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French validation of the “Reading the Mind in the Eyes Test”
Relation with subclinical psychotic positive symptoms in general population

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INTRODUCTION
Very few tests are available to assess the “Theory of Mind” (ToM) in adults in French. The aim of our study was to validate a French version of a ToM task: the “Reading the Mind in the Eyes Test” (RMET; Baron-Cohen et al. 2001). The ToM task part in the social cognition processes which have impacts on the everyday functioning of schizophrenic patients but also in bipolar disorder patients.

According to some authors, some psychotic symptoms are present even in persons without severe mental disease (like schizophrenia). Our aim is to validate our own version of the Eyes Test by studying the relationship between the score at this test from healthy people and the positive symptoms subscale score of the CAPE-42 (Community Assessment of Psychotic Experiences, CAPE-P. Brenner et al.). This scale was specifically developed to study psychotic symptoms in general population. The relation between the Eyes Test and the CAPE-P is used to support the predictive utility of the test (according to McDonald, 1999).

The Eyes Test assesses the ToM with pictures of the “eye-region of the face” expressing a mental state. The task of the subject tested is to find among four words the one that describes better what the persons on the pictures thinks or feels.

préoccupé
reconnaissant

insistant
implorant

RESULTS
Total score distribution
The score does not follow a normal distribution (Shapiro-Wilk Test: W = 0.938, p-value < .001). The confidence interval at 90 percent of the total score is CI=[17;28]. All subjects obtained a score above the chance level score of 12 (binomial distribution with n= 30 and p = 0.25).

Convergent validity
The correlation between the RMET and the FERT are significant r= .21, p<.01, CI=[.04;36] and when we compute the partial correlation adjusted on the Mill-Hill score, the correlation is still significant (r=.18).

Divergent validity
The RMET show only a trend to correlate with the Mill-Hill (p=.06, N=141).

Predictive Utility
The regression with CAPE-P as dependent variable is significant: F (4,117) = 4.6; and explained 13.6 % of the variance (adjusted R² = 10.7), the Beta coefficient of the score at the RMET is significant (β = -0.40, CI=[-0.73; -0.06]; p=.023), whereas the FERT and the Mill-Hill Beta coefficients were not significant.

METHODS
The test was translated and back-translated. A 35 items version was then administered to 178 undergraduate students. On reliability criteria (corrected biserial item-total correlations and U-L indices), we select 30 items with “ordinal” omega coefficient of 0.78 and ordinal alpha of .76. The other computations were conducted on a subsample of 141 subjects. The different validities were supported by the analyze of the relations between:

- the RMET and a score at a Facial Emotion Recognition Test of 35 validated items (FERT, Ekman,1976; convergent validity on subjects)
- and between the RMET and the “Mill-Hill vocabulary test” (Mill-Hill; a verbal intelligence test, Raven and Deltour, 1998; divergent validity).

A regression was computed to determine if the score at the RMET predicts better the life-time subclinical positive psychotic symptoms assessed with the CAPE-42 (CAPE) scale than other abilities (Verbal intelligence, basic emotion recognition and gender as confounding variable).

CONCLUSION
This French version of the RMET shows good convergent and divergent validities. Furthermore, the test shows better predictive value than the FERT and the Mill-Hill to predict the subclinical positive psychotic symptoms in a population of undergraduate students. The results demonstrate that the RMET presents sound predictive utility.


Item 22: 93 % of correct responses, N=171

Histogram of Eyes Test 30 items