

Psychoanalysis and Functional Magnetic Resonance Imaging: a Systematic Review

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PURPOSE OF THE STUDY

In the last ten years it has sought a connection between the psychoanalysis and the neuroscience. The meeting point between these two branches is the neuropsychanalysis [1].

METHODS

A literature search was conducted on March 2014. PubMed and Scopus databases were used to find studies for inclusion in the systematic review. The keywords used for the literature search were: 'psychoanalysis', 'psychoanalytic psychotherapy', 'psychodynamic', 'psychodynamic psychotherapy', 'fmri', 'functional neuroimaging' and 'functional magnetic resonance'. keywords were used together with the logical operator 'and'. Only studies wich compared functional magnetic resonance imaging results before and after psychoanalytic psychotherapy in adult subjects were taken into account. Two (n=2) potentially relevant studies were obtained for the systematic review.

AUTHOR	SCANNER	PARTICIPANTS	TYPE OF THERAPY	MAIN FINDINGS
Buchheim et al. 2013	3.0 Tesla	A female dysthymic patient with narcissistic traits	Standard long-term psychoanalysis with a frequency of two face-to-face sessions per week.	The results show the therapy hours modulated the activation of the ventrolateral and the dorsolateral prefrontal cortex, the perigenual portion of the medial prefrontal cortex, the posterior cingulate and precuneus, the middle temporal gyrus, and the anterior tip of the inferior temporal gyrus, and the occipital/calcarine cortex.
Fischmann et al. 2013	3.0 Tesla	16 patients with recurrent major depressive disorders and 18 healthy volunteers	3-year psychoanalytic treatment	After treatment, it was found a marked reduction in activation pattern occipital, left and right hippocampus, left and right thalamus, left precuneus, left middle cingulated cortex, left inferior frontal gyrus/pars orbitalis, left precentral gyrus, vermis, left inferior frontal gyrus, right middle temporal gyrus, superior parietal lobule, cerebellum, and right and left putamen.

SUMMARY

As shown in the table, Buchheim et al. study results demonstrate that the therapy hours modulated the activation of brain areas. After treatment, Fischmann et al. found a marked reduction in activation pattern.

CONCLUSIONS

The common results of the studies investigated in this systematic review is represented by a reduction, a modulation or a normalization of the activation areas before and after the psychoanalytic psychotherapy.

REFERENCES

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