

# Mentalization-based Treatment for Psychosis: Linking an Attachment-based Model to the Psychotherapy for Impaired Mental State Understanding in People with Psychotic Disorders

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## ABSTRACT

Disturbances of mentalization have been increasingly associated with the symptoms and functional impairment of people with psychotic disorders. It has been proposed that psychotherapy designed to foster self and other understanding, such as mentalization-based treatment (MBT), may play an important part in facilitating recovery from psychosis. Here, we present an attachment-based understanding of mentalization impairments. We then outline a neuropsychological model that links disruptions of mentalization associated with disturbances in the caregiving environment to the pathophysiology of psychosis in genetically at-risk individuals. This is followed by an illustration of some of the core MBT techniques for the rehabilitation of the capacity to mentalize as applied to the treatment of a patient with a psychotic disorder.

situations (e.g., persecutory delusions and hallucinations), or of the person's self-appraisal with respect to other people (e.g., grandiose or religious delusions), it has been proposed that the disruption of the capacity for social understanding may constitute a key vulnerability to psychosis (4). This hypothesis has received support from studies showing associations between mentalization deficits (e.g., impaired theory of mind [ToM]) and core psychotic symptoms, such as delusions and hallucinations (5). Moreover, growing evidence links aberrant mentalization to the social dysfunction (e.g., inability to work, poor quality of life) that commonly accompanies psychosis (6). The strength of the relationship between impaired mentalization and the socially disabling effects of psychosis is highlighted by a recent meta-analysis that showed that ToM impairments exhibited the strongest association with social dysfunction in schizophrenia of any social or neurocognitive domain tested (7).

One question raised by these findings is whether psychotherapy focusing on deficits of social understanding, such as mentalization-based treatment (MBT), can facilitate the recovery of patients with psychosis. Closely related to MBT is metacognitive psychotherapy (8, 9), which targets deficits of "thinking about thinking" in schizophrenia. Metacognition and mentalization have been linked theoretically and empirically, as both involve meta-representational abilities (10). Typically, metacognition is closely associated with self-monitoring one's cognitive performance (e.g., evaluating how well one

## INTRODUCTION

Impaired mentalization (i.e., the capacity to think about mental states in the self and others) is increasingly regarded as an important psychopathological domain in people with psychotic disorders (1-3). Because psychotic symptoms frequently involve misunderstandings of social

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has learned the material for a test), while mentalization focuses more specifically on the representation of states of mind in the self and other people (10). Recently, however, conceptualizations of metacognition have included the integration of complex self and other representations, thus strengthening the theoretical overlap between mentalizing and metacognitive functions (8). In several case reports, people with schizophrenia who received metacognitive psychotherapy have shown significant improvement of social function (11, 12). Here, we provide a conceptual framework to support the adaptation of MBT to the understanding and treatment of individuals with psychosis. We begin by outlining an attachment-based model of mentalization disturbances. This is followed by a theoretical overview regarding how disruptions within the caregiving environment may confer vulnerability to psychosis. We conclude by describing the key features of an MBT approach to the enhancement of self and other understanding in psychotic disorders.

## **ATTACHMENT DISTURBANCE, IMPAIRED MENTALIZATION AND PSYCHOSIS**

### **ATTACHMENT AND MENTALIZATION**

A growing literature suggests that understanding mental states is related to the social context in which thinking about minds initially develops, namely attachment relationships involving caregivers (13). During the first year of life, a child and a caregiver develop an emotional bond (attachment), which is thought to create for the child a feeling of safety in proximity to the caregiver and reflect the child's expectations in turning to the caregiver for comfort during periods of emotional distress (14). Within an attachment theory framework, it is predicted that a caregiver's attunement to the child's attachment-seeking behavior (e.g., crying, smiling, clinging), and generally reliable responses to signs of infantile distress, gradually promote the child's sense of safety with the caregiver (14). Secure attachment relationships are increasingly internalized, leading to an experience of genuine relatedness coupled with appropriate independence and self-sufficiency. Moreover, attachment security has been shown to contribute to the early development of the capacity to link behavior with states of mind – feelings, thoughts and desires (15). On the other hand, greater caregiver misattunement to the child's efforts to achieve closeness is thought to undermine a child's expectation of safety from that relationship and lead to attachment patterns indicative of insecurity or disorganization (16). Further,

children who experience significant attachment dysfunction (e.g., maltreated children) have shown delays in the acquisition of mental state understanding (15). Insecurity can make itself felt through continued need for physical proximity to the attachment figures, or exaggerated claims of self-sufficiency and pretence of independence. Given these links between attachment and the development of mentalization, the caregiving environment may have a significant moderating influence on the capacity for accurate interpersonal understanding (17).

