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SCORES Project

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SCORES Project

The SCORES project arises with the objective of developing and validating tests and intervention programs in social cognition (SC) into Spanish.

Phases:

- Developing the ERAT (Emotion Recognition Assessment Test)
- Validating into Spanish the Faux-Pas Test
- Validating the SCTP (Social Cognition Training Program)



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The SCTP validation is based on a previous study made with 83 subjects, 44 outpatients with schizophrenia and 39 health controls. Outpatients were randomized assigned to experimental and control group.

Most important results were :

- Experimental group improved in ToM measures and in recognition of sadness, anger and disgust.
- These results were not related to clinical or neurocognitive variables, because there were no significant differences between experimental and control groups.
- Despite the improvement, patients in the experimental group had worse post-treatment scores than healthy controls, except in the recognition of happiness and neutral faces.



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These results supported that:

- ✓ SC deficit can be considered a stable trait in schizophrenia
- ✓ There is a specific deficit for negative emotions recognition

Limitations:

1. There was an only measure of ToM
2. All the domains of SC were not assessed
3. There were not measures of social functioning
4. Experimental group was composed by 20 patients
5. There were not longitudinal measures



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Efficacy of the Social Cognition Training Program in a sample of schizophrenic outpatients

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Objective: Social cognition is recognized to be a deficit in individuals suffering from schizophrenia. Numerous studies have explored the relationship between social cognition and social functioning in outpatients with schizophrenia through the use of different social cognition training programs. This study examines the efficacy of the Social Cognition Training Program (PECS in Spanish) in adults with a diagnosis of schizophrenia. **Methods:** Data were derived from a sample of 44 non-hospitalized adult patients, who presented with a DSM-IV-R Axis I diagnosis of schizophrenia, and 39 healthy controls. Patients were divided into an experimental group and a control task group, that received cognitive training. Healthy controls did not receive any treatment. Sociodemographic and clinic variables correlates were computed. 2-way ANOVA was conducted to examine differences between groups in pre and post-treatment measures. Intragroup differences were explored using the paired-samples t-test. **Results:** At the end of the training, patients in the experimental group showed a higher performance compared to patients in the control task group, in the Hinting Task Test and in the emotion recognition of sadness, anger, fear, and disgust. **Conclusions:** The PECS proved to be effective in the improvement of some areas of theory of mind and emotion recognition, in outpatients with schizophrenia. The PECS is one of the first programs developed in Spanish to train social cognition, and the data obtained support the importance of expand the social cognition programs to non-English language samples.

Keywords: [Schizophrenia](#), [Social cognition training](#), [Emotion perception](#), [Theory of Mind](#), [Attributional style](#)

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The current project has been developed in two phases:

- Analysis of the relationship between CS and sociodemographic and social functioning variables.
- **Assessment of the efficacy of SCTP**: randomized study, with pre and post-treatment assessments and 6 and 12 months follow-up assessment.

The study is approved by a Ethical Committee.



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Inclusion criteria:

- Schizophrenia or schizoaffective diagnosis.
- Age 18-65.

Exclusion criteria:

- Intellectual disability or organic disorder comorbidity.
- Having received social cognition training in last 12 months.



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Assessment protocol

- Symptomatology: Brief Psychiatric Rating Scale (BPRS)
- ToM: Faux-Pas Test (10 histories version) and Hinting Task
- Emotion recognition: Emotion Recognition Assessment Test (ERAT). 56 color photographs, 8 for each basic emotion and 8 neutral faces.
- Attributional style: Attributional Style Questionnaire (ASQ)
- Social functioning: Life Skill Profile (LSP) and Quality of Life Scale (QLS)
- Cognitive functioning: Screen for Cognitive Impairment in Psychiatry (SCIP)



Social Cognition Training Program

SCTP consists of 12 weekly group sessions. It is recommended groups between 8 and 12 patients.

It is also recommended that the therapist be a psychologist because there are sessions dedicated to manage delusions.

Program has a manual for the therapist with a guide for all sessions, and a workbook for patients.

Sessions integrate didactic information and exercises.

Computer and projector are required.



