

Antipsychotic treatment beyond antipsychotics: Metacognitive Therapy for Schizophrenia Patients (MCT+)

Francesca Vitzthum, Ruth Veckenstedt, Sarah Randjbar and Steffen Moritz

Introduction: There is increasing evidence that cognitive factors play a prominent role in the pathogenesis of schizophrenia (van der Gaag, 2006). According to recent meta-analyses, cognitive-behavioral therapy (CBT; for German programs see for example Klingberg et al., 2003; Lincoln, 2006) achieves weak-to-medium effect sizes beyond the effects of neuroleptics (Lincoln et al., 2008). The Metacognitive Training for Schizophrenia Patients (MCT; Moritz et al., 2007a) is a variant of CBT. The MCT group training focuses on cognitive biases (e.g., jumping to conclusions, mental inflexibility) which are assumed to play a role in the formation and maintenance of psychotic symptoms. Several studies assert the safety, feasibility and effectiveness of the MCT (Moritz & Woodward, 2007b; Ross et al., 2009). An individualized variant of the training, entitled Metacognitive Therapy for Patients with Psychosis (MCT+, Moritz et al., in press-a), is now available and attempts to correct *individual* false metacognitive beliefs and subsequently challenges personal delusional convictions. **Study Rationale:** The present study compared each 24 patients undergoing group and individual MCT versus CogPack training (cognitive remediation). The Positive and Negative Syndrome Scale (PANSS) and the Psychotic Rating Scales (PSYRATS) delusion parameters served as main outcome parameters.

Methods I

Patients, were tested blind to group allocation (MCT versus CogPack) with a large test battery before intervention and 4 weeks later. Participants were recruited from the University Medical Center Hamburg-Eppendorf. Exclusion criteria were alcohol-/substance dependence and age <18 or >65 years.

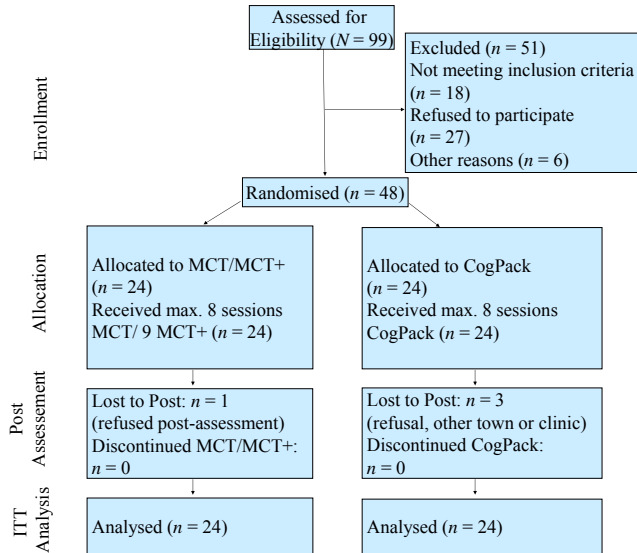


Figure 1. CONSORT flow diagram.

Table 1: Background and psychopathological data at baseline

Variable	MCT	CogPack	statistics
gender (male/female)	17/7	14/10	$\chi^2(1)=.82, p > .3$
age	32.63 (12.48)	35.46 (9.10)	$t(46)=.90, p > .3$
years of formal school education	11.25 (1.48)	11.35 (1.53)	$t(46)=.22, p > .8$
% maximal dosage	52.36 (36.89)	60.20 (35.03)	$t(46)=.76, p > .4$
PANSS total	56.12 (12.60)	60.87 (14.93)	$t(46)=1.19, p > .2$
PANSS delusions	9.04 (3.47)	10.04 (3.86)	$t(46)=.94, p > .3$
PSYRATS delusions	8.71 (6.31)	10.57 (7.18)	$t(46)=.94, p > .3$

Discussion: Group and individualized MCT were superior to CogPack (cognitive remediation) on the amelioration of delusion severity (PANSS), delusion conviction (PSYRATS) and jumping to conclusions (beads task variant). Effect sizes were in the medium to strong range ($\eta^2 > .06$). Since most patients were on neuroleptic medication for more than 2 weeks, which is the critical period for symptom improvement under antipsychotics (Agid et al., 2003), overall improvements are in our view mainly attributable to psychological intervention. Limitations of the study are as follows: lack of follow-up period, small sample and unequal number of sessions for cognitive remediation and MCT. In view of the poor outcome in schizophrenia, high rates of relapse and medication noncompliance (~50%) even in the era of atypical neuroleptics on the one hand and mounting evidence for the effectiveness of psychological intervention in schizophrenia on the other hand, cognitive interventions should be integrated into standard psychiatric care and complement the administration of neuroleptic medication.

