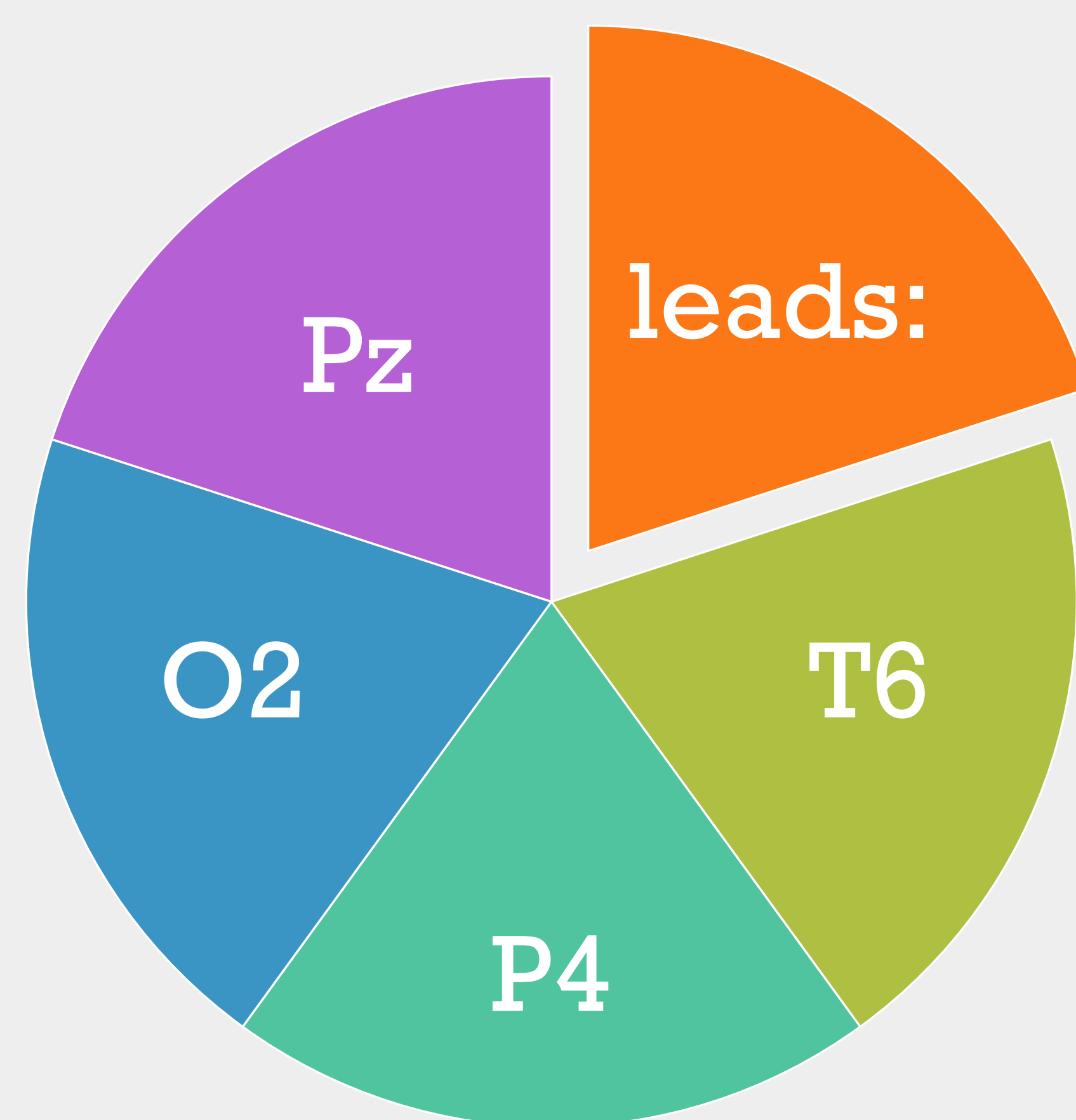
