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A VIRTUAL REALITY BASED APPROACH TO INVESTIGATE SELF MONITORING AND SELF AGENCY IN SCHIZOPHRENIA

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Objective: It has been shown that a disorder of self-monitoring and/or self agency may underlie positive symptoms in schizophrenia, such as hallucinations and delusions of control. The objective of our study was to explore the deficit of these constructs in a sample of schizophrenic subjects by means of low-cost virtual reality.

Methods: 15 schizophrenic subjects and 10 age matched control subjects were tested in two different sessions of a Microsoft Xbox videogame (Dungeons & Dragons: Heroes), in which two players had to cooperate by fighting against various enemies in a virtual space. In each session an avatar was assigned to the test subject: in the first session the test subject's avatar was distinguished by a different coloured circle from the tester's one. In the second session the test subject's avatar was identical to the tester's one. Before playing the game, the schizophrenic test subjects and controls were evaluated on a neuropsychological battery including visuo spatial and executive abilities. Clinical characteristics of the schizophrenic subjects were also assessed.

Results: While in the first session patients and normal controls performed similarly, in the second session schizophrenic subjects confused their own avatar more often with the tester's one compared to normal controls (ANOVA Sig. ,035). A regression analysis identified visuospatial abilities and set shifting as best predictors of performance in the videogame, while there was no correlation between the performance in the videogame and the clinical variables.

Conclusions: Low-cost virtual reality can be used to explore deficits of self monitoring/self agency in schizophrenia.