

# **Psychosocial deficits across autism and schizotypal spectra are interactively modulated by excitatory and inhibitory neurotransmission**

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Autism and schizophrenia are conditions involving lots of different symptoms that affect people in lots of different ways. Autism is characterized by social and communication difficulties, and restricted and repetitive patterns of behavior. Schizophrenia is characterized by psychosis, interpersonal difficulties, and disorganization. Evidence from studies on humans and animals suggests that brain excitation and inhibition might be disrupted in people with autism and schizophrenia. By excitation and inhibition, we mean the processes that increase or decrease activity in the brain. Evidence further suggests that this disruption is specifically associated with social and interpersonal difficulties.

In this research, we investigated whether traits of autism and schizophrenia were associated with excitation and inhibition in the brain. We found that people who had higher excitation, but lower inhibition, had poorer social and interpersonal skills. When excitation and inhibition were both high, or both low, however, there was no effect on social and interpersonal skills. Importantly, this imbalance in excitation and inhibition did not affect autism-related traits of restricted and repetitive behavior, or schizophrenia-related traits of psychosis-proneness and disorganization: it was very specific to social and interpersonal difficulties.

These findings will make a meaningful contribution to the development of targeted, individualized therapeutic interventions for individuals with either condition.