References: Agid, O., Kapur, S., Arenovich, T., Zipursky, R.B. (2003). Delayed-onset hypothesis of antipsychotic action. A hypothesis tested and rejected. *Archives of General Psychiatry*, 60, 1228-1235; Haddock, G., McCarron, J., Tarrier, N., Faragher, E.B. (1999). Scales to measure dimensions of hallucinations and delusions; the psychotic symptom rating scales (PSYRATS). *Psychological Medicine*, 29, 879-889; Klingberg, S., Schaub, A., Conrad, B. (2003). Rezidivprophylaxe bei schizophrenen Störungen. Beltz: Weinheim; Lincoln, T. M. (2006). *Kognitive Verhaltenstherapie der Schizophrenie. Ein individuenzentrierter Ansatz zur Veränderung von Wahn, Halluzinationen und Negativsymptomatik [Cognitive-behavioral therapy for schizophrenia. An individual approach to changing delusions, hallucinations and negative symptoms]*. Göttingen: Hogrefe; Lincoln, T.M., Suttner, C. & Nestorluc, Y. (2008). Wirksamkeit kognitiver Interventionen in der Reduktion schizophrener Symptomatik. Eine Meta-Analyse. *Psychologische Rundschau*, 4, 217-232; Moritz, S., Woodward, T.S., Metacognitive Study Group (2007a). *Metacognitive Training for Patients with Schizophrenia (MCT)*. (2nd ed.). Hamburg: VanHam Campus; Moritz, S., Woodward, T. S. (2007b). Metacognitive training in schizophrenia: from basic research to knowledge translation and intervention. *Current Opinion in Psychiatry*, 20, 619-625; Moritz, S., Veckenstedt, R., Randjbar, S., Vitzthum, F. (in press-a). Individuelle Metacognitive Therapie für Patienten mit Psychose (MCT+). Berlin: Springer; Moritz, S., Veckenstedt, R., Hottenrott, B., Woodward, T. S., Randjbar, S., Lincoln, T. M. (in press-b). Different sides of the same coin? Intercorrelations of cognitive biases in schizophrenia. *Cognitive Neuropsychiatry*; Ross, K., Freeman, D., Dunn, G., Garety, P. (in press). A randomized experimental investigation of reasoning training for people with delusions. *Schizophrenia Bulletin*; van der Gaag, M. (2006). A neuropsychiatric model of biological and psychological processes in the remission of delusions and auditory hallucinations. *Schizophrenia Bulletin*, 32, 113-S122.

Methods II

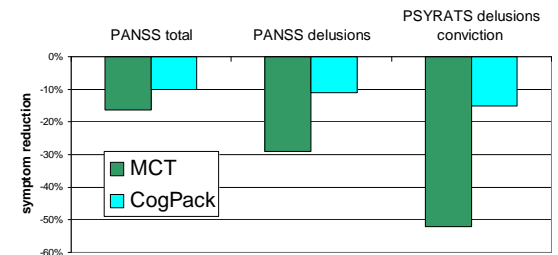
The main parameters were:

- PANSS (Kay et al., 1989) delusions score (items on delusions (p1), grandiosity (p5), suspiciousness (p6) and unusual thought content (g9))
- PSYRATS (Haddock et al. 1999) delusion subscale
- jumping to conclusions (decision after 1 or 2 items on a variant of the beads task; Moritz et al, in press-b)

Results

Patients were on stable neuroleptic medication for more than 2 weeks. Subjects did not differ on any baseline parameter. As can be seen in figure 2, PANSS delusion severity declined significantly more strongly under MCT than under CogPack ($F(1,45)=4.97, p = .03, \eta^2 = .10$). While the PSYRATS delusion subscale did not significantly discriminate between groups, MCT impacted significantly better on delusion conviction than CogPack ($F(1,45)=4.18, p = .05, \eta^2 = .09$).

Figure 2. Symptom decline (pre – post)



Finally, jumping to conclusions was ameliorated to a significantly greater extent under MCT than CogPack as can be seen in figure 3 ($F(1,45)=3.96, p = .05, \eta^2 = .08$).

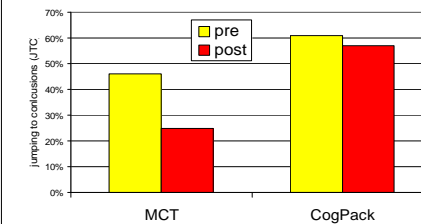


Figure 3. Change in hasty decision-making over time