

# COGNITIVE FUNCTIONS AND SCHIZOTYPAL TRAITS IN UNAFFECTED RELATIVES OF SCHIZOPHRENIA PATIENTS: NON-LINEAR EFFECTS OF FAMILIAL LOADING

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## Abstract

**OBJECTIVE:** Schizophrenia can be classified into familial and sporadic, according to the genetic loading carried. The comparison of unaffected relatives with familial ("multiplex") vs. sporadic ("simplex") background, has revealed discrepant findings on the cognitive endophenotypes of the disorder, possibly because schizotypal traits were not accounted for. The present study aimed to examine differences in the cognitive performance between unaffected multiplex and simplex relatives of schizophrenia patients and control individuals, taking into consideration the effects of schizotypal traits.

**MATERIAL-METHOD:** "Simplex" (n=65), "multiplex" (n=35) relatives and controls (n=114) were evaluated for a range of cognitive functions and schizotypal traits with the Schizotypal Personality Questionnaire, SPQ). Between-group differences in a) SPQ scores were examined with analyses of covariance (Covariate: age) and b) neurocognitive performance were examined with multivariate analyses of covariance (Covariates: age, SPQ Paranoid and Negative schizotypy scores).

**RESULTS:** Both groups of relatives scored higher on Paranoid and Negative schizotypal dimensions compared with controls (all  $P$ s <.001). Controls outperformed multiplex relatives in strategy formation and set-shifting and simplex relatives in psychomotor speed, set shifting and executive working memory (all  $P$ s <.005).

**CONCLUSIONS:** Although both groups of relatives had high negative and paranoid schizotypy, simplex relatives presented with deficits in more cognitive domains, which is counterintuitive given the higher genetic loading of the multiplex group. If this was not due to self-selection bias (i.e. mostly the highest functioning multiplex relatives volunteering for the study), it possibly reflects the prevalence of protective factors in unaffected multiplex relatives.