

Abstract

Introduction. Inhibition is a fundamental part of cognitive control and is affected by the condition of schizophrenia. The negative priming ('NP') effect, measured by the increase in reaction time or decrease in performance when current target stimuli (probe trial) was employed as a distractor in the previous trial (prime trial) is regarded as a useful measure of inhibition. While the NP effect on patients with schizophrenia is relatively more examined, research on its interaction with other conditions is still in infancy. Aim. The current study aims to investigate into the relationship of NP with two factors: perceptual load and emotional interference. Method. A sample of 28 with first-episode non-affective schizophrenia spectrum of other psychotic disorders are recruited. Numerical Stroop task is used as the test paradigm under four conditions: emotional interference manipulated by the absence or presence of a negative emotional incident recalled prior to the NP task, while perceptual load manipulated by the number of numerical digits presented as distractor in the prime trial (low-load condition: 1-2 digits; high-load condition: 3-4 digits). Main effect and interaction effect of the two factors were calculated by 2x2 two-way repeated analysis of variance (ANOVA). Results. The effect of perceptual load and emotional interference is insignificant to the NP task performance. No interaction effect is observed. The current study pose doubts on the generalizability on Perceptual Load Theory on individuals with schizophrenia and suggest other mechanisms such as the impact of visual short-term memory and attentional allocation processes behind the phenomenon.

Keywords: negative priming, inhibition, perceptual load, emotional interference, individuals with schizophrenia