Social Cognition Training Program

SCTP aims:

1. Improving emotions recognition, specially negative emotions
2. Analyzing emotions causes and their consequences
3. Eliciting positive emotions
4. Learning to prevent and manage negative emotions
5. Improving comprehension and interpretation of others intentions
6. Analyzing delusions as internal or external over-attributions
7. Defining concepts of social norm an social role
8. Associating these concepts with social acceptance
9. Analyzing patients personal situations in which can be detected a social cognition deficit



Social Cognition Training Program

SCTP blocks:

1. Emotional processing
2. ToM and attributional style.
3. Social perception.



Emotional processing

Four sessions:

- Definition of basic emotion
- Facial features recognition for each emotion
- External events influence on emotions
- Thoughts influence on emotions
- Relationship between emotions and behaviors
- Emotions integration in context



ToM and Attributional style

Five sessions:

- ToM definition
- Comprehension of hintings, ironies, proverbs, and metaphors
- Errors in ToM: literal interpretation and jumping to conclusions
- Jumping to conclusions: differentiate between what we know and what we guess
- Attributional style types: internal and external
- Analysis of delusional ideas as an over-attribution



Social perception

Three sessions:

- Definition of social norm and social role
- Personal interaction contexts: formal and informal
- Use of norms and roles according to social context



Some examples

(sorry, in Spanish)



Emotions: didactic information

Causas de las Emociones

Origen interno: pensamientos

Nuestros propios pensamientos pueden provocarnos emociones, es decir, las cosas que nos decimos a nosotros mismos, lo que recordamos, las expectativas que tenemos sobre algo, ...

Un ejemplo...





Emotions: didactic information

Causas de las Emociones

Teresa está dándole vueltas a que ha suspendido un examen sin motivo. Cuanto más lo piensa, más se convence de que ha sido injusto. Es probable que Teresa se sienta:



Sorprendida



Enfadada



Triste





Emotions: exercises

Expresiones Faciales

ALEGRÍA





ToM and Attributional style: didactic information

Estilo Atribucional

En conclusión

Si aplicamos esto a los delirios, podemos entender estos síntomas como un uso extremado de un estilo atribucional (sobreatribución) para explicar las cosas que suceden.

En concreto:

- Ideas de referencia: sobreatribución interna
- Ideas de perjuicio: sobreatribución externa





ToM and Attributional style: exercises

Ejercicios prácticos

Rodolfo tiene unos vecinos que llevan dos días haciendo ruido con los muebles. Rodolfo está convencido de que lo hacen para molestarle

¿Qué tipo de atribución está haciendo Rodolfo:
interna o externa?

¿Se te ocurre alguna explicación alternativa?





Social perception: didactic information

¿Qué es la Percepción Social?

Vestido: algunas normas

- Salir de casa con ropa de calle (ni desnudo, ni en ropa interior, ni en pijama, ...)
- Adecuar la ropa a la climatología
- Combinar colores
-



Social perception: exercises



Ejercicios

En marzo de 2010 se publicó la siguiente noticia:

Una pareja británica condenada a un mes de prisión por haberse dado un beso en público en Dubái

La pareja estaba acusada de haber "cometido un acto sexual en público al besarse en la boca"

Sin embargo, es muy probable que ellos no supieran que en Dubái existe esta **norma social**.





Preliminary results



Preliminary results

17 centers have participated in the research, with a total sample about 300 subjects.

We are currently analyzing the data, so we have not data of all sample yet.

At the moment, we have analyzed data of 176 patients:

- control group = 83
- experimental group = 93

There were no significant differences between groups in sociodemographic or clinical variables, as we can see in next tables.



Sociodemographic characteristics

	Experimental (n = 93)	Control (n = 83)	Statistic
Gender			$\chi^2 = 0.05$
Men	56	49	$p = 0.87$
Women	37	34	
Education			$\chi^2 = 1.39$
Incomplete	10	13	$p = 0.70$
Primary	47	36	
High school	30	29	
University	6	5	
Laboral experience			$\chi^2 = 6.01$
None	16	22	$p = 0.11$
Supported	13	8	
Normal	64	53	
	Mean \pm SD	Mean \pm SD	
Age	45.20 \pm 11.02	45.54 \pm 11.47	$t = -0.19$ $p = 0.84$



Clinical characteristics

	Experimental	Control	<i>t</i>	<i>p</i>
	Mean \pm SD	Mean \pm SD		
Age of onset	23.30 \pm 6.84	22.90 \pm 7.37	0.37	0.71
Years of evolution	22.39 \pm 10.51	23.20 \pm 11.49	-0.48	0.63
BPRS-P	7.02 \pm 2.75	7.53 \pm 3.43	-1.08	0.28
BPRS-N	7.61 \pm 4.04	7.58 \pm 3.80	0.05	0.95
BPRS-T	32.66 \pm 11	34.33 \pm 10.90	-1.09	0.31



Results

Experimental group patients outperformed than control group patients in post-treatment measures of:

