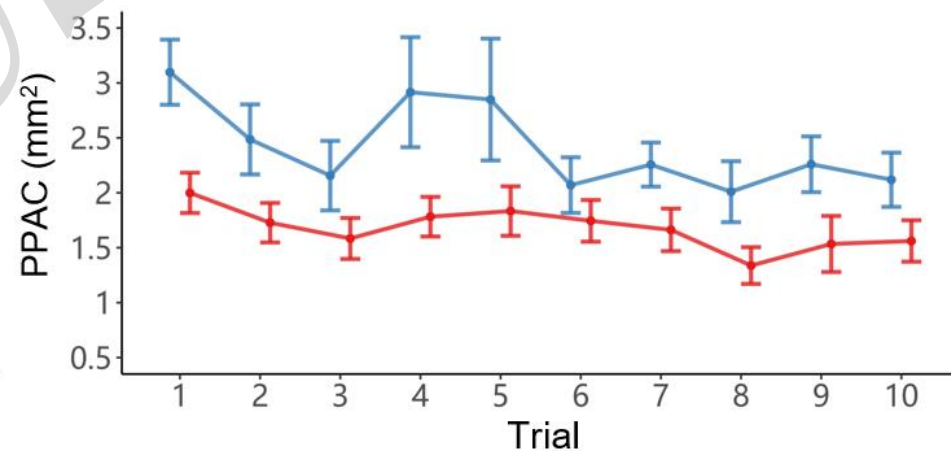
Innovation points

- **Examined whether atypical initial responses and/or habituation rates were underlying dynamic factors of an atypical arousal level in autistic children**

(e) Mild Sound



(f) Aversive Sound



—●— Autistic —●— NT

Fig. 2