

## **METACOGNITIVE REFLECTION INSIGHT THERAPY (MERIT): A BRIEF OVERVIEW**

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### **What is MERIT?**

Metacognitive Reflection and Insight Therapy (MERIT) is a model of psychotherapy based upon research suggesting that persons who experience psychosis have problems forming a sufficiently integrated sense of self and others. In turn, these difficulties in one's ability to reflect on oneself and others lead to difficulties sustaining goal-directed behavior. An integrated sense of self and others is created when one is able to combine different pieces of information into a complex and coherent whole and reflect upon that understanding. The processes that allow us to form these integrated ideas are referred to as *metacognition* and significant impairments in this ability are called metacognitive deficits.

MERIT is provided at least once a week with sessions lasting 30 to 50 minutes depending upon patient need and preference. It is an integrative approach driven by the overarching theory that metacognitive deficits are a central barrier to recovery from severe mental illness. As an integrative therapy, it supports the use of a variety of techniques and interventions in the service of promoting the incorporation of information and experience into sufficiently complex and coherent understandings of self and others. MERIT is intended to allow therapists from a variety of theoretical orientations to use existing skills in new and creative ways.

MERIT has been developed for use with adults diagnosed with psychosis and is intended to be offered in concert with other accepted treatments for these conditions. While there are no formal "rule outs" for MERIT, active substance dependence and mild to moderate intellectual disabilities may complicate treatment and could be contraindicated. Length of treatment is expected to vary based upon need and client preference.

MERIT therapists must be fully credentialed mental health professionals with previous experience providing psychotherapy to persons with severe mental illness. Participation in MERIT-based clinical supervision is required. Certification as a MERIT therapist is available from the MERIT Institute. There is also a MERIT Clinical Adherence tool (see Appendix 2) which therapists should use to assess the fidelity of their sessions with the MERIT protocol.

### **Focus on Enhancing Metacognition**

MERIT is intended to help persons to develop metacognitive capacity by repeatedly practicing metacognitive acts. It seeks to enhance metacognitive capacity by therapists thinking with patients about their sense of themselves and others and ultimately using that knowledge to respond to psychosocial and psychiatric challenges.

MERIT involves eight related activities or elements, each of which provides a different opportunity for patients to reflect about their sense of themselves and others. These elements which are detailed below include thinking with patients about:

1. What the patient is seeking in the moment
2. The patient's experience of the therapist's presence, thoughts, and actions
3. Specific events in the patient lives (i.e. narrative episodes)
4. The social and psychological challenges the patient is facing

5. The relationship with the therapist
6. What is happening in the session

In addition to each of the six elements above, MERIT also asks therapists to assess patients' maximal metacognitive capacity within the session and to work with patients at that current maximal metacognitive level to:

7. Reflect about themselves or their sense of others
8. Use metacognitive knowledge to respond to psychological and social challenges.

By attending to each of these eight elements, the therapist is able to enter into dialogue with patients that will enable them to experience their own subjectivity as well as that of the therapist and others and ultimately move from the experience of self as a fragmented set of unconnected experiences to one that is more integrated and coherent. These elements that underlie MERIT will be described in more detail below as well as the process for assessing the client's level of metacognitive functioning.

### Basic Assumptions

For MERIT to be effectively carried out, therapists should be familiar and comfortable with several foundational assumptions:

- Recovery from severe mental illness is possible.
- Patients are active agents in their own recovery in all phases of illness.
- The role of the therapist is one of an equal participant or consultant in the thinking process and not one who is prescriptive or holds all the answers.
- The experiences of persons with psychosis can be understood by those persons and by others who try to understand them.
- Greater levels of awareness may lead to the emergence of emotional distress or pain for many with psychosis.
- Stigma can be found in all corners of society, has a profound negative impact on the lives of persons with mental disorders, and could be a barrier to the development of metacognitive capacity.

### The Eight Core Elements of MERIT

MERIT is an integrative form of psychotherapy. During every session, eight elements, or distinct and measurable therapist behaviors, should be evident. Each element facilitates a different type of metacognitive reflection that is shared by the patient and therapist. Together, they also synergistically promote the enhancement of metacognition. Given the dialogical and unpredictable nature of human reflection, there is no prescribed order in which these elements should appear:

1. **AGENDA** involves *attending to the patient's immediate wishes and desires*. This discussion is referred to as an agenda and typically includes the wishes, hopes, desires, plans, and purposes that a patient brings to each session. MERIT follows the fundamental assertion

that human behavior is purposeful and that all patients are seeking *something* when they come to a session. As a result, this element asks the therapist to be both continuously attuned to what patients may be seeking and to think with patients about this. This stance requires that therapists perceive and respond to patients as actively seeking something and not as someone who needs to be directed or corrected. Patients can have multiple complementary as well as contradictory agendas as well as be more or less aware of those agendas in the moment.

