

# Individualized Metacognitive Therapy Program for Patients with Psychosis (MCT+): Introduction of a Novel Approach for Psychotic Symptoms

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**Background:** Metacognitive Group Training for Schizophrenia Patients (MCTg) focuses on dysfunctional thinking styles (e.g. cognitive biases) putatively involved in the formation and maintenance of delusions. Recently, the Individualized Metacognitive Therapy Program for Patients with Psychosis (MCT+), an extension of the group training, was released. MCT+ sessions aim to correct false metacognitive beliefs, which in turn should challenge a patient's personal delusional convictions. **Aims:** The present study demonstrates how MCT and MCT+ can be combined and how the contents are conveyed to the patient. **Method:** We present a single case study of a patient undergoing a combined treatment of MCT and MCT+. Before intervention and 4 weeks later the Positive and Negative Syndrome Scale (PANSS) and the Psychotic Symptom Rating Scales (PSYRATS) were administered. **Results:** The patient showed a substantial symptom reduction after 4 weeks of combined therapy of MCTg and MCT+ as measured with PANSS and PSYRATS. **Conclusions:** The present case history lends preliminary evidence for the feasibility of this new treatment approach in psychosis.

*Keywords:* Schizophrenia, psychosis, CBT, delusions.

## Introduction

Cognitive behavioural therapy (CBT) has emerged as a promising approach to complement psychopharmacological treatment in schizophrenia. CBT exerts a weak-to-medium effect on psychotic symptoms beyond neuroleptic medication (Wykes, Steel, Everitt and Tarrier, 2008). Recently, results of similar magnitude have been obtained with the Metacognitive Group Training for Schizophrenia Patients (MCTg; Moritz, Vitzthum, Randjbar, Veckenstedt and Woodward, 2010b). Metacognition has been defined in different ways,<sup>1</sup> but in this context it is understood as “thinking about one's thinking”. MCTg focuses on dysfunctional

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<sup>1</sup>There are several other metacognitive approaches by, for example, Adrian Wells and Peter Fisher, as well as Paul Lysaker. The present MCT is rooted in an experimental psychology understanding of metacognition, which views confidence/conviction as core metacognitive aspect. One of the foremost aims of the MCT is to sow doubt (see text).

thinking styles (i.e. cognitive biases) putatively involved in the formation and maintenance of schizophrenia symptoms in general and delusions in particular (e.g. altered attributional style, jumping to conclusions; Bell, Halligan and Ellis, 2006). MCTg is fully documented (Moritz et al., 2010b) and can be downloaded at no cost via [www.uke.de/mkt](http://www.uke.de/mkt) in 30 languages. For a detailed description of the MCTg modules<sup>2</sup>, the reader is referred to the manual and previous articles (Moritz, Vitzthum, Randjbar, Veckenstedt and Woodward, 2010a; Moritz et al., 2010b).

With CBT Metacognitive Training shares the aim of improving insight and facilitating symptom reduction. However, this is achieved by raising patients' awareness of these biases before personal convictions are challenged. Adoption of this gentler "backdoor-approach" is hoped to increase therapy adherence and subjective well-being by improving their (meta)-cognitive competence. However, the group setting provides only little room to address individual concerns. Therefore, we developed an extension of MCTg with one-to-one sessions called Individualized Metacognitive Therapy Program for Patients with Psychosis (MCT+), which can be regarded as a CBT-based approach. This setting gives the opportunity to combine the training of cognitive biases with the treatment of individual (delusional) ideas.

The MCT+ material contains therapy demonstration sheets, a manual with dialogue guidance for exercises, worksheets and instruments to measure psychopathology and cognitive biases (e.g. PANSS, IPSAQ). The purpose of this report is to introduce MCT+ by means of a case history (for an in-depth description of all MCT+ therapy units the reader is referred to the following link: [www.uke.de/mct\\_plus](http://www.uke.de/mct_plus)).<sup>3</sup>

### Case history

The following case history deals with a 44-year-old male who had been admitted to hospital for the fourth time since the diagnosis of schizophrenia 8 years earlier. After each psychotic episode the patient fully remitted and was able to finish a PhD degree, have a family life and carry out a highly demanding job in an information technology firm.

On admission, he reported having noticed a decrease of well-being 3 months before, but was unable to reflect on it as warning signs. Back then, he experienced a time of intensive stress at his workplace and feared losing his job. He began to interpret reactions of his colleagues in a delusional way leading to more intensified fears of being displaced. On the other hand, he felt that he had disappointed his employer and significant others resulting in strong feelings of worthlessness. He felt that those people were trying to take revenge by degrading him because he had disappointed them. Their ultimate goal was to make him ill. As a result, feelings of being persecuted by his employer as well as family members emerged, making him unable to cope with demands of everyday life.