### **ATTACHMENT DYSFUNCTION AND PSYCHOSIS RISK**

Two decades ago, Frith initially theorized that disruption of the ability to represent one's own mind and the minds of others constitutes a core neuropsychological vulnerability to psychosis (18). There is now consistent evidence for mentalization impairments in people with psychotic disorders (19). However, the extent to which mentalization deficits that arise in the context of dysfunctional attachment relationships contribute to psychosis remains an unresolved question.

We recognize that many factors may lead to mentalization deficits in people with psychotic disorders that are not necessarily related to the quality of the caregiving environment, such as temperament, traumatic events independent of experiences with caregivers, or substance misuse. We suggest, however, that evidence from developmental psychology regarding the connection between attachment disruptions and impaired mentalization may provide a valuable additional link for advancing current understanding regarding the contribution of disturbances within the caregiving environment to psychosis (Figure 1). Consistent with contemporary diathesis-stress models (20), we speculate that mentalization impairments arising in the context of aberrant caregiving relationships may interact with dysregulation of the stress-response system and of mesolimbic dopamine to heighten the risk for psychosis in genetically vulnerable people.

Aberrant relationships with caregivers are increasingly recognized as an important environmental risk factor for psychosis (20). Chronic exposure to life stressors, such as aberrant attachment relationships, is thought to increase the risk for psychosis in large part because of its disruption of the biological system responsible for regulating stress (the hypothalamic–pituitary–adrenal [HPA] axis) (21). Because the HPA-axis system stimulates dopamine synthesis and release, chronic life stressors that result in HPA-axis overactivity may contribute to the dysregulation of prefrontal and corticolimbic dopamine circuits that

have been linked with key psychotic symptoms, such as delusions and hallucinations (21).

Additionally, in the context of attachment insecurity or disorganization, dopamine dysfunction could become amplified through decreased levels of oxytocin (the key neurohormone associated with social attachment). It has been shown, for example, that oxytocin is reduced in children exposed to an aberrant caregiving environment (22). Given the evidence that oxytocin has an inhibitory effect on mesolimbic dopamine (23), lower levels of oxytocin may act synergistically with disruptions of the HPA-axis system to contribute to dopaminergic dysregulation in people at risk for psychosis who experience significant disruptions in relationships with caregivers.

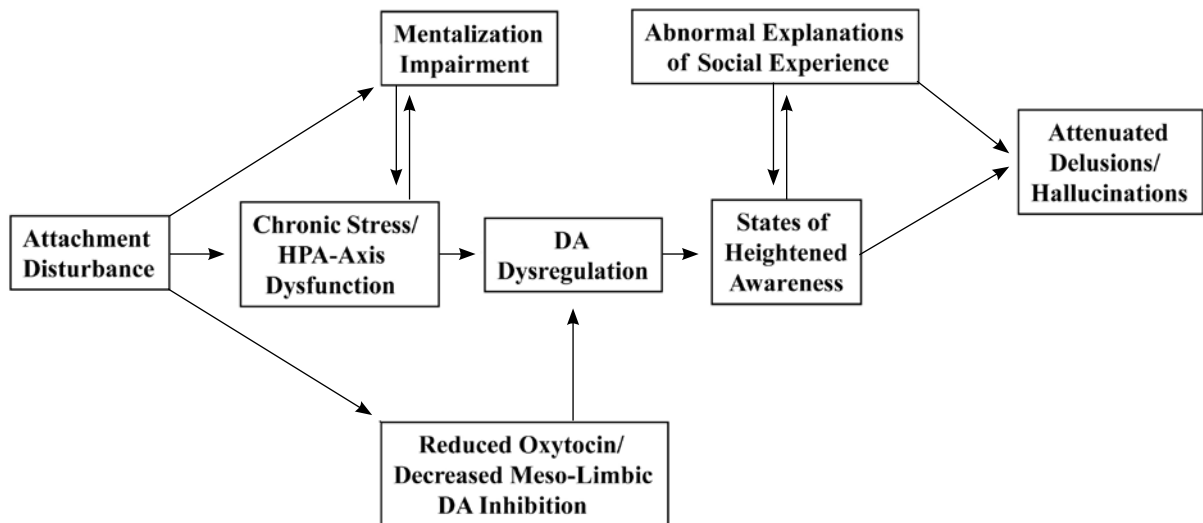
According to aberrant salience models of psychosis, dopamine dysfunction may provide a biological vulnerability for “heightened states of awareness” and subsequent misinterpretations of internal and external stimuli (24). Thus, individuals at risk for psychosis who develop mentalization impairments in the context of attachment insecurity may be particularly vulnerable to elaborating abnormal explanations of social experience during periods of acute stress. For example, at-risk individuals with difficulties discerning others’ intentions, or evaluating their position in the world relative to others, may be prone to evolve mild paranoid or grandiose beliefs. Further, difficulties differentiating internal from external