<b>Goal:</b>	Patients will develop a greater awareness of their wishes and intentions
<b>Facilitated by:</b>	Ongoing and evolving understanding of the patient's agenda
<b>Thwarted by:</b>	Taking verbalizations at face value and ignoring the subtleties and hints inherent during session communication

Evidence that this element has been met at a fully successful level involves active efforts to understand what the patient is seeking by attending to patients' verbal and non-verbal behavior as well as therapists' reactions to what is unfolding in the session and how they are positioned within the session. Patients' agendas should be a subject for mutual reflection, not simply noted in the therapist's mind.

Direct evidence that this element has been achieved frequently involves therapists and patients actively discussing what the patient is seeking. The issue is not the identification of the "true" agenda but a joint consideration of what the patient might be seeking, which as noted above could be something they are unaware of or contains contradictory elements. Therapists will at times need to distinguish a topic that is brought up in order to get to patients' agenda or from a topic intended to divert from the agenda itself.

Examples of patients' agendas may include:

- To feel less anxious
- To establish something is not their fault
- To make the therapist feel confused
- To convince the therapist to agree with their estimation of another person
- To feel safe
- To feel connected to someone
- To be rejected by the therapist
- To be admired by the therapist
- To please the therapist
- To seek permission to give up
- To decide how to respond to a loss
- To avoid a drug relapse

**2. *DIALOGUE*** involves therapists' sharing their thoughts about patients' mental activities and behaviors without overriding patients' agendas. While the first element offers patients the

chance to reflect upon what they are seeking, here patients are offered a chance to reflect about what they think about the therapist’s presence, behavior, and thoughts about them.

<b>Goal:</b>	Patients will develop a greater awareness of how they are reacting to the therapist.
<b>Facilitated by:</b>	Therapists sharing their own thoughts about the patient and reflecting upon them together.
<b>Thwarted by:</b>	Therapists taking a hierarchical, education-based, fearful, or timid stance.

Evidence that this element has been accomplished can involve the therapist providing explicit expressions of understanding of what patients have communicated (both verbally and non-verbally) and allowing space and time for patients to decide what they think about that.

Examples may include the therapist sharing that:

- The patient is smiling while describing things that are generally frightening
- The therapist is confused by what the patient is saying
- The therapist notices the patient is wearing dark glasses or an odd orange hat
- The therapist is hearing things from the patient that makes him or her feel anxious
- The therapist feels as if they say the wrong thing they will anger the patient
- The patient has not spoken of the crisis that was the subject of the last three sessions
- The subject has not arisen that the patient failed to attend the last two sessions without cancelling

Evidence that this element is not being achieved can involve a clinical stance which blocks dialogue by conveying:

- Therapist anxiety or soothing the patient to relieve therapist anxiety
- Hierarchical relationships
- Infantilization of patients
- Excessive politeness or timidity
- Therapists’ preoccupation with their own agenda.

**3. NARRATIVE FOCUS** *involves attending to and reflecting with patients’ about their sense of themselves and others within the flow of life.* MERIT seeks to forge a mutual understanding with patients by viewing their experience as comprehensible and available for understanding within the events and contacts with others that are unique to their lives.

<b>Goal:</b>	Patients will develop a greater awareness of their own mental states (e.g., thoughts or feelings) and changes in them within the flow of life
<b>Facilitated by:</b>	Therapists eliciting and exploring narrative episodes
<b>Thwarted by:</b>	Therapists not seeking sufficient details or discussing experiences abstractly

Patients are expected to vary in their abilities to produce coherent and lengthy narratives. Some will begin only able to produce fragments of what will later become more coherent and lengthy narratives. Thus, therapists should explore narratives according to patients' abilities and comfort levels narrating their lives. Therapists should promote discussion of issues in terms of sequences of events involving specific people and places that have personal relevance regardless of length and regardless of whether it has been discussed before. Often, the more a patient reviews a particular memory or life event, more details emerge that contribute to a deeper and more nuanced understanding. When patients makes an abstract claim about themselves, such as they have a certain personality trait, therapists should use this as an opportunity for joint reflection about those claims. Here therapists should inquire about unique details that were specific to that event such as who was present, what was happening and the antecedents and consequences of the event.

