

Social Motor Coordination in Schizophrenia Patients: From Impairment to Rehabilitation

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Introduction

Motor coordination of interacting people influences social cognitive functioning, impacting feelings of connectedness or interpersonal rapport and communication. Social interaction deficits are one of the most significant and defining features of schizophrenia but until recently no quantitative and objective measures of social motor coordination in schizophrenia have been proposed.

Objectives

We aimed to investigate social motor coordination of patients suffering from schizophrenia and the implication of this paradigm in rehabilitation, using priming effects.

Methods

Interpersonal coordination was assessed with a hand-held pendulum task. In the first experiment we evaluated intentional social motor coordination in 20 schizophrenia patients and 20 healthy controls.

In the second experiment, hand-held pendulum task was realized after implicit exposure to pro-social, non-social or anti-social primes, in 45 patients and 45 healthy controls.

Results

We found that intentional social motor coordination was impaired in patient suffering from schizophrenia with lower stability and the fact that patients never led the coordination. In the second experiment, we found that schizophrenia patients who received pro-social priming have greater stability during interpersonal coordination. Furthermore, pro-social priming induced, in their synchronization partner greater feelings of connectedness towards patients.

Conclusion

First we demonstrate that schizophrenic patients have a specific relational motor signature. Such findings may lead to the development of rehabilitation protocols improving social motor coordination and successful social exchanges of patients. This hypothesis is strengthened by the fact that pro-social priming can have a direct and important effect on improving social motor interaction in patients suffering from schizophrenia.