sensory experience, or a compromised sense of agency, might increase the risk of aberrant perceptual experiences among people with risk genes for psychosis. These aberrant beliefs and perceptions could, in turn, become reinforced and maintained via underlying dopamine dysfunction, leading to further anomalies in social and self-understanding.

**MENTALIZATION IMPAIRMENTS IN PSYCHOTIC DISORDERS**

Mentalization impairments have increasingly been linked with a broad range of disorders, including borderline (19, 25) and schizotypal (5) personality disorder, and autism (26). There is growing recognition that aberrant “self-experience” occurs across all major mental illness to some degree (27). According to phenomenological models, it has been proposed that anomalous self-experience in schizophrenia is marked by a hyper-focus on inner mental states (“hyper-reflexivity”) together with a loss of the sense of being the subject of one’s experience (i.e., loss of “ipseity”) (28). Accordingly, experiences of caregiver neglect that impede curiosity about others’ minds and contribute to “hypermentalizing” (excessive reflection on the self) may play an important role in the development of psychosis (29). Indeed, “autism” (e.g., preoccupation with fantasy, or the withdrawal of interest in personal hygiene and/or relationships with other people) has long been viewed as a defining aspect of the psychopathology of people with

**Figure 1.** Model Linking Mentalization Impairments Associated with the Early Caregiving Environment and Psychosis. In genetically predisposed individuals, attachment disturbances may contribute to: 1) impaired self–other understanding (mentalization disturbances) and 2) dopamine dysregulation and heightened states of awareness resulting from chronic stress/HPA-axis dysfunction, combined with reduced oxytocin/mesolimbic dopamine inhibition. Individuals with mentalization impairments may be prone to elaborating abnormal explanations of social experience that, in conjunction with heightened states of awareness, could constitute a psychological/neurobiological vulnerability for the eventual emergence of psychotic symptoms.



psychosis and has posed a central challenge to psychotherapeutic interventions (30). The specific mentalization deficits occurring in psychotic disorders, however, remain to be determined empirically (5). A meta-analysis of ToM deficits in schizophrenia showed similar levels of mentalizing impairment across a wide range of ToM tasks (e.g., verbal vs. nonverbal tasks, or first-order vs. second-order ToM) (19). Differentiating the mentalizing disturbances associated with psychotic disorders from those occurring in borderline personality disorder, autism, or other major mental illness is complicated by several factors: 1) the limitations of current assessment methods (5); 2) the extent to which mentalization impairments are linked to specific social contexts (27); 3) the considerable diagnostic heterogeneity of people with psychosis (4); and 4) the high rates of psychiatric comorbidity, including personality disorders, among psychotic disorder patients (31). Future longitudinal studies are needed to determine which attachment contexts and forms of mentalization deficits are specific to people who develop psychosis.

