Department of Psychiatry

Exploring the Functional Utility of the Advanced Clinical Solutions-Social Perception Affect Naming Subtest in Treatment Resistant Psychosis

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Introduction

Deficits in social cognition are a core feature of schizophrenia, and have been found to account for variance in patient functioning beyond non-social cognitive processes. One of the most researched areas of social cognition within schizophrenia is facial affect recognition, which refers to one's ability to perceive others' emotions through their facial expressions. Despite its recognized importance, there is a lack of widely accepted measures that assess this broad domain while possessing psychometric validity and predictive utility. This study aimed to address this gap by providing incremental validity data for a promising social cognitive measure assessing facial affect recognition in patients presenting with treatment resistant psychosis (TRP).

Methods

This study utilized a clinical archival dataset comprised of 59 consecutive admissions to the BC Psychosis Program (BCPP), which provides care for inpatients with TRP. This study examined facial affect naming performance from the Advanced Clinical Solutions-Social Perception (ACS-SP) affect naming subtest, and assessed its divergent validity through determining its association with neuropsychological functioning and symptom severity. Then, the predictive validity of this measure was assessed using hierarchical regression models, based on whether the ACS-SP affect naming task could explain variance in patients' functional impairments beyond non-social cognitive functioning and symptoms.

Table 1. Sample characteristics (N=59)

Variable	N	Mean (SD) or Percentage
Age at admission	59	34.75 (12.20)
Sex (% male)	59	66.1
Ethnic group (%)		
White	36	61
Chinese/East Asian	11	18.6
First Nations	5	8.5
South Asian	4	6.8
Other/Mixed	3	5.1
Marital status (%)		
Single	49	83.1
Married/Common law	3	5.1
Separated/Divorced	7	11.9
Years of Education	59	11.95 (1.89)
Duration of illness (years)	59	11.67 (8.70)
Primary Diagnosis (%)		
Schizophrenia	40	67.8
Schizoaffective	14	23.7
Psychosis NOS	2	3.4
Delusional Disorder	2	3.4
Bipolar	1	1.7
% on any antipsychotic at testing	57	94.7
% on Clozapine at testing	57	61.4
Defined Daily Dose (DDD) at testing	57	1.72 (1.16)
% with history of Clozapine use	59	91.5
May Degree of Resistance Scale Score	57	5.25 (0.81)
% with at least one substance use disorder	59	64.4
PANSS	57	
Positive symptoms		20.93 (6.93)
Negative symptoms		19.21 (7.41)
Disorganization		26.91 (6.49)
Excitement		9.09 (4.69)
Emotional distress		10.40 (3.72)
Total		86.54 (20.19)
RAPP	59	
Basic needs		3.39 (2.32)
Psychopathology		8.61 (4.28)
Life Skills		4.59 (3.52)
Total		16.59 (8.25)
SOFAS	59	29.76 (5.08)

Patient functioning was assessed in two ways:

- Routine Assessment of Patient Progress (RAPP), to assess functional capacity
- Social and Occupational Functioning Assessment Scale (SOFAS), to assess functional performance

Results

The ACS-SP affect naming task showed weak to moderate correlations with a broad range of non-memory cognitive functions, and no association with symptom severity. After controlling for cognitive functioning and symptoms, the ACS-SP affect naming task predicted poorer functioning with regard to functional performance, as measured by the SOFAS, but not functional capacity, as measured by the RAPP.

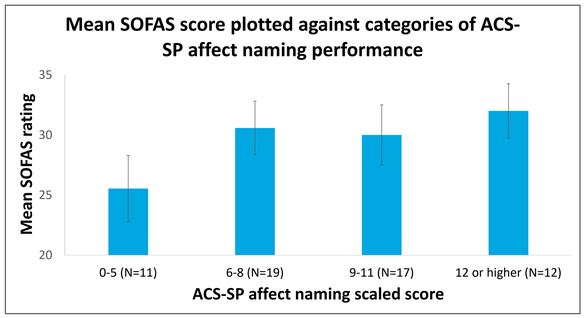
Conclusions

Given its weak to moderate correlations with other measures of cognition, the ACS-SP affect naming task partially associates with other measures of cognition, but also likely taps into social cognitive skills not measured by typical neuropsychological tests.

This measure was predictive of some aspects of functional outcomes in patients with treatment resistant psychosis, and therefore may be a useful tool to incorporate into routine neuropsychological assessments in such treatment settings.

Table 2. Correlations between ACS-SP affect naming and both non-social cognition and symptom severity

Variable	N	ACS-SP Affect Naming
Premorbid IQ	59	.175
Verbal Comprehension	56	.419**
Perceptual Reasoning	56	.374**
Processing Speed	56	.311*
Working Memory	56	.427**
Verbal Learning and Memory	55	.163
Nonverbal Learning and Memory	56	.205
Executive Functioning	59	.584**
Symptom Severity		
PANSS Positive Symptoms	57	.019
PANSS Negative Signs	57	-.156
PANSS Disorganization	57	-.211
PANSS Excitement	57	.215
PANSS Emotion Distress	57	.066
PANSS Total	57	-.057



Limitations

This study used an archival dataset, which introduced several limitations: the absence of a healthy control group for comparison on facial affect naming performance, and a heterogeneous patient sample (varying in diagnoses, comorbidities, medications, and illness duration). Moreover, the use of the RAPP and SOFAS to measure functional capacity and performance, respectively, may be an overly simplified conceptualization of these domains.

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