Evidence that this element has been met may include discussions of issues as occurring within discernable events or within a narrative context. Examples can include exploring:

- When and where the patient said, thought, or felt a certain thing
- The events that led up to a patient's involvement in a particular activity
- Who else was present during a specific event
- What were the actual contents of the conversation during a certain event
- Whether a certain event was like other specific past events.

Evidence that this element is not being met often involve:

- The therapist's accepting a claim at face value
- The therapist assuming they understand without seeking additional information
- Discussing patients' experiences exclusively in an abstract manner
- Failing to use autobiographical memories as the context for joint reflection.

**4. PSYCHOLOGICAL PROBLEM** involves *attending to patients' sense of the psychological and social challenges they face*. Here, the therapist and patient should be thinking together about the difficulties that emerge as the dyad thinks together.

<b>Goal:</b>	Patients will develop a greater awareness of themselves as confronted with specific dilemmas, challenges, and forms of emotional distress
<b>Facilitated by:</b>	Therapists identifying personal and meaningful psychological struggles using common, understandable language
<b>Thwarted by:</b>	Therapists focusing on preconceived problems or using non-specific symptom focused language

Some patients may have multiple and perhaps contradictory problems. They may be unable to articulate these difficulties or struggle to perceive a problem within a matter of fact

account of their lives. Evidence of successfully meeting this element lies in the joint reflection about potential and meaningful problems. This does not necessitate agreement about the “correct” or “true” problem but simply conjoint reflection upon it.

Common topics include:

- Struggling with feelings of loneliness
- Confusion related to thoughts in their head
- Wondering how other people perceive them
- Troubled by their history of sexual abuse
- Uncertain about the origins of certain perceptions
- Anticipating rejection and failure
- Consumed with feelings of paranoia such that nothing else can be considered

The focus here should be upon *psychological* problems. For instance, symptoms such as hallucinations or implausible beliefs (e.g., persecution by secret agents) may not necessarily be considered to be valuable areas for exploration under this element. However, affective states such as feelings of loneliness as a result of being shunned for being a “voice hearer” or the sense of terror resulting from beliefs that one is being terrorized or persecuted are considered to be potentially valuable topics of exploration.

5. **REFLECTION UPON INTERPERSONAL PROCESS** involves *attending to the patients’ sense of how they are relating to the therapist*. Within each session, patients should be encouraged to reflect not just upon the therapists’ thoughts, as in element two, but also on the larger interpersonal processes that are taking place in sessions between the therapist and client, especially when they positively or negatively impact patients’ reflective process.

<b>Goal:</b>	Patients will develop greater awareness of how they are relating to the therapist
<b>Facilitated by:</b>	Therapists providing opportunities to think about how patients perceive and relate to the therapist
<b>Thwarted by:</b>	Therapists failing to try to develop a frank and evolving understanding of how they are experienced by patients

This element requires therapists to create or seize on opportunities for patients to reflect on their own thinking about the therapy relationship, either in terms of what they are currently experiencing or are seeking to experience. Therapists should encourage patients to speak about difficult issues regarding their relationship and welcome patients’ disclosure of negative and positive feelings. This element does not necessitate a “correct” description of the relationship, but instead mutual reflection on the part of patients and therapists.

Examples of interventions intended to accomplish this include:

- Please tell me how you feel about what I have just told you?
- Is it uncomfortable to discuss this?

- Is my role today like your step-father telling you to go to school today?
- You feel insulted by me?
- You would like to find out something about me so you can laugh at me?
- How are you finding it to sit here with me today?

Evidence that this element is not being met often includes a failure to explore patient feelings about the therapy relationship.

6. **PERCEPTIONS OF CHANGE** involves the *therapist attending to the patients' sense of what they are experiencing as it is happening within the session*. Reflection should be encouraged in every session to reflect about progress or changes resulting from the session.

<b>Goal:</b>	Patients will develop greater awareness of their own experience of progress and lack of progress in therapy
<b>Facilitated by:</b>	Therapists eliciting how the patient thinks sessions are progressing
<b>Thwarted by:</b>	Therapists assuming what progress has or has not been accomplished or being unaware that unexpected gain could be discerned

Patients should be directly invited to reflect upon what is changing and not changing as a result of therapy (within the context of either a single or multiple sessions). This should include things expected and unexpected and matters that are positive, negative, or both positive and negative in different senses. This may include eliciting reflections about specific outcomes, progress over time, impact of treatment upon life events or management of subjective feelings of distress or confusion.