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## MENTALIZATION-BASED TREATMENT FOR PSYCHOSIS

MBT is a manualized, evidence-based treatment for addressing the core symptoms (i.e., affect dysregulation, impulsivity, and self-harm behaviors) of borderline personality disorder (32). However, because psychotic symptoms commonly arise situationally within specific social contexts (e.g., misunderstanding other people's intentions), the rehabilitation of the capacity for self and other understanding may be a critical component of the mechanism of change in the treatment of people with psychosis.

### ASSESSMENT OF MENTALIZATION

Two of the central goals of MBT are to foster the capacity for mentalization about the self and others and to facilitate understanding of the way that mentalization is affected by specific interpersonal relationships. Given the links between mental state understanding and the quality of an individual's social experience, patients may frequently exhibit impairments in some, but not all, aspects of mentalization (17). In the treatment of people with psychosis, developing an understanding of the particular domains of impairment in an individual's capacity to think about mental states helps to establish a treatment focus. It provides an indication of the social and attachment contexts within which disturbances

of mentalization are most likely linked with psychotic symptoms and, therefore, should be addressed. Early in the course of treatment, the quality of mentalization is probed through discussions of the patient's thinking within interpersonal relationships.

The initial presentation of Rachel illustrates the assessment of mentalization in a person with early psychosis:

Rachel is a 25-year-old woman, the oldest child of four siblings, with one psychiatric hospitalization for paranoid delusions accompanied by auditory hallucinations. Rachel came to treatment for depression about falling short of her professional goals and not being able to develop lasting intimate relationships. She said she wanted to be able to get closer to other people, but felt that she could not. Rachel described a chaotic early family environment. Her father struggled with alcohol and drug addiction and there was perpetual conflict between her parents. When she was 10 years old, Rachel's parents divorced. Neither parent felt able to care for her, and she was sent to live with her grandparents. During her first summer away from her mother, Rachel remembers a time when she looked into the night sky and saw one star that seemed to be brighter than all the others. She began to wonder whether this might be a message from God telling her that she was a fallen angel. During high school, Rachel continued to search for clues about God's plan for her. But she remained uncertain about whether her interpretations of signs regarding God's intentions were "real" or just in her mind. Rachel graduated from high school with good grades. She had some friends, but never dated. Rachel had difficulty, however, adjusting to college. Her grades began to drop and she increasingly worried about being a failure. Ultimately, Rachel became convinced that her academic problems were an indication that she was being punished by God. A first episode of psychosis ensued, followed by hospitalization and subsequent maintenance on antipsychotic medication. Since that time, Rachel's acute psychotic symptoms stabilized, but she remained discouraged by her difficulties functioning socially.

From an MBT perspective, Rachel's history provides an example of how psychosis may be linked to attachment contexts (e.g., disturbances in relationships with caregivers) in which the capacity for mental state understanding is particularly likely to become impaired in vulnerable



individuals. For Rachel, both the initial emergence of her psychotic-like beliefs about being a fallen angel and her subsequent episode of full-blown psychosis were associated with periods of significant separation and/or disruption involving important caregivers (i.e., during the time after her parents' divorce, and then subsequently after leaving home to start college). In people whose capacity to reflect on the self and others has become compromised, maintaining physically proximate relationships with caring others is thought to play an increasingly pronounced role in the regulation of affect and self-experience (25). During periods of separation, such individuals may be particularly vulnerable to the situational breakdown of self-coherence that had been maintained through the attachment relationship, which may lead to an increased risk of impaired reality monitoring and psychosis, especially given an underlying genetic risk.

To more fully characterize Rachel's current ability to mentalize, Rachel was asked how she understood why her mother had sent her to live with her grandparents. Rachel said she thought her mother did not love her. She was unable to entertain alternatives – for example, that her mother may have been overwhelmed trying to raise four children as a single parent. Rachel was also asked to describe her current relationship difficulties. She said she was sure that other people thought there was something wrong with her. Rachel explained that she recently went to a party, but was unable to talk and felt “frozen.” All she could think about was how everyone must be thinking she was a failure. Rachel noticed herself thinking: “Everyone here has done so much more with their lives... I feel like such a failure... Why would anyone want to talk to me?” She assumed that other people must have been thinking the same thing about her.

