Evidence for the efficacy of a metacognitive and social cognition training program for outpatients with Schizophrenia

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1. Objective

Impairments in social cognition are a consistent finding in Schizophrenia. The most commonly afflicted domains are theory of mind, emotion recognition and social perception (Frith, 2004; Green et al., 2005, 2008). There is also a vast array of social-cognitive biases that lead to failures in data acquisition and attribution of causes, including jumping to conclusions, self-serving bias, bias against disconfirmatory evidence, need for closure and liberal acceptance (Beck et al., 2009; Freeman, 2007, Greeney & Freeman, 1999; Monti et al., 2007).

Social cognitive processes are unique predictors of functional outcome in schizophrenia (Couture, Pien, & Roberts, 2006). This influence is recognized in two directions. First, there is growing evidence that social cognition acts as a direct predictor of functional outcome and that this potential to exert even more influence in community functioning than neurocognition (Felt et al., 2011). Second, social cognitive biases have been found to mediate the relationship between basic neurocognition and functional outcome, making it more proximal to daily life functioning (Sieg et al., 2006, 2007; Vaudt et al., 2004). Therefore, it should be looked carefully as an important target for intervention. Thus, the aim of this study was to develop and test the effects of a metacognitive and social cognition training program in a sample of outpatients with Schizophrenia.

2. Material and Methods

2.1. Participants

27 clinically stable outpatients with Schizophrenia from two social-occupational centers in the North of Portugal were assigned to a metacognitive and social training program (n=14, 4 females) or to treatment as usual (TAU, n=13, 1 female). The mean age of the participants was 40.1 (SD=9.8) for the training program group and 36.1 (SD=7.9) for the TAU group. This difference was non-significant (t=1.28, p=0.21).

2.2. Instruments

Participants completed pre and post treatment assessments of cognitive flexibility, social cognition, functioning and symptoms. Measures correspond to domains and symptoms: social cognition (Traill Making Test B), theory of mind (Writing Task), jumping to conclusions bias (False task-draw to decisions), emotional recognition (MSCEIT Managing Emotions branch), attributional bias (Ambiguous Intensions Hostility Questionnaire), functioning (Life Skills Profile), symptoms (Positive and Negative Syndrome Scale) and e-assessment (Rosebery Self-Esteem Scale).

2.3. Procedures

The participants on the experimental condition underwent a 10-week metacognitive and social cognition training intervention, designed to address social-cognitive biases (e.g., jumping to conclusions, self-serving bias, bias against disconfirmatory evidence, need for closure and liberal acceptance) and other aspects of social cognition (emotional recognition, theory of mind and social perception). For the purposes, the program consisted of parallel metacognitive psychosocial sessions (in the first session of the week) and interactive social cognition sessions (in the second session of the week). Each metacognitive session was based on a theoretical framework (More, Howard-Roch, & Quinn, 2005) and has an introduction, as multiple exercises, and conclusions with learning phases. Case example and slides underlining the relevance of particular biases emphasize the relationship between the group exercises and social cognitive biases. The interactive social cognition sessions focused on the processing of emotional and social cues, the analyses of social situations, the understanding of non-literal speech and the ability to take another’s perspective. This was done by using group exercises (e.g., condensed messages), interactive didactic presentations (e.g. direct the attention to relevant facial features, use mimicry to potentiate the ability to recognize emotions), mini-plays and homework. Table 1 presents some of the main objectives of each training component.

The dose and the type of the antipsychotic medication were not controlled in the study, but it was not qualitatively changed during the study. Pre and post training scores were compared by paired samples t-tests, using the program PASW Statistics 18.

3. Results and Conclusions

Following intervention, the metacognition and social cognition group showed improvements in different social cognition measures. The most outstanding improvements were on theory of mind, emotion recognition and social perception. There was also a trend to a reduction of the bias in the interpretation of ambiguous situations and in the need to have more draws before making a decision, which is an indicator of a decrease in jumping to conclusions. There was also a small but significant increase in the psychosocial functioning, specially on self care, social contact and communication. These are areas of functioning that are closely related to social cognition skills. The participation in this program was also accompanied by reductions in positive and general symptoms.

These results seem to be differentially grounded on the participation in the metacognition and social cognition training program, since there was no significant change in these variables in the TAU group.

The improvement of relevant skills to social interaction demonstrated by the participants in the experimental condition in this trial encourage the application of this treatment format in the context of the rehabilitation of outpatients with Schizophrenia.

4. Bibliography

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