Examples might include asking:

- How is this going today?
- This isn't working very well is it?
- What do you think about our conversation so far?
- As we talk right now is there tension in your body?
- Is this going as you expected?
- (If going as expected): Is it good or bad that things are turning out this way?
- (If not going as expected): Is it good or bad that things are turning out this way?

Evidence that this item is not being met would simply be a failure to inquire about progress.

7. **OPTIMAL STIMULATION OF REFLECTIONS ABOUT SELF AND OTHERS** involves the *therapist ensuring that when patients are stimulated to think about themselves and others, the stimulation matches their maximal capacity for the metacognitive activity*. An intervention is said to match the patients' metacognitive capacity when it calls for the patient engage in a metacognitive act that does not exceed their capacity as determined by the *Metacognition Assessment Scale – Abbreviated* (see Appendix C) . For example, patients assessed as



capable of self-reflectivity at a maximal level of 4 should be offered interventions that call for metacognitive acts that require this level but not at levels 5, 6, 7, 8, or 9.

<b>Goal:</b>	Patients will develop an increasingly more integrated sense of self and others
<b>Facilitated by:</b>	Therapists using interventions that are appropriate to the patient’s current metacognitive capacity
<b>Thwarted by:</b>	Therapists failure to adjust interventions to the patient’s capacity in the moment for metacognitive acts pertaining to the self or others

To meet the requirements of this element therapists should continuously assess patients’ metacognitive capacities using the *Metacognitive Assessment Scale – Abbreviated (MAS-A)*. As metacognitive capacities are observed to change within and between sessions, levels of interventions should change accordingly. Metacognitive capacity may change for a number of reasons, including progress in MERIT, the emergence of pain, enhanced capacity to manage painful emotions, resolution of conflicts in the therapeutic relationships, etc. Declines in capacity may follow improvements and improvements may follow declines. Offering interventions that call for metacognitive acts that exceed current abilities are likely to be frustrating and result in failure experiences, possibly exacerbating symptoms. Examples of interventions paired with *MAS-A Self-Reflectivity* and *Awareness of Other* results can be found in Appendix A.

Evidence that this element is not achieved includes the use of interventions that consistently exceed or fall significantly below patient’s current metacognitive capacities or failing to adjust the level of intervention to changes in metacognitive capacity in session.

- 8. OPTIMAL STIMULATION OF METACOGNITIVE MASTERY** involves therapists attending to the patient’s use of sense of self and others to respond to psychological and social challenges. As capacities for reflection about the self and other increase, patients are expected to not only increasingly use the knowledge but to also use it in increasingly sophisticated manner. This element concerns stimulating patients to use of their unique knowledge of themselves and others to respond to psychological or social challenges at their maximal capacity. As in the last element, stimulation of patients to think at levels beyond their capacities is considered to be unhelpful or harmful at worst. Also, as in the last element, continuous assessment of Mastery should be conducted within sessions by the therapist with changes in intervention level occurring in response to changes in patients’ capacity. Examples of interventions paired with level of Mastery using the *MAS-A* can be found in Appendix A.

<b>Goal:</b>	Patients will develop an increasing ability to utilize metacognitive knowledge when responding to psychological and social challenges
<b>Facilitated by:</b>	Therapists using interventions that are appropriate to the patients’ current metacognitive capacity
<b>Thwarted by:</b>	Therapists failing to adjust interventions to patients’ capacity for metacognitive mastery

Evidence that this element is not being successfully completed is the use of interventions that consistently either exceed or fall below the patients' capacity for mastery.

### **The Early and Later Sessions of MERIT: Special Considerations**

While the core elements of MERIT should be evident throughout treatment, a number of dynamics need to be considered depending upon where the client is in the course of psychotherapy and the specific issue at hand.

***Initial Sessions and Concerns about Entering Treatment.*** As MERIT is explicit about reinforcing client autonomy, initial sessions should focus on whether patients are interested in pursuing this form of treatment. In doing so, therapists should offer an opportunity to discuss whether patients are willing to consider trying to talk with the therapist about their thoughts about what has been happening in their lives. This should not be taken for granted, and some patients may require a number of sessions to become acquainted with the therapist before making such a commitment. From the outset, it is important that the patient and therapist are positioned as partners who might have a potential dialogue about issues that are personally meaningful to the patient. This should be discussed in a way that is transparent and inviting of dialogue.

