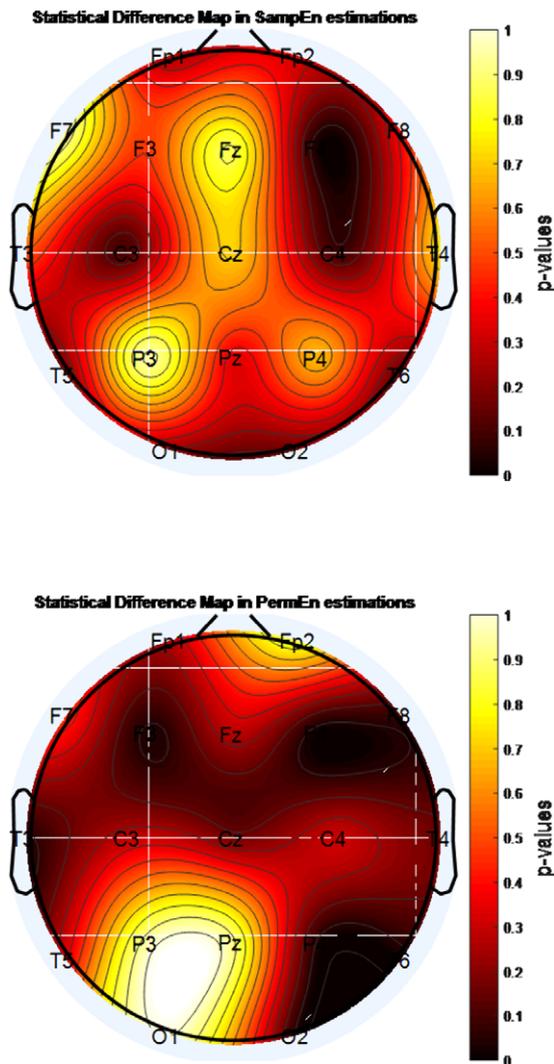


relationship between possible neurophysiological changes to be detected with clinical variables and how they are two other important questions of this study to be answered.

**Methods:** During eyes-open resting, EEG signals were recorded from 25 boys with ADHD-combined type before MPH administration and at the end of the 1st month of the treatment. Approximate entropy (ApEn), sample entropy (SampEn), permutation entropy (PermEn) were used to analyse.

**Results:**



A statistically significant decrease in entropy level was found with MPH treatment in the F4 channel according to approximate entropy (ApEn) and sample entropy (SampEn) analysis ( $p < 0.05$ ). In addition, according to permutation entropy (PermEn) analysis, the decrease in entropy with MPH treatment in the regions indicated by F3, F4, P4, T3, T6, and O2 channels was found to be statistically significant ( $p < 0.05$ ).

**Conclusions:** This is the first study to investigate how MPH treatment affects the complexity in the brain of children with ADHD. Entropy-based qEEG analysis may be a new method that can be used in diagnostic, clinical and prognostic predictions in ADHD.

**Disclosure:** No significant relationships.

**Keywords:** ADHD; methylphenidate; entropy; complexity

## EPV0078

### Increase in brain connectivity with methylphenidate treatment in boys diagnosed with attention deficit hyperactivity disorder: A coherence-based qeeg analysis

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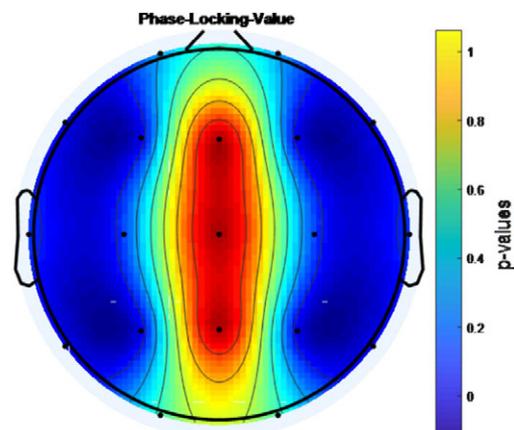
**Introduction:** Attention deficit hyperactivity (ADHD) disorder is a common childhood neurodevelopmental disorder, and Methylphenidate (MPH) is a first-line therapeutic option for treating ADHD. However, how brain connectivity changes with methylphenidate treatment have yet to be studied.

