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Inhibitory Processes in Normal and Disordered Thought

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Inhibitory processes are found at different levels of behaviour and are crucial for survival and the functioning of cognitive processes. The main purpose of inhibition is to prevent interference factors from disturbing individual goals and actions at different levels of cognition. In schizophrenia inhibitory control is thought to be disturbed and is hypothesised to be responsible for specific psychopathological symptoms, such as thought disorder. However, since inhibitory processes act at many different levels of behaviour and cognition, it appears to be very unlikely that a general inhibition deficit is to be found in schizophrenia. The purpose of this study was the attempt to delimit at what level of cognitive functioning a deficit in inhibition is found in schizophrenia (n=36) in comparison to healthy controls (n=21). Additionally, it was aimed to find to what specific psychopathological symptoms these deficits relate. Using a within-subject design, inhibitory processes involved at selective attention, orienting, working memory and executive control were measured using five different behavioural tasks. The results showed that schizophrenic patients, especially those with thought disorder have inhibitory deficits in tasks where working memory and executive control is required, but not in selective attention or orienting. In those tasks in which thought disordered patients presented deficits are thought to activate, according to neurobiological evidence, prefrontal areas in normal volunteers. This activation is disturbed in schizophrenic patients. In sum, this study showed that inhibitory deficit is not a generalised finding in

schizophrenia: it is thus 1) related to specific psychopathological symptoms such as thought disorder and 2) related to cognitive processes depending on prefrontal areas or networks. Future studies using other cognitive neuroscience methods are needed to confirm the suggestion of the relationship between inhibitory deficits, PFC dysfunction and thought disorder in schizophrenia.