Patients often have concerns and questions about what will take place in sessions including:

*What will you (the therapist) do?*

- "I will listen as carefully as I can."
- "I will try to understand exactly what you are telling me and asking me to do."
- "I will think with you about the things you are facing."
- "I will try to share my thoughts honestly and clearly with you."

*What will we talk about?*

- "I'm not exactly sure what we will discuss since I don't really know you or much about your life yet."
- "I imagine we'll discuss some about the things you are facing in your life, parts of your past you are comfortable discussing, things you hope to happen in your future, things you feel good about, and other things that are stressful or difficult for you."

*What will I get out of this?*

- "I would hope that you'll be able to decide what you think about things that are confusing to you."
- "I would hope you understand things about yourself better."
- "I hope you'll be able to find a way to get the kinds of things you want in life whatever that might include, so you can have a more rewarding and meaningful life."

*What if I don't know what to say?*

- "That happens to almost everyone."

- “It will be ok if you are not sure what to say... we have plenty of time.”
- “You don’t have to feel like there is a spotlight on you.”

*I don’t really trust you.*

- “That’s ok, I don’t trust people myself right away.”

**Common Initial Challenges.** As might be expected, there are also a number of clinical issues that may make it difficult for some patients to actively engage in MERIT. Below are some of the more frequent challenges:

*A patient with minimal insight says he or she has no problems and is here because of X:*

- “Ok, I’d guess we might talk about how it is X has come to make you be here.”
- “I’m interested in how you see this and am hoping you will explain it to me.”
- “I imagine this is a tough position for you, maybe we can still talk about something that would be helpful to you.”

*A patient with negative symptoms is silent or says they have no thoughts:*

- “Your mind is empty at the moment... that’s all you can tell.”
- “Are you having no thoughts or is it just hard to say what’s on your mind to me?”
- “Is there something I can say that would help?”
- “Perhaps if we can talk today and a few other times that will help ideas to come into your mind.”

*A patient can speak of only one subject (e.g., a delusion or preoccupation), allowing little interjection by the therapist:*

- “It seems it is important that we focus on this one subject today.”
- “How would you like me to respond to this?”
- “If we talk about this, perhaps eventually knowing my thoughts would be helpful?”

*A patient can speak of only one subject (e.g. a delusion) and asks for affirmation of that:*

- “I promise to tell you my opinion and want to but there is still a lot I need to understand before I can have a real idea about this.”

*A patient’s speech is significantly disorganized:*

- “You are telling me many different things... seems like there is a lot for us to sort out.”
- “I am getting the idea that there are many different things that might be difficult to understand.”

*A patient appears angry or hostile:*

- “This seems like an uncomfortable spot for you. Perhaps it is hard to imagine our talking together could be helpful?”
- “I have the sense our conversation somehow feels insulting or not helpful to you. Is there anything I can do to help make that go away?”

*A patient appears overly willing to please:*

- “I’m worried you are feeling some pressure to say the right thing or make sure I think you are a good person.”

**Ambivalence About Treatment Engagement.** Once the client makes a commitment to engaging in treatment, every session should include an inquiry into the client’s perceptions of how treatment is progressing. Here are common themes when patients express ambivalence about being involved in treatment and potential therapists’ responses to it.

*A patient notes they are not used to thinking with people:*

- “I can see how our conversations may be different than others. Allowing others to know your thoughts and then think with you may take some getting used to.”

*A patient notes they don’t think they have anything anyone would want to hear:*

- “What you have to say is important to me. Your thoughts, your past and your future matter to me. I hope I’ll be able to keep hearing about them and thinking with you.”

*A patient notes it is threatening to allow someone else to know them:*

- “What you are saying is important to me but it is you who decides what we talk about, and you can put on the brakes at any point and I won’t be upset.”
- “Is there something you would like me to do when I listen to you or share my thoughts with you?”

*A patient notes the emergence of painful or traumatic memories:*

- “I think some thoughts came up that you did not expect. What would you like to do with them?”
- “You are having upsetting thoughts. I am comfortable hearing more about them, but if you want to change the subject or drop these thoughts altogether, all you have to do is to let me know.”

During the course of treatment, the therapist’s level of activity is likely to vary as a function of the stage of treatment or may differ from interactions the client has had with prior clinicians. The following are some common themes along with potential therapist responses.

*A patient may be surprised the therapist is not as active as past therapists:*

- “You wish I could tell you what to do or say but I like to think with you about what would be the right thing for you.”
- “It seems like you would prefer that I form ideas in my mind but I would rather form them with you with us thinking together.”
- “Can we talk more about yourself and the challenges you are facing and then I can share my thoughts about anything you want?”

