# Relationship Between the Domains of Theory of Mind, Social Dysfunction, and Oxytocin in Schizophrenia

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**Background**
Social dysfunction, manifested by impaired social cognition, is contributing to the poorer prognosis of patients with schizophrenia. Growing evidence indicates that oxytocin acts as a neurotransmitter in the regulation of social cognition. It still lacks a thorough understanding of how oxytocin is linked with deficits in social cognition and social functioning in schizophrenia.

**Aims & Objectives**
We aimed to study the relationship between subdomains of social cognition and social dysfunction in patients with schizophrenia, as well as the role of plasma oxytocin levels.

**Methods**
Social Functioning Scale was administered to measure the social dysfunction while Faux Pas Recognition Test was used to assess the Theory of Mind in 40 patients with schizophrenia and 40 age-matched healthy controls. Peripheral venous blood samples were collected for plasma oxytocin analysis.

**Results**
Patients with schizophrenia exhibited more deficits in Theory of Mind, more severe social dysfunction, and had lower plasma oxytocin levels, relative to healthy controls. A pooled correlation analysis of all participants revealed significant effects of plasma oxytocin levels on the Theory of Mind and social dysfunction. In patients with schizophrenia, plasma oxytocin levels were positively correlated with the affective but not cognitive component of the Theory of Mind. The correlations between Social Functioning Scale, Faux Pas Recognition, and plasma oxytocin levels in patients with schizophrenia and healthy controls.

**Discussion & Conclusion**
Social cognition of schizophrenia accounts for a substantial amount of the variance in real-world social functioning. In this study, patients with schizophrenia exhibited more deficits in the cognitive domain and affective domain of Theory of Mind and in social functioning relative to age-matched healthy controls. The significant correlation between social cognition, social functioning, and oxytocin for patients with schizophrenia is noteworthy. Importantly, the affective domain (but not cognitive domain) of Theory of Mind was positively correlated with the plasma oxytocin levels of patients with schizophrenia. Our findings underscore the importance of oxytocin as a potential predictor of social cognition in patients with schizophrenia. It may be worthwhile for future studies of oxytocin in schizophrenia to focus on an affected behavioral domain, e.g., social cognition, rather than diagnosis, and the targeted domain should be deconstructed into more detailed subdomains. This finding raises the potential for the use of oxytocin in mitigating social cognition deficits and improving social dysfunction in schizophrenia.