During this initial assessment, Rachel exhibited a tendency toward rigid, inflexible assumptions about other people's minds (e.g., regarding her mother's behavior toward her in childhood, or the other people's thoughts about her at the party), typical of “psychic equivalence mentalization,” where internal and external reality are given equivalent status (25). Additionally, Rachel identified an interpersonal context in which her capacity to mentalize appeared particularly disrupted; namely, in the situation of the party, which presented the possibility of forming new relationships that might activate attachment needs (e.g., the need for emotional closeness). In the setting of increased anxiety about meeting someone new, Rachel's ability to mentalize became acutely compromised, as she felt “frozen,” preoccupied with her own internal

criticism, and unable to interact with other people. For Rachel, self-critical judgments (e.g., feeling like a failure during college) also appeared closely related to her prior difficulties maintaining a sense of the difference between her own thinking and external reality, and to the phenomenology of her psychotic delusion (i.e., that she was being punished by God). Thus, fostering Rachel's curiosity about her own and others' minds, and helping her to understand how interpersonal settings involving the heightening of attachment needs might affect her capacity to think about herself and others, became central foci of the initial phase of treatment.

### **THERAPEUTIC STANCE AND BASIC INTERVENTIONS**

In MBT, the therapist's focus on the patient's state of mind is critical to the development of a collaborative mentalizing process. In particular, taking an inquisitive, “not-knowing” therapeutic stance with regard to what a patient is thinking or feeling is viewed as fundamental to the evolution of the patient's curiosity about how his/her mind works and the generation of second-order representations in relation to mental states (19). Active questioning about the patient's mental state and detailed exploration of how the patient's state of mind is related to particular interpersonal contexts are employed to demonstrate the therapist's interest in understanding the way that what is going on in the patient's mind is related to the concerns that have led him/her to seek psychotherapy. For example:

After her initial assessment, Rachel began her next therapy appointment by asking: “What should I talk about today?” Rather than assuming to know what Rachel should talk about, or why she was having trouble getting started on this occasion, her therapist began by observing that initially she had spoken very freely, but something seemed different today. “I'm not sure I know what you should talk about today,” he said. “But, maybe we could try to think about what's making it hard for you to come up with a topic together?” Rachel looked down at the floor, and then said: “I thought you would know what I should talk about.” Rachel then told a story about a recent family gathering. During a conversation with her uncle, Rachel felt she had unintentionally made a critical comment that hurt her uncle's feelings. After their conversation, Rachel thought her uncle had given her a disapproving look. She felt rejected. In an effort to stimulate Rachel's curiosity about her state of mind at the beginning

of the hour, Rachel's therapist noted that after saying she didn't know what to talk about, she had told a story in which she'd felt rejected after saying something she thought was critical. "If I were in your shoes," he proceeded, "I might wonder if I would be rejected for saying something critical here." "I'm always worried I'm going to say the wrong thing," Rachel said. Rachel and her therapist then returned to her initial uncertainty about what to talk about, explored her concerns about "saying the wrong thing" in therapy, and worked toward developing a clearer focus for her treatment. At the start of the next session, Rachel again said she didn't know how to begin. However, perhaps reflecting a greater sense of safety in talking about her mental life with her therapist, she continued: "I guess I'll talk about what we started to discuss the last time..."

As patients with psychotic disorders may have difficulty with very basic aspects of mental state understanding (e.g., identifying their thoughts or feelings), complex interpretations about "deep" unconscious motivation, the connection between the remote past and the present, or even nonconscious phenomena are generally avoided and not given privileged status. Instead, a variety of mentalizing techniques are used to promote the awareness and understanding of mental states that can be most readily linked to a patient's current subjective experience. Some of the core MBT interventions include: the use of short, simple ("soundbite") observations; focusing on the patient's mind (particularly affective experience), as opposed to behavior or physical/social circumstances; nonjudgmental active listening; questioning to provoke curiosity about motivations; a dogged determination to fully understand the patient's point of view; praising positive mentalizing; or using the therapist's mind as a model. Of particular importance is that any intervention should be tailored to the patient's mentalizing capacity during a given therapy hour. For example, expressions of intense emotional arousal suggest that simpler, less complex interventions may be called for to support a patient's sense of safety and avoid the breakdown of the ability to mentalize.

