



# Obsessive-Compulsive Symptoms and Theory of Mind in Psychosis

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## Introduction

- Prior research has demonstrated a negative relationship between social cognition and obsessive-compulsive symptoms (OCS) in various stages of schizophrenia (SCZ).
- A majority of the literature has focused on first-episode psychosis patients.

## Aim

- The goal of the current study was to examine the relationship between OCS and social cognition at various stages of psychosis, from clinical high risk (CHR), to first episode psychosis (FEP), to schizophrenia (SCZ).
- We hypothesized that OCS would be negatively correlated to Theory of Mind (ToM) at each stage.
- In exploratory fashion, we also compared the strength of the OCS-ToM relationship between stages.

## Methods

Participants were 52 teenagers at CHR (14-19yo), 35 young adults with FEP (18-25yo), and 49 adults with SCZ (21-55yo) enrolled in a larger cognitive training study. This cross-sectional assessment at baseline included the Yale-Brown OCS scale (Y-BOCS), Hinting Task (ToM), and PANSS/SOPS (symptoms). Non-parametric correlations between OCS and ToM were calculated for each stage of psychosis. Strength of correlations between psychosis stages were evaluated using Fisher r-to-z transformation.

## Results

Table 1. Demographic and clinical characteristics of each sample

	CHR (n=52)	FEP (n=35)	Schizophrenia (n=49)
Age	16.25 (2.38)	23.20 (4.17)	33.20 (6.92)
Education	10.44 (2.03)	13.17 (2.81)	12.66 (2.81)
Gender (% female)	50	48	47
Premorbid IQ Estimate			
WRAT3 Reading	109.43 (7.59)	108.92 (7.16)	98.33 (9.01)
WISC or WAIS Vocabulary	9.85 (2.41)	10.09 (1.51)	8.92 (3.82)
Antipsychotic use (%)	35	83	97
Antidepressant use (%)	76	33	52
Y-BOCS (0-40)	17.75 (4.70)	8.44 (6.13)	7.80 (4.72)
ToM Hinting Task (0-20)	18.53 (1.21)	15.17 (4.28)	14.28 (5.03)
PANSS	--	46.16 (10.94)	58.77 (11.30)
SIPS/SOPS positive symptoms	14.11 (3.02)	--	--
SIPS/SOPS negative symptoms	10.31 (4.20)	--	--

Table 2. Y-BOCS and Hinting Task correlations and comparison of correlation strength between samples

Spearman Rho	CHR Y-BOCS	FEP Y-BOCS	SCZ Y-BOCS
CHR Hinting Task	0.07	--	--
FEP Hinting Task	--	-0.21 *	--
SCZ Hinting Task	--	--	-0.28 *

There were significant negative correlations between the Y-BOCS and Hinting Task in FEP ( $\rho=-0.21$ ,  $p=0.035$ ) and SCZ ( $\rho=-0.28$ ,  $p=0.012$ ), while no such correlation was found in CHR ( $\rho=0.07$ ,  $p=0.691$ ). The strength of the Y-BOCS/Hinting Task correlation in SCZ was greater than in FEP (Fisher r-to-z transformation:  $Z=1.70$ ,  $p=.042$ ).

## Conclusions

- We found significant negative correlations between OCS and ToM in FEP and SCZ, but not in CHR. This may be due to ceiling effects on Hinting Task scores and the significantly higher score on the Y-BOCS compared to other stages of psychosis.
- The relationship between ToM and OCS was stronger in SCZ than FEP. However, since these results are cross-sectional, they cannot establish a causal relationship between the progression of OCS and ToM scores across stages of psychosis.
- Our results replicate previous findings that the presence of OCS is linked to decreases in social cognition in SCZ. Furthermore, they replicate the prior findings that some SCZ patients may experience increased OCS in early stages as a form of prodromal SCZ.
- This suggests that the CHR population, especially those with OCS, should be targeted for earlier, preventative measures. Additional work is needed to investigate a longitudinal relationship between OCS and ToM in those with psychosis.

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