Recovery-focused Metacognitive Interpersonal Therapy (MIT) for adolescents with first-episode psychosis

Recovery-focused Metacognitive Interpersonal Therapy (MIT) for adolescents with First-Episode Psychosis

Felix Inchausti[1*], Helena García-Mieres[2,3], Nancy V. García-Poveda[1], Eduardo Fonseca–Pedrero[4], Angus MacBeth[5], Raffaele Popolo[6], & Giancarlo Dimaggio[6]

[1]Department of Mental Health, Servicio Riojano de Salud, Logroño, Spain

[2]Etiopathogenesis and Treatment of Severe Mental Disorders (MERITT), Teaching, Research & Innovation Unit, Institut de Recerca Sant Joan de Déu Parc Sanitari Sant Joan de Déu Sant Boi de Llobregat, Barcelona, Spain

[3]Mental Health Networking Biomedical Research Centre, CIBERSAM, Madrid, Spain

[4]Department of Educational Sciences, University of La Rioja, Logroño, Spain

[5]Centre for Applied Developmental Psychology, Clinical and Health Psychology, School of Health in Social Science, University of Edinburgh, Edinburgh, Scotland

[6]Center for Metacognitive Interpersonal Therapy, Rome, Italy.

*Correspondence concerning this article should be addressed to Felix Inchausti, who is now at Centro de Salud Espartero, Unidad de Salud Mental Infanto-Juvenil, Avenida Pío XII, 12 Bis 26003 Logroño, La Rioja, Spain. E-mail: finchausti@riojasalud.es

Recovery-focused Metacognitive Interpersonal Therapy (MIT) for adolescents with First-Episode Psychosis

Abstract

Access to evidence-based early intervention for adolescents with psychosis is critically important. The aim of this work was analysing the feasibility, acceptability and potential effects of a psychological intervention based on metacognitive interpersonal therapy (MIT) in adolescents presenting with early psychosis. Twenty-three participants (aged 14-18) experiencing first-episode psychosis or an at-risk mental state for psychosis were offered up to 40 hours of individual MIT over a 12-month period. Effect sizes were calculated for changes in subjective recovery experience (primary outcome), psychotic symptoms (secondary outcome), and metacognition (hypothetical mechanism of change) from baseline to treatment end. At study completion, 21 out of 23 (91.3%) participants had received twelve or more sessions of MIT. The average number of MIT treatment sessions received was 31 (range 12-40). Large effect sizes were observed for changes in subjective recovery, self-reflectivity, understanding others' minds, mastery, and emotional distress. Medium effect sizes were observed for changes in negative, positive, and disorganized symptoms. This is the first study to suggest that MIT is both acceptable to young people experiencing early psychosis and is associated with improvements in subjective recovery, symptoms, and metacognition. Despite study limitations, evidence of MIT feasibility, acceptability and potential effects was sufficient to warrant further investigation.

***Keywords*:** metacognitive interpersonal therapy; early psychosis; metacognition; first-episode psychosis; recovery; psychotherapy.

Early or first-episode psychosis (FEP) including schizophrenia spectrum diagnoses usually begins in adolescence or young adulthood, with age of onset of schizophrenia spectrum diagnosis frequently between 15 and 35 years (Kessler et al., 2007). Changes in the conceptualization of recovery in severe mental disorders, improved data on chronicity and the heterogeneous course of long-term outcome schizophrenia spectrum diagnoses disorders (Harding, Brooks, Ashikaga, Strauss, & Breier, 1987) suggests a shift towards recovery-oriented research, treatment, and policy. This has occurred alongside grassroots activism embracing a broadened view of recovery, incorporating regaining autonomy over one's life and a return to meaningful life roles, even in the face of ongoing symptoms or difficulties (Davidson & Roe, 2007; Silverstein & Bellack, 2008). This aspect of recovery has variously been labelled "recovery as process" or subjective recovery. Implicit within this definition is that individuals see themselves as more than a mental health patient, feel empowered to make decisions about their lives and health care, and can participate in aspects of their community that are meaningful to them (Davidson & Roe, 2007).

This broadened view of recovery has several implications for interventions offered to individuals with schizophrenia spectrum disorders in general, and emergent or early psychosis in particular. The literature to date has shown that early intervention in psychosis is essential for recovery, and those who receive early support have better outcomes than those who receive standard care (Morrison et al., 2021). Early intervention in psychosis is related to a range of improved outcomes such as symptom remission, use of acute services, and level of functioning, albeit often broadly defined. While these outcomes are important, there is less evidence of how early intervention assists individuals with FEP to attain subjective recovery (Dixon et al., 2015).