The content of his present delusion resembled the content of prior psychotic episodes. At the time of the first encounter with the therapist, the patient had constantly been taking atypical neuroleptic medication for 5 years (risperidone depot injection 25mg/twice monthly). Additionally, he had received 2,5mg/daily risperidone for one week.

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<sup>2</sup>The MCTg sessions are labelled modules, whereas the individualised MCT+ sessions are called therapy units.

<sup>3</sup>Additionally, an extended, more detailed version of this brief case report is available on request from the author or editor.

## Design

The patient had been admitted to hospital one week before attending the first of eight metacognitive group sessions each followed by an individual MCT+ session. Sessions took place twice weekly for one month. The duration of each session was approximately 50 minutes. The patient participated in all 16 possible training sessions (eight group (MCTg) and eight individual (MCT+) sessions, including one session focusing on generating an illness model<sup>4</sup>) as well as one initial medical history session. Treatment was conducted by the first author. In the following, the content of the different individual MCT+ sessions is briefly described.

### *Therapy unit “Attributional Style” (number of individual sessions: 1)*

Several studies (for a review see Moritz et al., 2010a) showed an externalizing and personalizing attribution bias in patients with schizophrenia and linked this to the formation of persecutory delusions. MCT addresses consequences of different attributional styles (e.g. blaming others may lead to interpersonal problems). The learning aim is that in most cases different causes (internal, personal and external attributions) contribute jointly to an event. Different attributional styles and their possible social consequences were then worked through.

The patient was able to develop different causes that could have contributed to his delusional idea “I feel watched and persecuted”. Using a pie chart, it was discussed how far internal and external (situational and personal) factors accounted for his conviction. He admitted to having blamed others up to 100%, but during treatment he was able to integrate the influence of personal factors (40%) as well as circumstances (20%), thus representing a more balanced interpretation.

### *Therapy unit “Decision Making” (number of individual sessions: 1)*

This therapy unit deals with jumping to conclusions (JTC) bias (for a review see Moritz et al., 2010a). The learning goals emphasize the need to gather sufficient information if one has to make important conclusions with consequences. This is illustrated via different exercises, for example, paintings for which the correct title must be deduced from different options. On first sight, many pictures prompt false responses, demonstrating that gathering information is essential to making a correct judgment.

The patient empathized with a fictional case example of someone who felt bullied at work. Next we proceeded to a pro and cons list, where the consequences of different scenarios were generated in order to sensitize him to the “costs and benefits” of different assumptions regarding his convictions. The patient had difficulty adapting this exercise to his own delusional beliefs, so that working on case examples regarding JTC as well as improving his metacognitive skills was continued rather than confronting him with the fallibility of his personal beliefs.

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<sup>4</sup>For a detailed description of therapy unit “Illness model”, the authors refer to the extended version of this case available online or on request from the authors.

*Therapy unit “Changing Beliefs” (number of individual sessions: 2)*

Several studies show that schizophrenia patients tend to stick to their conviction even when confronted with strong counter-arguments (Moritz et al., 2010a). The disadvantages of continuing to insist on one’s opinion while ignoring disconfirming information are discussed. Participants are encouraged to re-evaluate the validity of their opinions from time to time and to change them when necessary. This is done with the help of different exercises, for example, successive presentation of three pictures revealing step by step an ambiguous plot. The plausibility of four alternative interpretations of the situation shown at each of the three stages has to be discussed. The aim is to encourage patients to stay open-minded and include counter-arguments for decision making.

The patient was asked to gather arguments for and against fictional delusional ideas before focusing on his own idea and rating his degree of conviction. In the beginning of the therapy unit he stated this particular idea to be true at 100%. In the course of the therapy unit therapist and patient worked on his ability to generate ways he could verify his own ideas (e.g. to check back with people he trusts). In the end, the patient did not dismiss his conviction entirely; he still felt suspicious that colleagues and certain family members were trying to make him ill. Nonetheless, in the course of this therapy unit he attenuated his conviction from 100% to 20%. Thereafter, he considered allowing certain family members to contact him again, something he had previously refused to do.

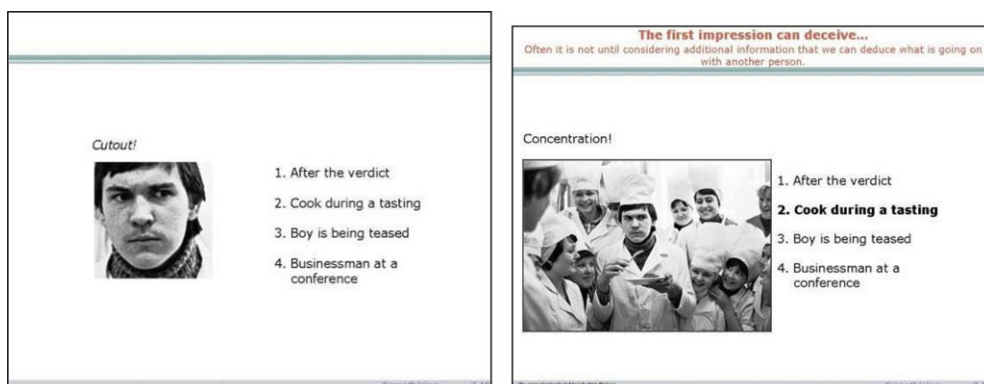
*Therapy unit “Empathising” (number of individual sessions: 1)*