- Emotion recognition: sadness, anger and fear
- ToM: all Faux-Pas indices, except stories comprehension, and Hinting Task
- Attributional style: positive attributional style

There were no significant differences in social functioning measures



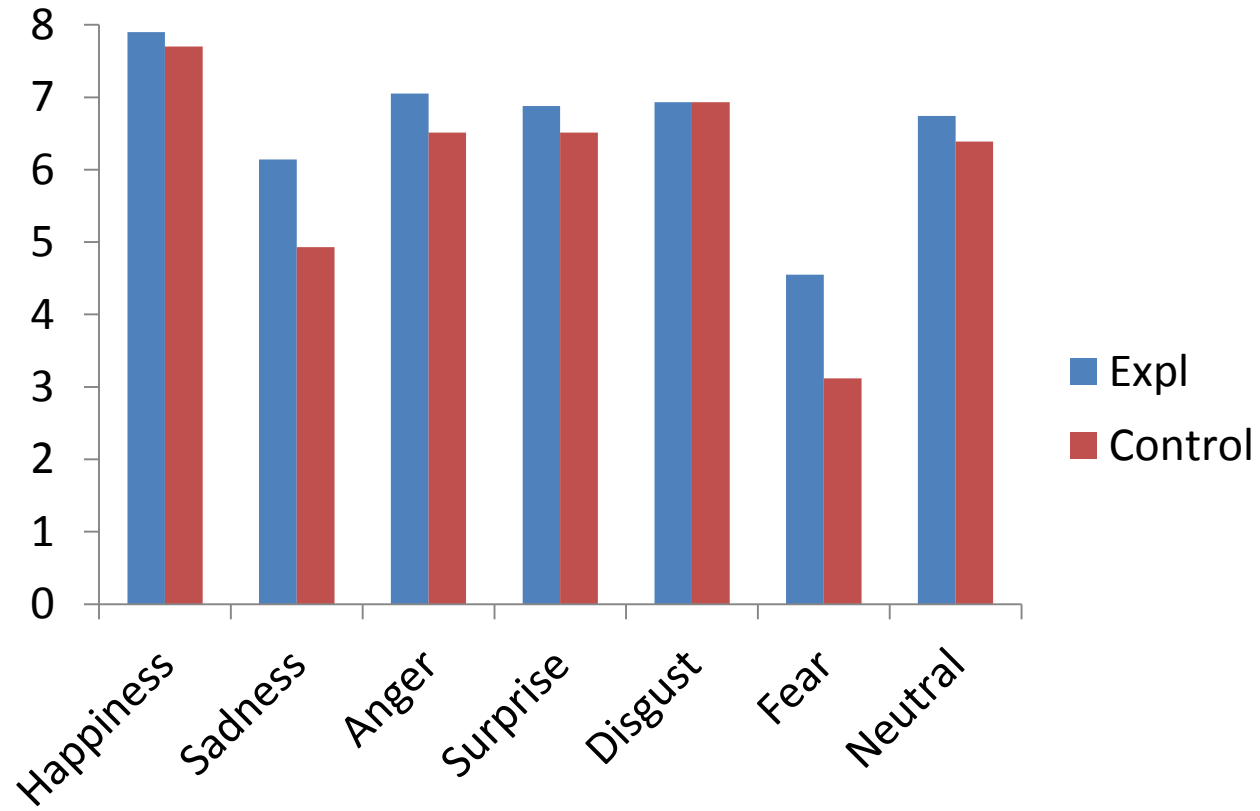
Emotion recognition

	Experimental (n = 42)	Control (n = 41)	<i>F</i>	<i>d</i>
	Media ± DT	Media ± DT		
Happiness	7.90 ± 0.29	7.70 ± 0.88	0.97	
Sadness	6.14 ± 1.13	4.93 ± 2.19	9.42**	0.69
Anger	7.05 ± 1.15	6.51 ± 1.27	4.08*	0.44
Surprise	6.88 ± 1.38	6.51 ± 1.53	1.32	0.25
Disgust	6.93 ± 1.64	6.93 ± 1.27	0.00	
Fear	4.55 ± 1.94	3.12 ± 1.71	12.61***	0.78
Neutral	6.74 ± 1.55	6.39 ± 2.18	0.71	0.18