We illustrate the use of some of these techniques in a vignette from the treatment of Rachel below:

Shortly after beginning therapy, Rachel reported paranoid thoughts – e.g., feeling like she might be being secretly recorded. She said these thoughts didn't last for very long, and she didn't think they

were true. But they were bothering her.

**Therapist:** Can you tell me a little more about these thoughts? When did you first notice having them? (Active questioning.)

**Rachel:** Well, during the last hour. I remember just looking at how the walls in your office are undecorated, just plain white walls. (Example of concrete mentalizing.) I started thinking: Is this a real doctor's office? And, then I wondered if you might be recording me...

**Therapist:** I'm not sure that I understand how noticing the white walls in my office was connected with the thought that I was tape recording you. Did you have any particular feelings when you were looking at the walls here? (Focus on affect.)

**Rachel:** (After a long pause.) When I look at the walls, it feels like you're not really here, like you could be planning to leave any minute.

**Therapist:** So, perhaps, when you feel that someone is going to leave you, you can start to worry about being hurt – like the idea that I'd record you without your permission? (Affect labeling with qualification.)

**Rachel:** Yeah, I think that's right.

**Therapist:** How has it felt to talk about this just now? (Monitoring patient's reaction to the process.)

**Rachel:** It's been okay. I feel more connected with you today.

As highlighted in this example, by focusing on the patient's inner experience, particularly in a specific social setting where the capacity for self and other understanding became lost (e.g., when Rachel felt increasingly disconnected from her therapist), MBT techniques offer a potentially valuable approach to the impairments of social understanding that are increasingly thought to contribute to the functional deficits and symptomatology of people with psychosis.

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## CONCLUSION

Here, we have presented an attachment-based model to support the adaptation of MBT to address impairments of mental state understanding in people with psychotic disorders. A number of case reports have provided evidence that conceptually related metacognitive psychotherapeutic techniques designed to foster self-understanding in schizophrenia may contribute to functional improvements in people with psychosis (8, 9,

11, 12). Further, findings from randomized clinical trials have demonstrated significant long-term improvements in social function among patients with schizophrenia who received cognitive therapies incorporating techniques targeting social cognitive deficits, for example, impaired perspective-taking (33) or ToM (34). Taken together, these findings suggest that MBT techniques to promote the recovery of the capacity to mentalize have the potential to contribute to improvements in social function of people with psychosis, particularly among individuals with disturbances in the caregiving environment.

The MBT therapeutic approach and treatment interventions outlined here share much in common with other established treatments for psychosis. For example, CBT (35) and metacognitive psychotherapy (8) for psychosis also emphasize: 1) the importance of taking a structured approach to patient's psychological capacities; 2) the use of interventions that are simple and easy to understand; and 3) a focus on the patient's current mental state, as opposed to explorations of the distant past. Some of the distinguishing features of the MBT model, however, include: 1) the focus on the patient's state of mind as central to the rehabilitation of the capacity for social understanding; 2) the emphasis on the role of affect in disruptions of the ability to mentalize; and 3) the importance given to understanding the links between the quality of mentalization and specific interpersonal/attachment contexts.

The emphasis in MBT on the association between attachment-related dysfunction, the need for a compassionate stance to internal experience, and the recognition of impaired mentalization in people with psychosis is in no way intended to blame caregivers as the cause of these deficits. In the absence of an underlying genetic predisposition to psychosis, disturbances in child-caregiver relationships are highly unlikely to contribute to the development of psychotic symptoms. Further, in our view, the hypothesis that the quality of attachment relationships may be linked with the social understanding of people at genetic risk for psychosis is consistent with the more general evidence regarding the significant value and importance that relationships with caregivers have in the lives of people with psychosis (36). In particular, evidence regarding the beneficial effects of family-based interventions with respect to clinical course and social function in people with psychosis suggests that patients who feel better understood by their caregivers may have a greater capacity to think about themselves and to function in the world (37). Future research, however, is needed to

determine whether taking an MBT approach to deficits of social understanding will lead to improved clinical outcomes for patients with psychotic disorders.

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