*A patient may be surprised the therapist is more active than past therapists:*

- “It seems like I am interrupting your thoughts when share my questions or ideas.”
- “I guess I am talking because I want to understand you better. If I stay too quiet, I am never sure if I am forming the right idea about what your thoughts are.”

*A patient may wish to focus exclusively on speculations about the negative behavior of others:*

- “So you think poorly of this person but I don’t know what you want from me.”
- “It seems your mind is focused on whether this other person did something wrong. But that is making it hard for me to know what you are thinking about yourself.”

*A patient may be so abstract that it is unclear what they are discussing:*

- “I am having a hard time forming an idea about you. Can we talk about specific times and places?”
- “I notice when we talk about specific times and places, it seems like that frustrates you, like I should know that already.”
- “Without talking about events in more detail I can’t imagine what you’ve experienced.”

***Breaks in Treatment and Termination.*** Voluntary breaks during the course of MERIT are not unexpected. Therapists should explore patients’ motivations to leave treatment while also respecting their rights to decline treatment. Typical factors behind a patient’s seeking a break in treatment often include fears of being known by the therapist, pain which emerges with awareness, feeling misunderstood by therapists, and wanting to demonstrate some control over the relationship. Regardless of the underlying dynamics, a decision to take a break should be treated as a meaningful behavior that is the subject of reflection. As with all psychological treatments, the termination process should be used to consolidate learning and to affirm the intimacy and importance of the relationship.

### **Final Comments**

Severe mental illness is a complex phenomenon that has many commonly-occurring comorbidities. These include substance use, demoralization, and non-psychiatric medical concerns, to name a few. As in all standard practice, these should be assessed and treated as needed. Dangerousness to self and other should be continuously assessed and responded to appropriately by following accepted practice standards. Therapists should also carefully follow emerging research on MERIT. Finally, MERIT should be offered in close collaboration with other services including psychosocial rehabilitation, peer support, medication management services, etc.

## Suggested reading

### Overviews

Dimaggio G & Lysaker PH. (2015). Metacognition and mentalizing in the psychotherapy of patients with psychosis and personality disorders. *Journal of Clinical Psychology*, 71(2) 117-125

Lysaker PH, Vohs, J, Minor K, Irrarázaval R, et al. (In press). Metacognitive Deficits in Schizophrenia: Presence and Associations with Psychosocial Outcomes. *Journal of Nervous and Mental Disease*.

Lysaker PH & Dimaggio G. (2014). Metacognitive capacities for reflection in schizophrenia: Implications for developing treatments. *Schizophrenia Bulletin*. 40(3), 487-491.

### Clinically Focused Articles

Hillis JD, Leonhardt BL, Vohs JL, et al. (2015). Metacognitive reflective and insight therapy for persons in early phase of a schizophrenia spectrum disorder. *Journal of Clinical Psychology*. 71(2):125-35

Hamm JA, Hasson-Ohayon I, Kukla M & Lysaker PH. (2013). Individual psychotherapy for schizophrenia: Trends and developments in the wake of the recovery movement. *Psychology Research and Behavior Management*. 6:45-54

### Recent Scientifically Focused Articles

Buck KD, McLeod HJ, Gumley A, Dimaggio G, Buck BE, Minor K, James AV & Lysaker PH. (2014). Anhedonia in prolonged schizophrenia spectrum patients with relatively lower vs. higher levels of depression disorders: Associations with deficits in social cognition and metacognition. *Consciousness and Cognition*, 10 (29c), 68-75.

Hasson-Ohayon I, Avidan M, Mashiach-Eizenberg M; Kravetz S; Rozencwaig S, Shalev H, Lysaker PH. (2015). Metacognitive and social cognition approaches to understanding the impact of schizophrenia on social quality of life. *Schizophrenia Research*. 161(2-3):386-91.

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Snethen G, McCormick BP, & Lysaker PH. (2014). Physical activity and psychiatric symptoms in adults with schizophrenia spectrum disorders. *Journal of Nervous and Mental Disease*. 202(12), 845-852.

McLeod HJ, Gumley AI, MacBeth A, Schwannauer M & Lysaker PH. (2014). Metacognitive functioning predicts positive and negative symptoms over 12 months in first episode psychosis. *Journal of Psychiatric Research*, 54:109-15

Lysaker PH, Vohs J, Hamm JA, et al. (2014). Deficits in metacognitive capacity distinguish patients with schizophrenia from those with prolonged medical adversity. *Journal of Psychiatric Research*. 55:126-32

Vohs, J.L., Lysaker, P.H., Francis, M., et al. (2014). Metacognition, social cognition, and symptoms in patients with first episode and prolonged psychosis. *Schizophrenia Research*, 153, 54-59.