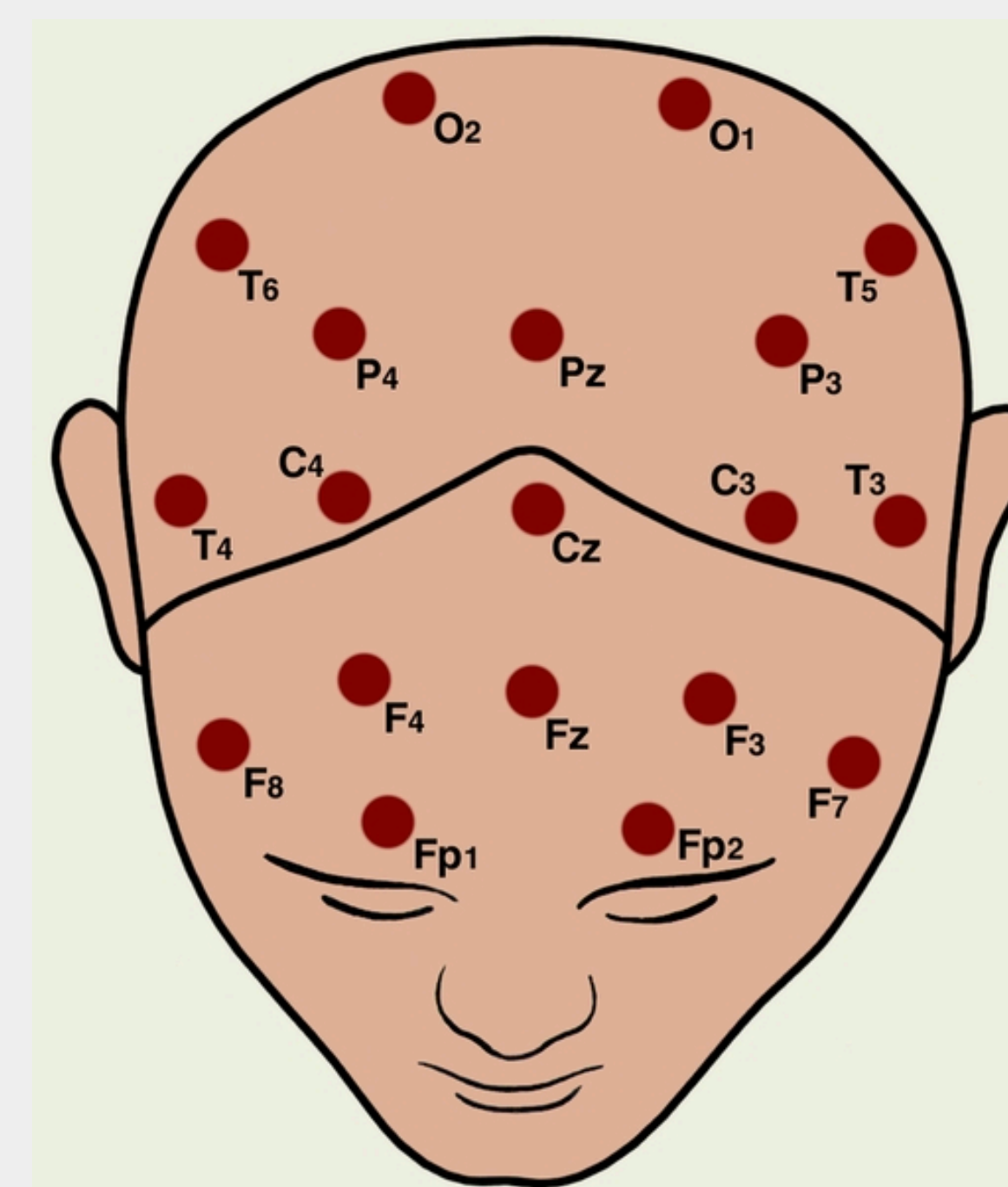