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$



Emotion recognition





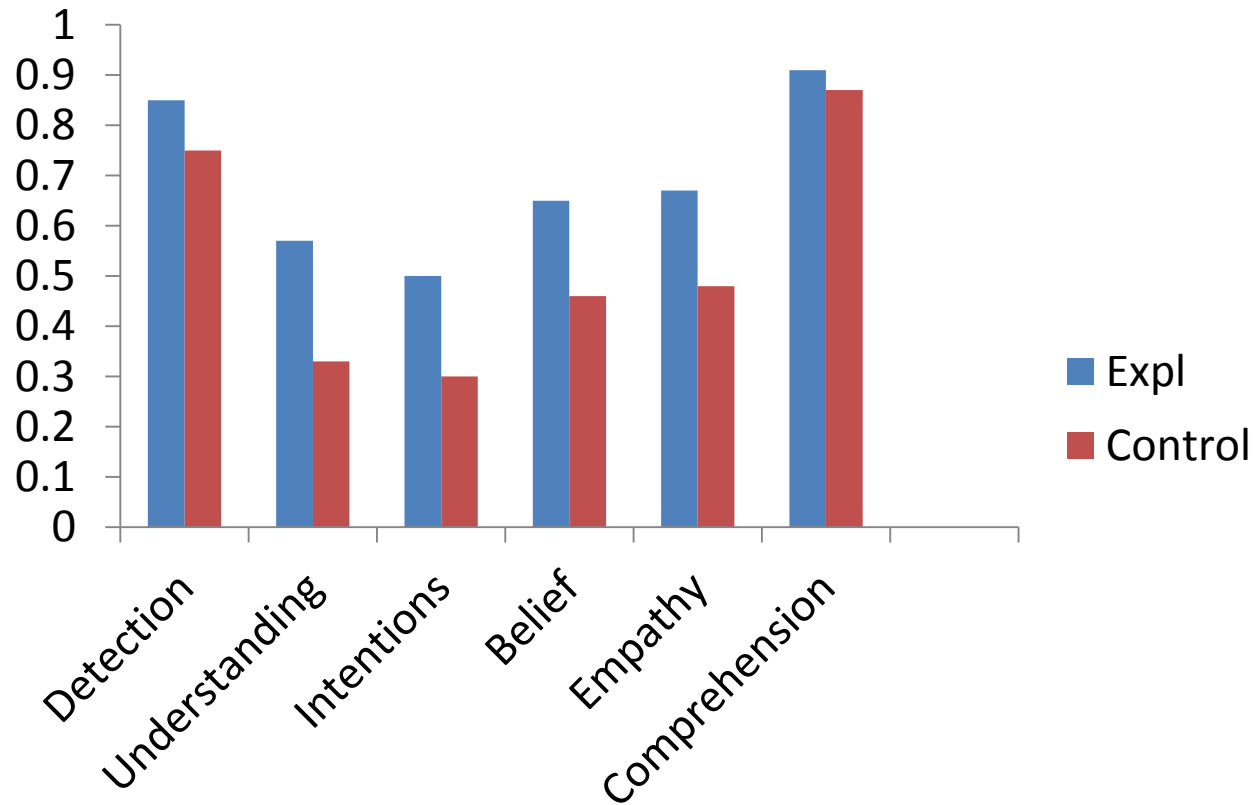
ToM

	Experimental (n = 93)	Control (n = 83)	<i>t</i>	<i>d</i>
	Mean ± SD	Mean ± SD		
Faux-pas detection	0.85 ± 0.15	0.75 ± 0.21	2.99*	0.55
Understanding Inappropriateness	0.57 ± 0.31	0.33 ± 0.30	4.24**	0.79
Intentions	0.50 ± 0.30	0.30 ± 0.26	4.31**	0.71
Belief	0.65 ± 0.28	0.46 ± 0.31	3.38*	0.64
Empathy	0.67 ± 0.28	0.48 ± 0.32	3.42*	0.63
Story comprehension	0.91 ± 0.12	0.87 ± 0.179	1.35	
Hinting Task	8.30 ± 1.69	6.93 ± 2.41	3.83**	0.66

