A Randomized Controlled Trial (RCT) evaluating the efficacy of the Metacognitive training (MCT) program for patients with schizophrenia spectrum disorders in the context of 1. cognitive insight and 2. general self-efficacy

Mr. Kino LAM
Registered Occupational Therapist
Kwai Chung Hospital
H.K.S.A.R.
Schizophrenia Spectrum Disorders

Severe mental illness
Psychosis

Major impact on the person’s function

Reflected in 3 main aspects:

Repeated hospitalizations

Difficulty in maintaining employment

A lack of social relationships

Lack of insight

Lack of insight

Deficits in Metacognition

Complex ideas for making judgments

Recognizing important information in social interactions

Predicts effective work function

Barriers or Booster for recovery-oriented practice
Study showed that metacognitive ability would predict real life functioning in schizophrenia and extend the prediction to the Life Skill Profile (LSP).

Recovery concept: Philosophy of LSP emphasize life skills rather than lack of life skills / focus on what the person can do.

Metacognition might be a close mediator between basic cognitive deficits and daily functioning.

(Life Skill Profile) constructs – a valid and widely used measure of social functioning for schizophrenia.

Neurocognitive functions are cognitive functions closely linked to the function of particular areas, neural pathways, or cortical networks in the brain substrate layers of neurological matrix at the cellular molecular level.

- Attention
- Working Memory
- Speed of processing
- Visual memory
- Verbal memory
- Orientation
- Organization
Increasingly investigation on cognitive biases in schizophrenia

1980s

Formation & maintenance of delusions
Cognitive Bias in Schizophrenia

1. Jumping to conclusions (JTC)
2. Attributional style (Self-serving bias)
3. Bias against disconfirmatory evidence (BADE)
4. Deficits in Mind (ToM)
5. Overconfidence in memory errors
6. Depressive cognitive patterns
MCT program since 2005

Dr. Steffen Moritz

Dr. Todd S. Woodward
<table>
<thead>
<tr>
<th>Psycho-education</th>
<th>Cognitive remediation</th>
<th>Cognitive-behavioral therapy</th>
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<tbody>
<tr>
<td>1. A feasible and effective complement of standard psychiatric treatment</td>
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<td>2. Enhancement of metacognitive abilities</td>
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<td>3. Tackle cognitive biases subserving delusions</td>
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<td></td>
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<td>4. Evidence-based approach</td>
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<td>5. Over 30 languages</td>
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Metacognitive Training for Schizophrenia Patients (MCT)
An attempt to bridge schizophrenia basic research and clinical intervention

Todd S. Woodward (Vancouver, Canada)
Steffen Moritz (Hamburg, Germany)
歡迎來到

訓練模組 3:

改變信念
練習

下列顯示的每一種情景將由三張圖片組成，並提供了不同的解釋。

這些圖片將按照逆序顯示，即最後發生的事最先顯示。

在圖片顯示後，要求你對每一種提供的解釋的合理性或可能性進行評定。當每一張構成該情景的新圖片被加入時，都需要重新評定。

請與組員討論你對你的評分自信程度如何？
你如何可能發現每一種選項？

1) 這個男孩正在享受美好的一天。
2) 這個男孩偷偷從園林作業中溜出來釣魚。
3) 這個男孩想抓條魚回去取悅他的媽媽。
4) 這個男孩偷了魚蟲來釣魚。
你的判斷隨著新圖片的出現改變了嗎？

1) 這個男孩正在享受美好的一天。
2) 這個男孩偷偷從園林作業中溜出來釣魚。
3) 這個男孩想抓條魚回去取悅他的媽媽。
4) 這個男孩偷了魚蟲來釣魚。
請重新評定可能性！

1) 這個男孩正在享受美好的一天。
2) 這個男孩偷偷從園林作業中溜出來釣魚。
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Metacognitive training (MCT) program acting on **metacognitive awareness**

Focuses on the cognitive biases (i.e., problematic thinking styles) thought to underlie the formation and maintenance of delusional beliefs

To raise the patient’s awareness of these cognitive distortions

Rather than directly developing an awareness of the implausible content of a client’s delusion

To prompt them to critically reflect on, complement and alter their current repertoire of problem solving skills

Increases the flexibility in responses to negative ideas

Constructive use of one’s cognition to improve thinking and coping style
A number of recent studies have demonstrated significant reductions in delusional severity (including distress and conviction) following MCT.

Improvement on the cognitive bias measures following MCT.

Less attention on other facets of the illness such as impaired cognitive Insight.

The ability of people with psychosis to evaluate and correct their distorted beliefs and misinterpretations (Beck, Baruch, Balter, Steer, & Warman, 2004).

