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Insight and executive functioning in schizophrenia: A multidimensional approach☆

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Abstract

Past research suggests that unawareness of illness in schizophrenia is associated with deficits in executive functions; however, the relationships between executive processes and the various dimensions of insight are still unclear. Recent models of executive functioning have proposed that four executive processes – inhibition, updating, shifting and dual task coordination – are moderately related yet separable. In this study, we proposed to investigate and clarify the relationships between insight dimensions and the aforementioned four executive components. A total of 60 patients were administered the Test for Attentional Performance and the Scale to Assess Unawareness of Mental Disorder. The effect of potential confounding variables such as medication, symptomatology, demography, psycho-affective state, and general processing speed were also examined in a preliminary statistical analysis. We found that both awareness of disorder and awareness of response to medication were significantly related to Updating. Awareness of the social consequences of the disease was significantly related to Updating, Divided Attention and Inhibition Processes. The analysis indicates that poor insight in schizophrenia may be partially related to executive dysfunction. Finally, our study emphasizes the possible role of neuropsychological intervention in improving patients' insight into illness.

Keywords: Confounding variables; Fractionated approach; Cognitive model

1. Introduction

Schizophrenia is the psychiatric disorder in which awareness of pathology is most frequently impaired. Studies published on this subject over the past two decades have stressed the specificity of this phenomenon in

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schizophrenic disorders, taking into account both its prevalence and its clinical consequences in comparison to other mental disorders (Amador et al., 1994). Among patients with psychiatric disorders, patients with schizophrenia are more often unaware of their mental disorder, their need for treatment, and the social consequences of their symptoms (Amador et al., 1994). The consequences of poor insight in schizophrenia are related to poor treatment compliance (Bartko et al., 1988; Smith et al., 1999), poor social and interpersonal functioning (Lysaker et al., 1998; Pyne et al., 2001), poor prognosis, and higher risk of relapse (David et al., 1995). (Fig. 1).

Insight has been defined for a very long time as a dichotomous phenomenon (McEvoy et al., 1989a,b). However, the recent clinical modelling of this concept in psychosis (Amador et al., 1991; Beck et al., 2004) and the development of tools for its clinical evaluation (Amador et al., 1993; Sanz et al., 1998; Beck et al., 2004) have revealed its multidimensional nature. Three subgroups of patients have been categorized in schizophrenia (Flashman and Roth, 2004; Mysore et al., 2007): Patients with full insight (aware, correct attributers of their symptoms), those aware of being unwell, but who misattributed their symptoms (aware, incorrect attributers) and those unaware of being ill (unaware).

Factors involved in the neurobiology of insight are still under debate, but several theoretical approaches have been proposed. Some studies have suggested that

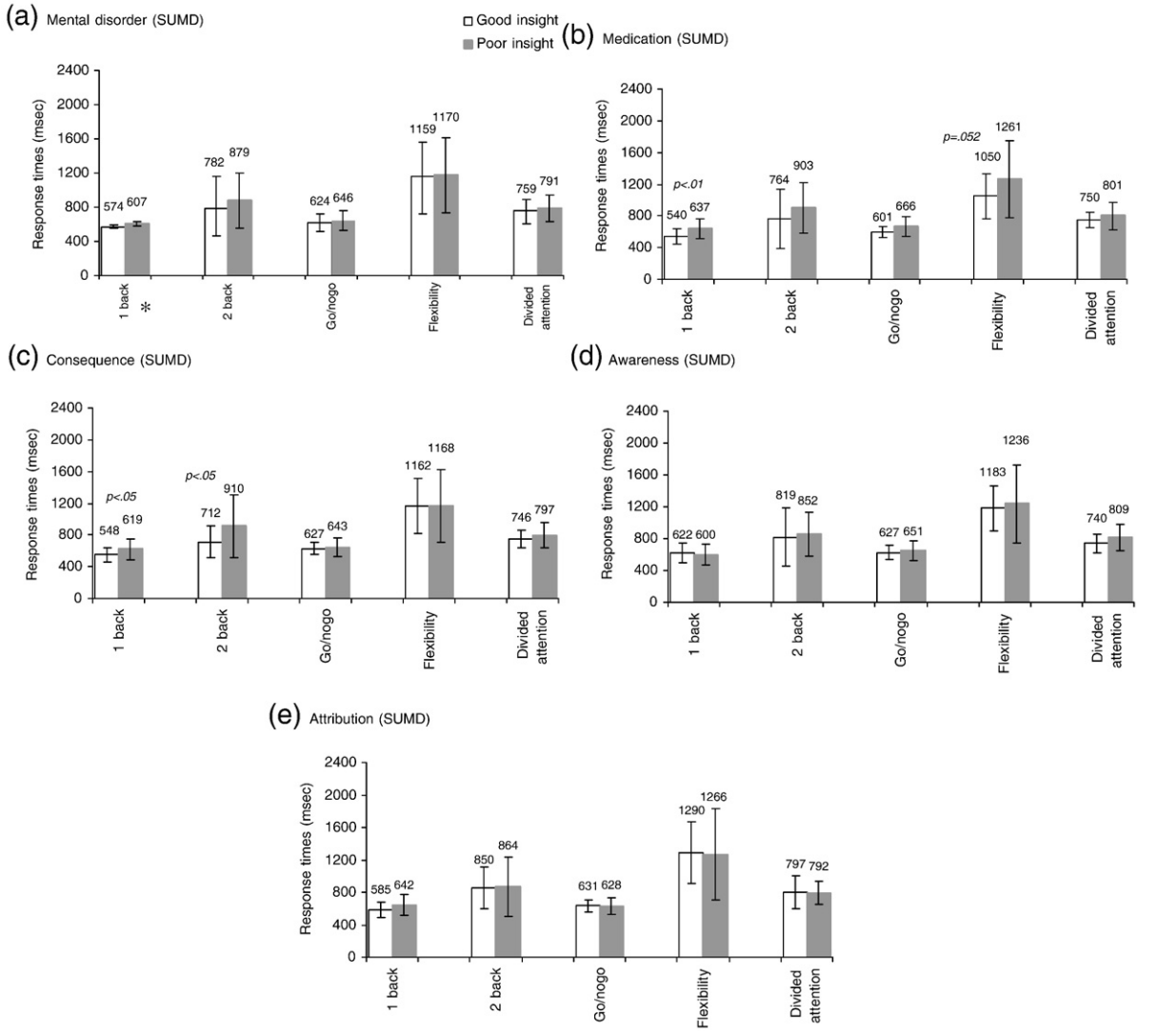

Fig. 1. Mean response times (ms) for the Good and Poor insight groups across the TEA tasks. The bars show the range from +1 to −1 standard deviation value.