

ATTENTIONAL SKILLS AND FACIAL EMOTION RECOGNITION IN SCHIZOPHRENIA

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Introduction:

Impairments in social cognition, particularly those related to affect recognition deficits, have been widely reported in studies with schizophrenic patients (Green, Uhlhaas & Coltheart, 2005). Recent studies have demonstrated that these impairments seem to be related to neurocognitive dysfunction. Specifically, attention seems to play an important role in affect perception (Combs & Gouvier, 2004).

Purpose:

The purpose of this study was to investigate the influence of attentional and concentration skills in the ability to recognize facial emotions in Portuguese schizophrenic patients.

Material & Methods:

The sample consisted of 40 individuals (5 of which were considered invalid for data analysis) with DSM-IV diagnoses of schizophrenia, ranged in age from 25 to 55 (Mean=42,6 Std. Deviation=8,1), and integrated in 3 portuguese psychosocial rehabilitation institutions. All subjects engaged in a Facial Emotion Recognition Experiment, which consisted of 30 morphed faces with different emotional intensities of happiness, sadness, anger, fear and disgust. For each morph, participants had to decide which of the 5 emotions was being expressed. To assess attentional skills, each person performed the D2 - Test of Attention. Pearson product-moment correlations between D2-Test scores and performance in the emotion recognition task were computed.

Results and Conclusions:

Table 1 Correlations of D2-Test scores with the total and the emotional intensity scores of the Facial Emotion Recognition Experiment

Facial Emotion Recognition Experiment					
	Total Score	Emotional Intensity - 60%	Emotional Intensity - 80%	Emotional Intensity - 100%	
D2-Test	Nº Answers	,328	,314	,235	,273
	Total Corrects	,269	,209	,247	,205
	Co-Omissions	-,396*	-,274	-,335*	-,364*
	Omissions	,117	,198	-,020	,135
	% Errors	-,214	-,090	-,328	-,185
	Total Score	,330	,288	,265	-,267
	Concentration Score	,297	,227	,269	,234
	* p < 0,05				

Table 2 Correlations between D2-Test scores and the number of correct responses for each emotion of the Facial Emotion Recognition Experiment

Facial Emotion Recognition Experiment						
	Happiness	Sadness	Anger	Disgust	Fear	
D2-Test	Nº Answers	,082	,054	,344*	-,024	,395*
	Total Corrects	,027	-,090	,368*	,079	,273
	Co-Omissions	,048	-,132	-,292	-,319	-,351*
	Omissions	,074	,246	-,002	-,180	,228
	% Errors	,037	,001	-,308	-,215	-,064
	Total Score	,063	,002	,370*	,039	,368*
	Concentration Score	,019	-,067	,375*	,112	,295
	* p < 0,05					

Results showed that attentional skills were significantly related to facial emotion recognition. In particular, we found interesting significant negative correlations between co-omissions (which are related to attentional control, precision and inhibitory processes) and total and emotional intensity scores (80% and 100%) of the Facial Emotion Recognition Experiment.

Correlations of some D2-Test scores with scores of anger and fear emphasize the relevance of attentional processes in the discrimination of negative emotions. These results show that addressing attentional skills may be an important strategy in order to improve facial affect recognition.

However, the absence of significant correlations between other dimensions of attention and emotional recognition, highlight the fact that this process seems to be differential (but not independent) from attention.

Bibliography:

- Green, M., Uhlhaas, P. & Coltheart, M. (2005). Context Processing and Social Cognition in Schizophrenia. *Current Psychiatry Reviews*, 1, 11-22.
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