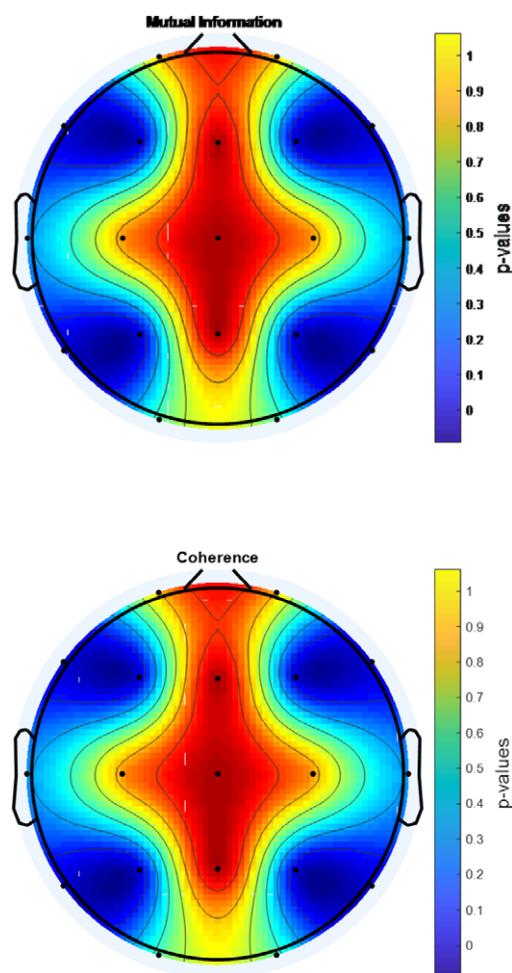
**Objectives:** This study investigates how the MPH treatment affects the connectivity in the brain of children with ADHD by coherence-based qEEG analysis during rest.

**Methods:** During eyes-open resting, EEG signals were recorded from 25 boys with ADHD-combined type before MPH administration and at the end of the 1st month of the treatment. Mutual Information (MI), Coherence Function (COH) and Phase Locking Value (PLV) were used to analyse the changes in brain connectivity.

**Results:** A statistically significant increase in connectivity level was found with MPH treatment between the F3-F4 channels, P3-P4 channels, F7-F8 channels and T5-T6 channels according to PLV, COH and MI analysis ( $p < 0.001$ ).

**Conclusions:** This is the first study to investigate how MPH treatment affects the connectivity of the brain of children with ADHD. Coherence-based qEEG analysis may be a new method





that can be used in diagnostic, clinical and prognostic predictions in ADHD.

**Disclosure:** No significant relationships.

**Keywords:** ADHD; methylphenidate; qEEG; connectivity

### EPV0079

#### Maternal mediation strategies during interaction with toddlers- a comparison of dyads with autism spectrum disorder (ASD) and dyads with typical development (TD)

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**Introduction:** During interactions with toddlers, mothers use various mediation strategies to encourage mutual play. Such mediation skills play an important role in the development of toddlers' communicative skills. Autism Spectrum Disorder (ASD) introduces challenges to this interaction.

**Objectives:** To study the use of maternal strategies during interaction with ASD and TD toddlers at early lexical levels.

**Methods:** Nine ASD and fifteen TD dyads participated. Toddlers were matched by lexical levels. The mean age in the ASD was 31.5 months and in TD - 17 months. Each dyad was video-recorded three times, during naturalistic interaction. Mothers' verbal mediation strategies were divided into five main communicative categories.

**Results:** 1. Exact repetition of toddler's utterances was similarly used and increased in both groups across the three visits ( $F(2,44) = 3.77, p < 0.05$ ). 2. Significant differences were found between the two groups regarding strategies associated with control of the interaction eg mothers of toddlers with ASD (MASD) made more frequent attempts to redirect their child's attention ( $F(1,22) = 74.56, p < 0.01$ ). 3. MASD had higher indices of overall talkativeness ( $F(1,22) = 5.43, p < 0.05$ ); use of nonverbal means ( $F(1,22) = 9.51, p < 0.01$ ); simultaneous use of different means of communication ( $F(1,22) = 19.8, p < 0.01$ ).

**Conclusions:** Our results highlight that in some respects, maternal mediation strategies reflect the child's lexical level. However, our main finding is a distinct interaction style expressed in MASD's elevated use of verbal and nonverbal mediation strategies. This, in hope of maintaining continuous interaction that could not be otherwise achieved due to their toddlers' difficulties

**Disclosure:** No significant relationships.

**Keywords:** toddlers; autism; Dyadic naturalistic interaction; early language

### EPV0080

#### Use of the autism spectrum screening questionnaire for identification of autism spectrum disorders in 8-10 years old georgian children\*

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**Introduction:** Rising prevalence of autism spectrum disorders highlights importance of research priority of development of effective screening procedures for schoolage children.

**Objectives:** The study aimed to identify the prevalence of ASD among 8-10 y old schoolchildren in Republic of Georgia.

**Methods:** In 2019 a cross sectional survey in four main cities of Republic of Georgia was conducted, totally 3rd and 4th grade (8-10 y old) 16654 children from 211 public schools were included. The Autism Spectrum Screening Questionnaire (ASSQ), completed by parents and teachers, was used to determine children at risk for ASD.

**Results:** 16654 (response rate 74%) parents were agreed to participate in the study. Parents and teachers rated 770 (5.0%) and 669 children (4.9%), respectively, as screen positive (in top five percentile). Cut-off scores for 99-95 percentiles (top 1-5%) was