Potentially to improve cognitive insight as it promotes greater cognitive flexibility and attempts to reduce overconfidence in existing delusional beliefs.

Potentially to improve subjective self-efficacy as it may offer clients more constructive thinking and reasoning strategies.
Does clinical insight directly affect the functional outcome?

Clinical insight - which is one’s awareness of their mental illness and symptoms (e.g., Amador & David, 2004; Amador, Strauss, Yale, & Gorman, 1991; Dam, 2006)
Anomalous experiences & misattributions
It is on their relative inability to...

Cognitive Insight!!

Distance themselves from these biases

• Vulnerable to cognitive biases

Their relative impermeability to corrective feedback

• Poor prognosis as a result
Metacognitive Training (MCT) for schizophrenia improves self-reflectiveness and general self-efficacy: A randomized controlled trial in a Chinese sample with schizophrenia spectrum disorders

Kino C.K. Lam
Christy P.S. Ho
Jimmy C. Wa
Salina M.Y. Chan
Kevin K.N. Yam
Odelia S.F. Yeung
Willy C.H. Wong
Ryan P. Balzan

2013
From the Occupational Therapy (OT) Department at Kwai Chung Hospital, Hong Kong

A total of 80 participants with schizophrenia spectrum disorders were recruited

77 participants were randomized to either an active intervention group receiving MCT (n = 38) or a control group (n = 39) continuing treatment as usual (TAU)

MCT participants were led through all 8 of the group intervention sessions, which cover six different cognitive and social biases

Each session lasted approximately 60 minutes and adhered to the study protocol provided in the manual (see www.uke.de/mkt)

Clients in the TAU group received general treatment from a case occupational therapist over a similar four week period
Beck Cognitive Insight Scale (BCIS)

1st Main Outcome Measure !
Cognitive Insight
(By BCIS – Taiwanese Version)
BCIS has its simple calculation

9 items
capacity and willingness to observe their mental productions and to consider alternative explanations.

6 items
overconfidence in the validity of their anomalous experiences, their attributions, and their aberrant interpretations of specific life events.
2nd Outcome Measure!
Chinese General Self-Efficacy
(By CGSS)
### 3rd Outcome measure

Subjective training satisfaction from adapted feedback form

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<tr>
<td>1. I agree with the program's activities and methodology.</td>
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<td>2. I was encouraged to participate in the group discussion.</td>
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<td>3. In my daily life, I use what I learned from the program.</td>
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<td>4. The group training program is an important part of my therapy.</td>
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<td>5. I find that the program helped me in other situations.</td>
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<tr>
<td>6. The program activities are relevant.</td>
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<td>7. The program helps me understand and cope with my daily living difficulties.</td>
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<tr>
<td>8. I understand the main objectives of the program.</td>
<td></td>
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<tr>
<td>9. I would recommend this program to others.</td>
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<td>10. I believe that this program is beneficial and effective.</td>
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Overall attendance rate = **82%**

1. **Primary outcome**
   - Cognitive insight (P<0.001)
   - **In-patient more prominent**

2. **Secondary outcome**
   - General self-efficacy (P<0.011)
   - **Out-patient more prominent**

3. **Subjective outcome**
   - Subjective training success
   - **** agree in positive appraisals

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**RCT**

38 vs 37
4 intervention group x control

- Sig. improvement in
  - Self-reflectiveness sub-scale
  - Higher metacognitive awareness in self-reflectivity under metacognition
  - More constructive thinking style and coping strategy
  - Correlates to improved psychiatric symptoms + improves functional outcome (Prediction of work performance)

**Mixed ANOVA**

Interaction effect (P<0.001) ** both Ax

MCT participants are significant different from control
1. Our hypothesis that MCT would improve cognitive insight was supported

but this was driven by an increase in self-reflectiveness, rather than a simultaneous decrease in self-certainty, which remained unchanged

2. Findings also supported our hypotheses that the MCT program would enhance general self-efficacy

3. It would be rated favorably by the Chinese sample on various subjective measures of training satisfaction (i.e., effectiveness, usefulness, applicability to treatment and daily life, transparency of the aims, and fun)

4. In contrast, we observed a deterioration of cognitive insight (i.e., less self-reflectivity) and general self-efficacy in the TAU control group
2 Key Points being noted

1. Confirms the notion that MCT works by increasing clients’ metacognitive awareness and cognitive flexibility, which may, in turn, reduce the severity of delusional symptoms.

2. Not only implies that the MCT program is feasible and subjectively efficacious among Chinese samples, but that it also encourages clients to be more cognitively reflective and competent in their ability to take control of their lives.
Metacognitive training (MCT) offers our clients a new way of thinking and enhances their functional outcomes!
References


