EEG FRONTO-PARIETAL GRADIENT AND INTERHEMISPHERIC ASYMMETRY PATTERNS IN ORPHANS AT AN EARLY AGE

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We have studied the patterns of the EEG interhemispheric asymmetry and fronto-parietal gradient recorded under condition of sustained visual attention in the institutionally-reared (32 boys and 19 girls) and family-reared (28 boys and 25 girls) children aged from 1.5 to 3 years. Both groups had an increased activation of the neocortex frontal areas in comparison with the parietal ones in the right hemisphere (alpha-rhythm power in locus F4 was higher than in P4). Alpha-rhythm interhemispheric asymmetry in the frontal areas was relatively weak in the institutionally-reared children, while the family-reared children had a significantly higher activation in the frontal areas of the right hemisphere (alpha-rhythm power in F4 higher than in F3). The parietal interhemispheric asymmetry differed between the groups so that the orphans had higher activation in the left hemisphere (alpha-rhythm power in P4 higher than in P3) and the family-reared children had higher activation in the right hemisphere (alpha-rhythm power in P3 higher than in P4). The found differences in the EEG fronto-parietal gradient and interhemispheric asymmetry might be related to the less expressed emotion of withdrawal in orphans under experimental conditions. Such type of response in the early age may be a result of an institutional deprivation syndrome, in particular the phenomenon of indiscriminate friendliness characteristic for it.

***Keywords*:** electroencephalogram, interhemispheric asymmetry, fronto-parietal gradient, institution-reared children.

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