
Article:
Al-Jawahiri, R., Jones, M. orcid.org/0000-0002-4580-7559 and Milne, E. orcid.org/0000-0003-0127-0718 (2021) Spontaneous neural activity relates to psychiatric traits in 16p11.2 CNV carriers: An analysis of EEG spectral power and multiscale entropy. Journal of Psychiatric Research, 136. pp. 610-618. ISSN 0022-3956

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Table 1: 16p11.2 CNV brain functional alterations.

	Modality	Age Group	Paradigm	Feature	del / ctrl	dup / ctrl	del / dup	Region
(Al-Jawahiri *et al.*, 2019)	EEG	Children	Visual	Neural variability[1]	del > ctrl	-	del > dup[2]	Occipital area.
				Alpha power		dup < ctrl	-	Occipital area.
(Hinkley *et al.*, 2019)	MEG	Children and adults (split)	Speech and motor	Beta power suppression	del > ctrl	-	del > dup	Vocal production task: MOG, PoCG. Manual production task: MiFG, MeFG, and SFG.[3]
				Laterality index	del < ctrl	-	del < dup	IFG, MiFG, PrCG.
(Matsuzaki *et al.*, 2019)	MEG	Children	Auditory	Magnetic mismatch fields latency	del > ctrl	dup > ctrl	-	left and right STG auditory cortex.
(LeBlanc and Nelson, 2016)	EEG	Children	Visual	P1 amplitude	-	-	del > dup	Occipital area.
(Jenkins et al., 2016)	MEG	Children	Auditory	M100 latency	del > ctrl	-	-	Left and right STG auditory cortex.

(Hudac *et al.*, 2015)	EEG	Children and adults (collapsed)	Social	mu power suppression	del > ctrl[4]	dup > ctrl[4,5]	-	Centro-parieto-occipital areas.

del, deletion carriers; dup, duplication carriers; ctrl, controls; PoCG, post-central gyrus (primary somatosensory cortex); PrCG, pre-central gyrus (primary motor cortex); STG, superior temporal gyrus; MOG, middle occipital gyrus; MiFG, middle frontal gyrus; MeFG, medial superior frontal gyrus; SFG, superior frontal gyrus; IFG, inferior frontal gyrus.

1 Neural variability measures include single-trial event-related potentials and spectral power analyses in the alpha and beta frequency bands, in addition to signal-to-noise ratios.

2 Higher variability in alpha and beta power but lower variability in P1 latency was found in del compared to dup.

3 For deletion adult carriers, neural responses to both tasks were observed mainly in the PoCG (somatosensory cortex).

4 For del and dup, there were no group differences per se, compared to controls. However, group by context interactions were observed. Del and dup showed an increase in mu suppression for non-social stimuli, as opposed to social stimuli as is the case in controls.

5 Additional analysis showed that mu power suppression was initially in the typical range for duplication carriers in response to social stimuli, however, mu suppression decreased over time more rapidly compared to controls.