Deficits in social cognition and theory of mind are often found in schizophrenia (for a review see Moritz et al., 2010a). The unit focuses on emotion recognition, encouraging patients to collect different cues before making strong social inferences (e.g. facial expression). Additionally, patients are requested to take different perspectives to experience how others might look upon things. The learning goal is to stay open-minded, particularly when there are insufficient social cues to make a firm judgment about others.

One exercise is to identify facial expressions and underlying emotional states by means of cut-outs (see Figure 1), whereby many of these items prompt wrong interpretations. Patients are taught to collect information from different sources and to decrease their level of confidence in case information is ambiguous. Consequences of being excessively confident about other people’s intentions as well as the influence of mood (e.g. suspicious vs. sad) on the patient’s perception and appraisal of situations or other people were discussed.

*Therapy unit “Self-Esteem and Mood” (number of individual sessions: 1)*

Many patients with psychosis show comorbid affective disorders. For this reason, depressive thought distortions are introduced. The relationship of these thinking biases with affective problems as well as delusions are discussed (e.g. delusions of guilt and grandiosity). Moreover, the extent to which psychosis had an effect on mood and self-esteem, and also the role of low self-esteem in developing a psychosis, were studied. The patient appraised this topic as particularly relevant.



**Figure 1.** (Colour online) Exercise taken from the MCT+ unit “Empathising”

### Assessment

The effect of the combined metacognitive intervention on psychotic symptoms was assessed at baseline (i.e. before the first training session) and one month later (i.e. after 8 group and 9 individual sessions of MCT). This case report was part of a larger treatment trial that allocated patients either to MCTg/MCT+ or to cognitive remediation. The Positive and Negative Syndrome Scale (PANSS; Kay, Opler and Lindenmayer, 1989) and the Psychotic Symptom Rating Scales (PSYRATS; Haddock, McCarron, Tarrier and Faragher, 1999) served as core outcome parameters. Assessments were kept blind to treatment allocation.

## Results

### *Positive and Negative Syndrome Scale (PANSS)*

Symptom improvements occurred on all five factors (positive and negative symptoms, disorganization, excitement, emotional distress) of at least four points after 4 weeks of intervention. A more marked reduction was achieved in emotional distress (-15 points) as well as positive and negative symptoms (-10 points).

### *The Psychotic Symptom Rating Scales (PSYRATS)*

No hallucinations were evident on both occasions. At baseline, the degree of the overall delusion conviction was in the medium range, stating that the patient had some doubts of conviction but would not yet dismiss his beliefs. At post assessment he stated having no conviction at all, measured by a decline on the respective PSYRATS item from 2 to 0 points after 4 weeks of treatment.

## Discussion

The present case study reports the metacognitive treatment of a 44-year-old male who had been hospitalized for acute psychosis. He underwent the Metacognitive Group Training that

addresses different cognitive biases involved in the formation and maintenance of delusions. These biases are brought to awareness with the help of playful exercises that elucidate “cognitive traps”. In addition, he underwent the Individualized Metacognitive Therapy Program (MCT+; Moritz, Veckenstedt, Randjbar and Vitzthum, 2011), a newly developed individualized extension of MCTg. As insight appeared to be low during the first sessions, fictional case examples described on worksheets (see [www.uke.de/mct\\_plus](http://www.uke.de/mct_plus)) were introduced. This aimed to familiarize the patient with the different topics in a more indirect manner. In the course of the individual therapy, overall delusion conviction, assessed with the PSYRATS, declined from a medium degree at baseline to no conviction at all after 4 weeks of treatment. An overall improvement of symptoms was measured with the PANSS.

The fact that the patient did not miss a single session underlines his motivation to engage and emphasizes the applicability of the therapy package. Although results of this case study are promising, several methodological limitations should be noted inherent to most case studies. First, we have neither collected data on the improvement of cognitive biases, nor are any follow-up data available. The results are thus unknown on the sustained effects of the training. As a result, we are not able to generalize from this case report. However, this would go beyond the primary purpose of this paper which aims at introducing a novel therapy approach. Second, not all of the treatment effects can be attributed to the metacognitive intervention package. Although the patient did not receive any other psychological intervention during his hospitalization, symptom reduction may partly be ascribable to the slight increase in dosage of neuroleptic medication as well as to a natural fluctuating course of illness.

By introducing MCT+, an individual metacognitive approach that follows CBT- guidelines and incorporates innovative metacognitive components, we hope to present a possible new way to provide psychological treatment to schizophrenia patients beyond antipsychotic monotherapy.

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