* $p < 0.01$, ** $p < 0.001$

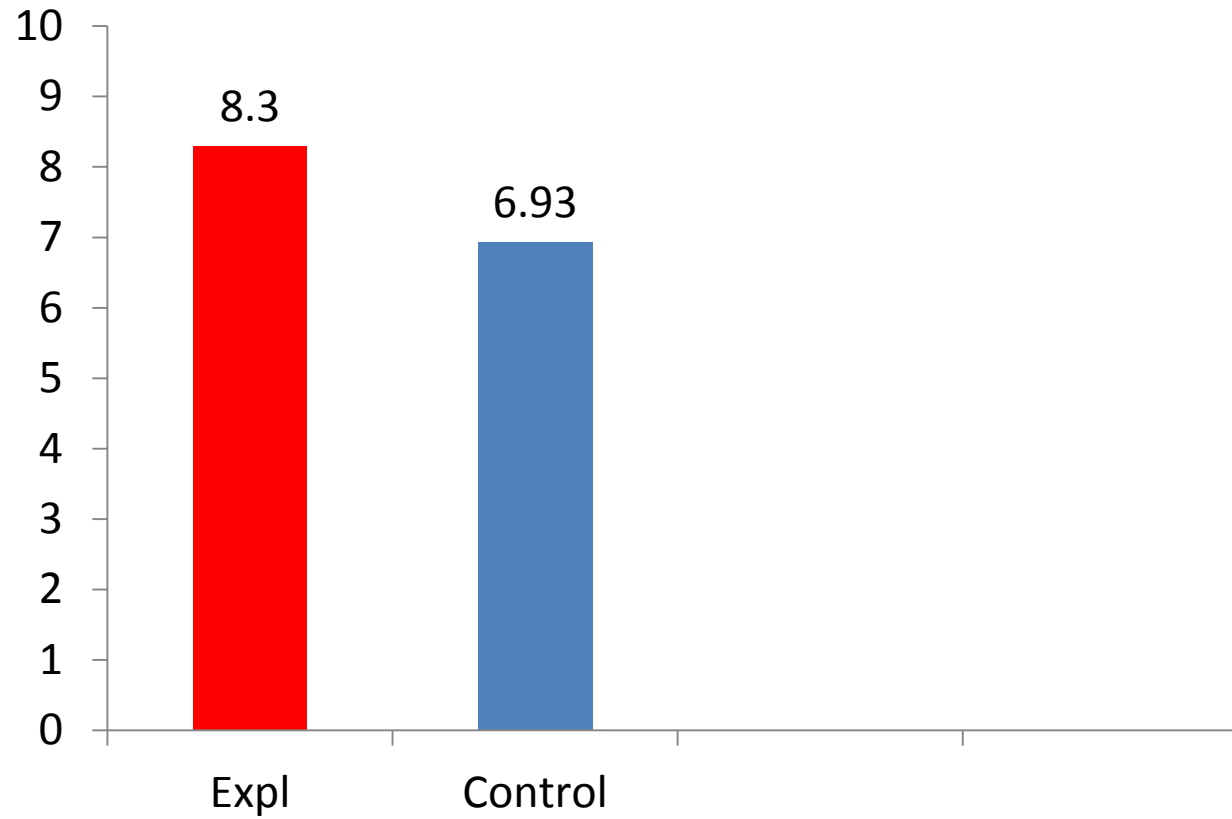


ToM: Faux-Pas indices





ToM: Hinting Task





Attributional style

	Experimental (n = 93)	Control (n = 83)	<i>t</i>
	Mean ± SD	Mean ± SD	
ASQ-P	5.19 ± 0.65	4.77 ± 1.22	2.56*
ASQ-N	4.41 ± 0.87	4.19 ± 1.19	1.22

* $p < 0.05$



Social functioning

	Experimental (n = 93)	Control (n = 83)	<i>t</i>
	Mean ± SD	Mean ± SD	
LSP			
Self-care	34.83 ± 4.12	34.96 ± 4.12	-0.17
Communication	34.18 ± 4.95	33.37 ± 5.38	0.87
Social contact	19.55 ± 4.38	19.54 ± 3.70	0.01
Non-turbulence	21.23 ± 2.69	20.23 ± 3.48	1.78
Responsibility	16.96 ± 4.34	16.79 ± 4.01	0.22
QLS			
Intrapsychic foundations	0.58 ± 0.17	0.54 ± 0.19	1.25
Interpersonal relations	0.45 ± 0.24	0.41 ± 0.22	1.15
Instrumental role	0.46 ± 0.24	0.44 ± 0.26	0.46



Conclusions



Conclusions

1. Sample is composed by chronic patients in remission phase.
2. SCTP seems to be **effective** in improving **recognition of emotion**, (especially sadness, anger and fear), **ToM** and **Attributional style** (positive style).
3. Lack of improvement in social functioning measures could be explained by the short training time. SCPT is a 12 week program.
Improvements in social functioning could require longer training programs.



Conclusions

In a future:

- ✓ It is necessary to replicate the results with all sample of the study (about 300).
- ✓ It is necessary to analyze SCTP efficacy according to clinical variables (age of onset, year of evolution and specific symptoms), premorbid social adjustment or cognitive functioning.
- ✓ It is necessary to assess these data in follow-up assessment.
- ✓ We are thinking about translating into English the SCPT.



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Thank you very much!

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