



## Editorial

## Cognitive therapies for psychosis: Advances and challenges

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Over the past two decades, recovery, not just symptom control, has become the focus of treatment for individuals suffering from the various clinical challenges associated with the schizophrenia syndrome. While pharmacotherapy is standard practice for managing the disorder, it has clear limitations for achieving the outcomes that patients urgently need to regain social and vocational functioning. Effective treatments for negative symptoms, persistent psychotic symptoms, and neuro- and social cognitive impairments remain major unmet needs, which prevent optimal functional outcomes and impede the recovery of a significant proportion of individuals.

Cognitive therapies are now recognized as effective approaches for promoting recovery in individuals with psychotic disorders. Cognitive Remediation (CR) reduces the neuro- and social-cognitive impairments, like impaired attention, memory and emotion processing, as a way to improve functional outcomes. Cognitive Behavioral Therapy (CBT) helps reduce positive and negative symptoms, the associated distress, and may help prevent the onset of a psychotic disorder in those at high risk. Together, the cognitive therapies target cognition at both the granular level (neuro and social cognition) and the complex level (beliefs and thoughts). Evidence-based, well-tolerated and cost-effective, the challenge is to make CR and CBT more widely available. This special issue introduces the reader to the spectrum of cognitive therapies with the goal of showcasing the latest research advances and the conceptual evolution of the theory and application of CR and CBT in schizophrenia.

### 1. Cognitive remediation papers

The issue begins with a review paper by Horan and Green (2017) that critically evaluates the current evidence for social cognitive interventions, which target skills like emotion processing, social cue perception, attributional style, and theory of mind. The consistency of evidence for improvements in facial affect identification and the fact that the more well-controlled studies find treatment benefits, support their cautious optimism for social cognitive interventions. The authors advocate for future research to prioritize development of novel psychosocial and non-psychosocial interventions.

The next two papers explore mechanisms of action. Cella and Wykes (2017) examined the association between potential active ingredients and the cognitive, functioning and symptom outcomes that significantly improved following CR. They found that cognitive improvements were associated with massed practice, number of useful strategies and

therapeutic alliance. Therapeutic alliance emerged as the only factor associated with change in both cognitive and functional CR outcomes in people with psychosis. Similar to other psychological therapies, therapeutic alliance has an important role in CR outcomes, particularly functional outcomes.

Sandoval et al. (2017) turned their focus to people with first episode psychosis and examined the extent to which CR related cognitive improvement is due solely to computer based training or other therapeutic variables, such as peer social interaction (PSI) during clinician led CR. They found that compared to those in sessions without PSI, patients with PSI demonstrated better cognitive performance on some cognitive exercises. Confirmation of these pilot results could have implications for how CR is delivered- whether CR is best done individually or where there is group interaction.

The next three papers present research on new applications of cognitive therapies. Ventura et al. (2017) report on their randomized controlled trial, where CR participants improved more than participants in Healthy Behavior Training in cognition, negative symptoms and social functioning. Both treatments were offered in the context of psychosocial rehabilitation and were therapist led; patients were randomized to oral or long acting injectable Risperidone. This paper speaks to the synergistic effects of the offered treatments as well as the role for CR in the treatment of first episode outpatients.

Best et al. (2017) conclude that the addition of a brief executive function (EF) training procedure to other psychosocial interventions is worth considering, given that executive functioning is important to successful community functioning. Their randomized control trial found that even two weeks (6 h) of working on four computerized EF training exercises led to neurocognitive improvement and neurophysiological change.

Twamley et al. (2017) tested a 12-week Compensatory Cognitive Training (CCT) intervention in the context of supported employment for people with severe mental illnesses who were seeking work. Compensatory training teaches strategies to work around the deficits, instead of giving restorative drill and practice exercises. Compared to the control condition, the CCT participants demonstrated more immediate post treatment benefits to cognitive performance, psychiatric symptom severity, and quality of life but this was not sustained over two years. Work outcomes did not differ in the treatment groups.

The final CR paper addresses the challenges of disseminating the intervention in a large system of care. Medalia et al. (2017) report on the

implementation of CR programs for adults in 16 state operated outpatient clinics in New York state. The data indicate that a decrease in referrals, enrollment and utilization can be expected when a program moves from a research setting to the real world. Still, the acceptability, fill rates and utilization data indicated that CR can be successfully implemented in large scale, geographically diverse, publically funded clinic settings. Furthermore, there was high treatment fidelity for program structure and content across clinical sites.

## 2. Cognitive behavioral therapy papers

The CBT section begins with a theoretical review paper by Beck et al. (2017) The authors show that the cognitive triad – the negative view of self, others, and the future – which has been a useful tool in depression, anxiety, and personality disorders, provides a framework for understanding and intervening in schizophrenia. They present literature supporting the role of the cognitive triad in expressive and experiential negative symptoms, as well as delusions and hallucinations, and explain the implications of this understanding on psychotherapeutic interventions.

The next three papers are critical reviews of the literature. Kingdon and Turkington (2017) report on the effectiveness of CBT in individuals with schizophrenia, psychotic symptoms, and depression in psychosis. They conclude that CBT has been shown to be effective, and in some cases over and above medication, across a range of different approaches, and in different cultural settings. The authors argue that international training efforts should be initiated to make this treatment more available.

Lincoln and Peters (2018) focus on delusions and hallucinations, finding that targeted, individualized interventions show promising efficacy. They suggest CBT should continue to include a wide range of flexible techniques. Specifically, the authors assert that the best way to elucidate the mechanisms of CBT is for researchers to employ approaches explicitly targeting delusions or hallucinations, focusing on one factor at a time, demonstrating that an intervention can change the factor and the symptoms.

Ward and Garety's (2017) review covers reasoning biases in delusions, including jumping to conclusions, belief flexibility, and the bias against disconfirmatory evidence. They propose that dual process models (i.e., fast and slow thinking) of reasoning provide a useful framework for therapy and treating individuals with distressing delusions.

The final three papers present new directions. First prevention – van der Gaag et al. (2017) examine the evidence for the efficacy of CBT in individuals with an at risk mental state. They conclude that CBT successfully postpones and prevents the transition to psychosis. The authors discuss clinical implications and ideas for future research.

Next, stand-alone treatment – Morrison (2018) presents the use of CBT as an alternative to antipsychotic medication. He reviews several trials that show CBT without medication is a safe and effective treatment option. Individuals should be allowed to make an informed choice, Morrison concludes, and be given the option of CBT without medication.

Finally, promoting recovery – Fowler et al. (2017) report 2-year follow-up data on social recovery of individuals experiencing an early episode. They found that 25% of the individuals in the CBT treatment

group had engaged in paid work, as compared to none of the control group, and experienced no worsening of symptoms in the year following the end of treatment. These results provide evidence for the durability of social recovery gains in young people with early non-affective psychosis.

Together these papers provide strong evidence for the role of cognitive therapies in the recovery from psychosis, and some exciting findings about the potential for cognitive therapies to prevent transition to psychosis. A consistent theme is the need to facilitate patient access to these therapies. Provider education and clinical dissemination efforts are the next frontier for cognitive therapies to treat psychosis.

### Role of funding source

There was no funding source for this editorial.

### Contributors to the guest editorial cognitive therapies for psychosis: advances and challenges

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### Conflict of interest

The authors of this editorial have no conflicts of interest to report.

### Acknowledgements

We thank Nina Bertolami and Alice Saperstein for their assistance with this special issue.

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