Appendix A: Summary of MAS-A Anchors and Interventions as Cued to those Interventions

**Examples of Interventions Tied to MAS-A Self-Reflectivity and Awareness of the Other Assessments**

*For a maximal capacity of S0*

- There is nothing in your mind
- Your mind does not exist

*For a maximal capacity of O0*

- There is nothing in the mind of...
- That person... has no thoughts

*For a maximal capacity of S1*

- What you are thinking came from outside of your mind

*For a maximal capacity of O1*

- That person's mind was being controlled
- Something put thoughts in that person's mind

*For a maximal capacity of S2*

- There is something in your mind...
- There is a tension in your body...
- You are thinking something

*For a maximal capacity of O2*

- That person was thinking...
- That person had their own idea

*For a maximal capacity of S3*

- You are having a memory of...
- You have a plan to...
- You want to...
- You wish you could...

*For a maximal capacity of O3*

- That person had a memory
- That person was planning to...
- That person wanted to...
- That person wishes to...

*For a maximal capacity of S4*

- You have two different feelings about...
- You regret... but also
- ... made you jealous about...
- You were sad
- ... left you feeling insulted

*For a maximal capacity of O4*

- That person had different feelings about...
- That person regretted ... but also....

*For a maximal capacity of S5*

- You're not so certain like before...
- You've changed your mind about...
- ... seemed to be... but now it seems that...

*For or a maximal capacity of O5*

- When that person did... you think they felt
- When that person said... they really wanted

*For a maximal capacity of S6*

- Things aren't what you needed
- What you wanted isn't happening

*For a maximal capacity of O6*

- During... that person's thought led them to feel...

*For a maximal capacity of S7*

- During.... that thought was connected to the emotions of....
- When you were... what you wanted led to ...

*For a maximal capacity of O7*

- That persons reacted in that situation in ways like they did the time when...
- You've noticed that across that person's life you can find patterns to their thoughts and feelings

*For a maximal capacity of S8*

- Can you think of another situation that was like....
- These kinds of things in your mind have happened in different times...
- You notice how different times in your life are similar in terms of how you were thinking and feeling

*For a maximal capacity of S9*

- You can see how all of these different times in your life fit together following the theme of...

**Examples of Interventions Tied to MAS-A Mastery Assessments**

*For a maximal capacity of M0*

- You have no sense that anything is wrong with...
- Your day has gone exactly how you would like it to

*For a maximal capacity of M1*

- You have an idea of what the problem is but it is different than how others see it...

*For a maximal capacity of M2*

- The social situation of .... is really challenging
- When .... happens it can be really difficult

*For a maximal capacity of M3*

- When... happens all you can do is stay home
- The social situation ... leaves without anything to do about it
- When... happens you just follow the doctor's orders



*For a maximal capacity of M4*

- When... happens you can reach out to others
- At least when that situation happens you can avoid that specific thing

*For a maximal capacity of M5*

- When... happens you can... to make yourself feel better.
- If... social situation starts to happen you can take the action of...

*For a maximal capacity of M6*

- When... happens sometimes you decide to change how you think about it
- If... social situation happens you make sure you don't think negatively about...
- In the face of... you were trying to change the thoughts in your head...

*For a maximal capacity of M7*

- When.... happens you realize that the way you tend to think and react can make the problem worse

*For a maximal capacity of M8*

- In that social situation, you can understand how that person responded

*For a maximal capacity of M9*

- You can understand why you might have reacted that way because of your tendency to have paranoid thoughts, but instead you decided to...

**Appendix B: MERIT Therapist Adherence Form**

TMAS item	Description	Self-rating				
		Absent	Sometimes present	Consistently present	Sometimes exceptional	Consistently exceptional
1	Openness to patient agenda	1	2	3	4	5
2	Insertion of the therapist's mind	1	2	3	4	5
3	Eliciting narrative episode	1	2	3	4	5
4	Identification of psychological challenges	1	2	3	4	5
5	Reflection on progress	1	2	3	4	5
6	Reflection on interpersonal processes	1	2	3	4	5
7	Stimulation of S and/or O	1	2	3	4	5
8	Stimulation of M	1	2	3	4	5