ABSTRACT

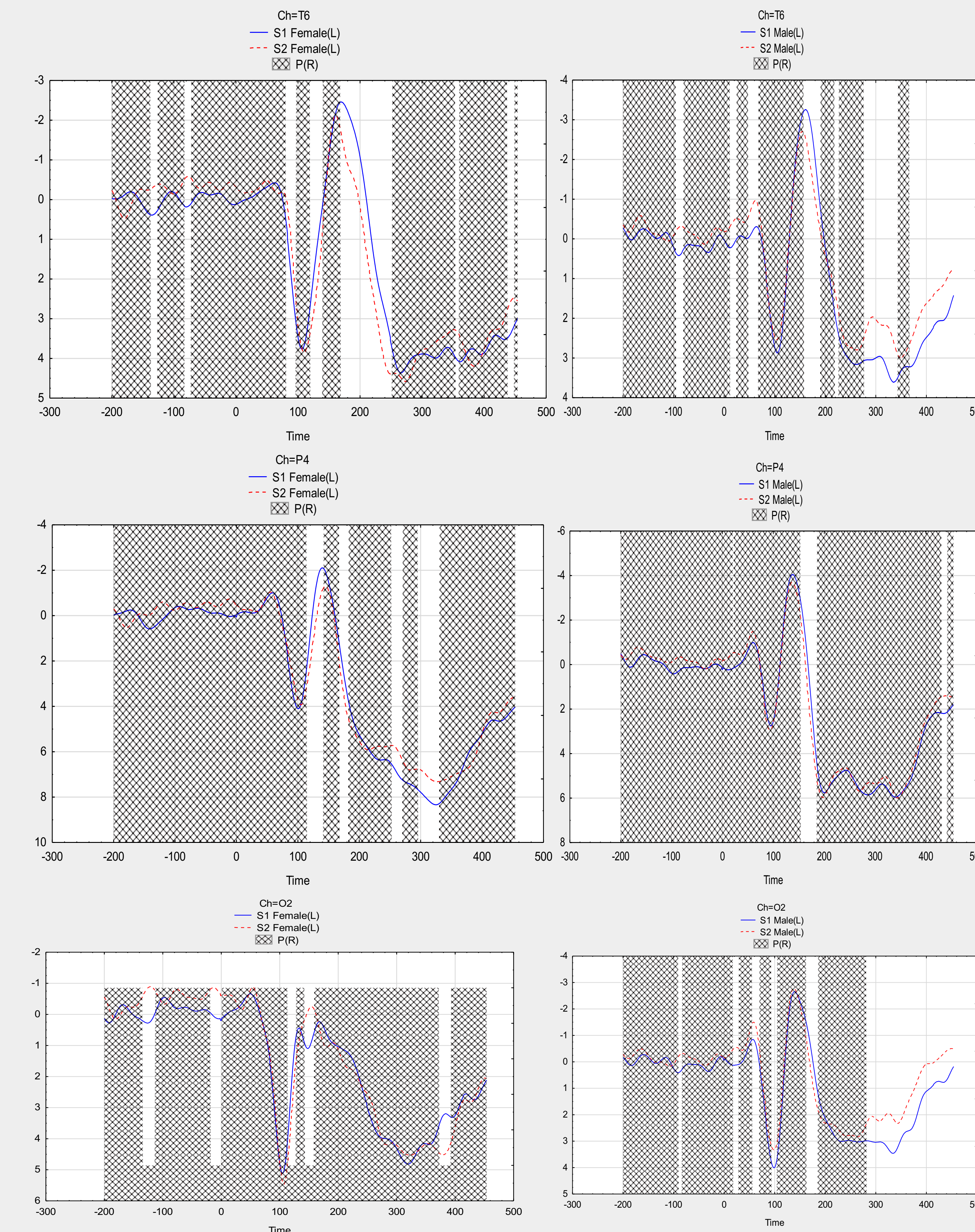
- Empathy is the ability to recognize, understand, and share the feelings of another person, including the perception of another person. Empathy promotes prosocial or helping behavior that comes from within, rather than under duress.
- Our paper revealed brain activity including empathy and altruistic processes in evoked potentials (EP). To review empathy, we analyze the brain activity characteristics with electrodes during watching the empathic game "Stone-Paper-Scissors".
- Results based on the nineteen-channel electroencephalography (EEG) recordings experiment on a sample of 16 participants (6 women and 10 men). Using the EP method, electrical activity was measured for the situation when the empathy behavior was activated. The evoked potential consists of a sequence of negative and positive deviations from the mainline and lasts 500ms after the end of the stimulus. In EP, evaluate the amplitude and latent period of occurrence. To register the EP, the same electrodes are used as for the EEG recording, and with the unified observational conditions.
- We focused on brain structures associated with prosocial behavior, including the cortex, amygdala, and thalamus. A comparison between the empathy situations and the 'first-person' experience has been performed separately for reactions of men and women. We found significant differences in the following leads: T6, P4, O2, Pz in EP obtained in 2 series separately by gender.



METHOD



RESULTS



ACKNOWLEDGEMENTS

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CONCLUSION

- 1. The difference is more pronounced in the group of women, while in the group of men, the difference between the series is found at a later latency – 400 ms.
- 2. Men show more empathy. The manifestation of empathy by women is less dependent on the conscious effort in connection with the instruction in the experiment, but is manifested constantly.
- 3. The greatest differences affecting both the early and late components of the EP in the group of women are found in the Pz lead, while in the group of men in this lead there are no significant differences between the series.

PARTICIPANTS

- 16
- 6 women
- 10 men