Evidence of the efficacy of the REHACOP Programme for cognitive rehabilitation in schizophrenia

REHACOP tackles the historically deficient cognitive domains in schizophrenia as well as training of functional and psycho-education-related abilities. The approach is based on restoring, compensating and optimising.

Schizophrenia is one of the most severe and widespread mental illnesses in today's world, affecting 1% of the population. Symptoms and severity vary, with each patient showing different evolution. In the past, schizophrenia was understood in terms of negative or positive symptoms. Progress in research on the disease has revealed other clinical symptoms (lack of organisation, agitation or emotional distress) as well as "cognitive deficiencies".

Schizophrenics show difficulty performing cognitive tasks such as those related to attention, concentration, memory, learning, executive functions, language, information processing speed or social cognition. Patients' poor performance for these abilities may appear in stages prior to the onset of the illness and directly affect how the person functions in the family, social, school and work contexts. Although necessary, the medication normally prescribed does not cover these deficits. As a result, health care professionals posed the need to combine medication with psychosocial therapies. Cognitive rehabilitation was one of a wide range of psychosocial treatments put forth to treat schizophrenia.

Cognitive rehabilitation is a treatment based on knowledge of neuropsychology. The main objective is to restore, optimise or compensate patients' performance of cognitive capacities that seem to have been damaged. Including neuropsychology and cognitive rehabilitation in treatment of schizophrenia entailed creating a wide variety of rehabilitation programmes for these patients. Only three of the existing programmes can be used in Spanish and none of them cover all the cognitive deficits schizophrenics suffer from.

Furthermore, the fact that the programmes showed very different features led the scientific community to doubt their efficacy. Studies by leading experts (McGurk, 2008; Wykes, 2011) showed that most of the programmes were effective. Nevertheless, the programmes that combined cognitive rehabilitation with another type of psychiatric rehabilitation and trained patients to use cognitive strategies and functional abilities such as social skills seemed to be more efficient than the others.

The REHACOP Programme
Natalia Ojeda, PhD and Javier Peña, PhD decided to create the “Cognitive Rehabilitation Programme in Psychosis REHACOP” (2005-2012) in view of the need for a programme in Spanish to treat most cognitive deficits in schizophrenia. The project required the collaboration of all the members of Ojeda's Neuropsychology Team on Severe Medical Disorders, medical experts, nurses and patients from the Alava Psychiatric Hospital. The team received funding from the Basque Government Departments of Education and Health and the Spanish Ministry of Health for this project.

REHACOP tackles the historically deficient cognitive domains in schizophrenia as well as training of functional and psycho-education-related abilities. The approach is based on restoring, compensating and optimising. The programme is organised by content and application, which makes it easy to use for any practitioner with basic ideas about the illness and rehabilitation. There is a wide range of exercises (over 300), all of which are organised in levels of mastery and difficulty. Although the activities are interrelated, they may be used separately. The therapist can ultimately choose only those activities the patient needs and thus adapt the programme to his/her profile. The programme includes teaching and practising cognitive strategies during and after the sessions.
Once the programme had been created, the need to test its efficacy arose. For this reason, the study which the thesis recently defended by Eneritz Bengoetxea, PhD was based on. The main aim was to identify REHACOP's possible impact on the subjects' clinical symptoms, cognitive deficits and their general and specific functional level. The secondary objective was to identify the variables that could condition or influence the programme's efficacy.

The study yielded the following results by comparing the performance of patients receiving treatment with REHACOP (N=36) and the performance of the control group that took part in group occupational activities (N=48): REHACOP helped to improve cognitive abilities such as visual memory, work memory, executive functions, processing speeds and verbal fluency. On the other hand, the REHACOP group showed higher improvement of negative symptoms, emotional distress and disorganisation. The overall functional level of patients treated with REHACOP showed significant improvement over the control group. This improvement was especially noticeable in functional levels related to family, social and occupational contexts. It was also observed that the pre-treatment levels of certain cognitive abilities and clinical symptoms could determine the degree of improvement for patients in the REHACOP group. Unfortunately, the results of the study did not give conclusive results which could lead to better knowledge of the causal mechanisms of the programme's efficacy.

These results have been published in international scientific impact journals such as Schizophrenia Bulletin or Neuro Rehabilitation.

Conclusions
Thanks to these results, we could conclude that the Cognitive Rehabilitation Programme in Psychosis REHACOP efficiently improves deteriorated cognitive abilities in schizophrenia. It also seems possible to use REHACOP to treat certain clinical symptoms that had not been fully studied or had not improved with cognitive rehabilitation programmes used in previous studies. Lastly, REHACOP also seems to be more effective than the control treatment to improve patients' functional levels, providing more complete information on the changes undergone in specific functional subdomains. This study suggests that cognitive rehabilitation affords the possibility of producing a therapeutic impact on the normal course of the illness. This means that including cognitive rehabilitation in standard treatment of schizophrenia is clearly plausible.

At present, the REHACOP programme has been implemented as standard treatment in day centres and hospitals in the Biscay Mental Health Care Service. Numerous professionals and care services centres across Spain have started to include the programme in their treatment portfolios. The team has also received requests from international teams to translate and adapt the programme for use in other countries.

*Doctoral Thesis by Eneritz Bengoetxea Noreña: Evidence of the efficacy of the REHACOP Programme for cognitive rehabilitation in schizophrenia (Evidencias de la Eficacia de la Rehabilitación Cognitiva en la Esquizofrenia con el Programa REHACOP) Thesis supervised by: Natalia Ojeda del Pozo, PhD and Naroa Ibarretxe Bilbao, PhD.

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