## Appendix C: MAS-A Anchors

## Self-Reflectivity (S)

S0	Patients are not aware that they have mental experiences.
S1	Patients are aware that they have mental experiences and that their thoughts are representational in nature
S2	Patients are aware that they are autonomous beings and that their thoughts are their own
S3	Patients can name and distinguish between the different cognitive operations which comprise mental activity (e.g. remembering, imagining, wishing, deciding, and anticipating).
S4	Patients can name and distinguish between significantly different valenced emotions.
S5	Patients can recognize that the ideas they have about themselves and the world are subjective, have changed, or are changeable and/or are fallible.
S6	Patients can recognize that what they expect, think, and want may not match what is possible in reality.
S7	Patients can form representations of themselves within at least one specific situation, or narrative episode, in which they can describe how different mental activities such as thoughts and feelings influence one another.
S8	Patients are able to recognize a psychological pattern over time, through connecting at least two narrative episodes, describing how the narrative episodes involve similar themes and relationships between different mental activities such as thoughts and feelings.
S9	Patients are able to recognize psychological patterns across their life, synthesizing multiple narrative episodes into a coherent and complex narrative which integrates different modes of cognitive and/or emotional functioning.

## Awareness of the Other's Mind (O)

O0	Patients cannot recognize that the other experiences mental functions.
O1	Patients can recognize that the other experiences mental functions.
O2	Patients can recognize that the other has autonomous mental functions.
O3	Patients can recognize and distinguish between another person's different cognitive operations (e.g. remembering, imagining, wishing, deciding, and anticipating).
O4	Patients are able to distinguish many different emotional states experienced by another person.
O5	Patients can make plausible inferences about the mental state of another person, recognizing the meaning of verbal and non-verbal communications.
O6	Patients can give a complete description of another person's mental states in a specific moment, or narrative episode, distinguishing between and integrating different mental activities including thoughts, intentions, and feelings.
O7	Patients can form an integrated idea of another person's mental states across multiple narrative episodes into a coherent narration.

Decentration (D)

D0	Patients cannot recognize that they are not necessarily the center of other people's mental activities.
D1	Patients can recognize that they are not necessarily the center of other people's mental activities (their thoughts, feelings, and emotions) and/or that some of the actions of other people stem from goals and reasons etc. which are not related to the participant.
D2	Patients can recognize that others can perceive and/or interpret events in a validly different way than how the participant perceives and/or interprets events.
D3	Patients can recognize that the events that occur in regular life are often the result of complex emotional, cognitive, social, and environmental factors which vary according to the individual people involved. These factors include person-centered factors, such as individual development and life history, as well as the larger political and social context. Patients are further able to perceive the larger world as involving unique individuals who have unique relationships with one another which involve no central organizing theme.

Mastery (M)

M0	Patients cannot formulate any plausible or implausible psychological challenges.
M1	Patients can identify general distress affecting discuss behavior and psychological processes but cannot plausibly present a psychological challenge.
M2	Patients are able to plausibly describe a psychological challenge.
M3	Patients are able to respond to psychological challenges through gross avoidance or passive activities, such as following others' directions or other actions that grossly reduce distress.
M4	Patients are able to respond to psychological challenges by generally actively avoiding problematic states or by seeking support from others.
M5	Patients are able to respond to psychological challenges by voluntarily engaging in or inhibiting a specific behavior.
M6	Patients are able to respond to psychological challenges by changing how s/he thinks about the problem or him/herself.
M7	Patients are able to respond to psychological challenges by utilizing unique metacognitive knowledge about him or herself in light of the specific challenge.
M8	Patients are able to respond to psychological challenges by utilizing unique metacognitive knowledge both about themselves and a specific other person in the context of a specific challenge.
M9	Patients are able to respond to psychological challenges by utilizing unique metacognitive knowledge about themselves, specific others, others in the general, and the human condition. The participant can take into account human limitations and acknowledge that some pain cannot be avoided and is part of life.

MAS-A Scoring Grid

9.0			9.0
8.5			8.5
8.0			8.0
7.5			7.5
7.0	7.0		7.0
6.5	6.5		6.5
6.0	6.0		6.0
5.5	5.5		5.5
5.0	5.0		5.0
4.5	4.5		4.5
4.0	4.0		4.0
3.5	3.5		3.5
3.0	3.0	3.0	3.0
2.5	2.5	2.5	2.5
2.0	2.0	2.0	2.0
1.5	1.5	1.5	1.5
1.0	1.0	1.0	1.0
0.5	0.5	0.5	0.5
0	0	0	0
Self-reflectivity	Awareness of the other	Decentration	Mastery