Access to evidence-based early interventions for adolescents with psychosis is paramount. To date, the mainstay of research and treatment for psychosis in adolescence has been antipsychotic medication, with a limited number of studies of psychological treatments for people presenting with psychosis and under 25 years of age. One promising intervention that may assist in promoting recovery in FEP is Metacognitive Interpersonal Therapy (MIT; Dimaggio et al., 2015, 2020). MIT hypothesizes that it is possible to improve the effectiveness of psychotherapy for recovery in FEP by helping patients understand what psychotic symptoms mean in their personal experience, and in particular, how they arise as a response interpersonal event according to their pre-existing maladaptive schemas, for example being firmly convinced they are inferior, and that others will humiliate them. This perspective is consistent with cognitive-behavioural therapy (CBT) approaches to psychosis (Morrison, Renton, Dunn, Williams, & Bentall, 2003; Chadwick, 2008; Kingdon & Turkington, 2008; Garret, 2019), which focus on the personal experience of individuals with psychosis and the meaning they ascribe to their experiences. CBT emphasizes the role of negative self and other schemata in determining the personal meaning of relational events and the generation of fixed cognitions of threat. MIT approaches this in further detail, based on two fundamental principles. The first is that psychotic symptoms have a meaning that is connected to the life of the individual experiencing them. As Salvatore et al. (2009, 2012, 2018) note, MIT proposes that the onset of FEP—and the recurrence of symptoms later in the disorder—may be correlated with a fundamental experiencing of the self as ontologically vulnerable, often elicited by either real or imagined potentially stressful interpersonal situations. This experience of the self as vulnerable can involve seeing oneself as being unable to cope with possible criticism or aggression from others seen as superior and malevolent. This often leads to detachment or reactive aggression as forms of maladaptive coping. The end result is that these persons fear they cannot maintain personal boundaries but simultaneously create barriers between themselves and the others as coping strategies, laying the foundations for future social isolation. The individual is not necessarily aware

of his or her vulnerable self, which is generally experienced as a form of anxiety, physical weakness, or vague threat.

The second principle is metacognition. This refers to a spectrum of mental activities ranging from discrete acts in which individuals recognize specific thoughts and feelings to more sophisticated acts in which intentions, thoughts, feelings, and links between events are combined into larger and more complex representations of self and others. Metacognition includes "mastery," namely the ability to use metacognitive knowledge to solve the psychologically or emotionally challenging events and social problems occurring in daily life (Semerari et al., 2003; Lysaker & Dimaggio, 2014). All metacognitive domains may be impaired among people with schizophrenia, and these impairments are linked with greater levels of social and vocational dysfunction (Lysaker et al., 2013). These problems are key to understanding how psychosis arises. Patients do not understand that, for example, in a certain situation they automatically perceive themselves as being vulnerable and inadequate and others as intending to subjugate them and that this is the antecedent of psychological distress (for example, anxiety), which then leads to the emergence of psychosis. They also display low levels of mastery (Vohs et al., 2015). For instance, they may struggle with identifying psychologically healthy or adaptive responses in their attempts to manage their symptoms (e.g., coping skills, interpersonal effectiveness). From this perspective, FEP emerges as the outcome of difficulties in making sense of interpersonal exchange. Therefore, negative emotion arises as a function of one's actions, which are themselves initiated under specific relational triggers. This contrasts with construing the difficulties as arising 'out of the blue' or via a generic social relational rule. Against this background, we explored whether MIT was associated with an increased sense of recovery in young patients presenting with FEP, alongside reduced symptoms. Our position was that improved metacognition means that as individuals become more aware of their inner experiences, their desires and worries, and progressively see themselves and the world from a

different perspective, one where they have greater agency towards personal goals and correspondingly fewer negative cognitions and affect regarding self and others.

Aim of the study

The aim of the study was to analyse the feasibility, acceptability, and model effect sizes for a MIT-based psychological intervention for adolescents presenting with a FEP or an at-risk mental state for psychosis. Regarding potential effectiveness, the primary goal was to explore whether MIT was associated with an increased subjective sense of recovery, and secondly to estimate the effects of MIT on psychotic symptoms (as measured by magnitude of clinical gains), and in metacognition (the hypothetical change mechanism).

Methods

Participants

Twenty-three adolescents experiencing a FEP with schizophrenia spectrum diagnosis or an at-risk mental state for psychosis were recruited from a child and adolescent mental health service (CAMHS) in La Rioja, Spain. Inclusion criteria were: aged 14–18 years; experiencing FEP with current delusions or hallucinations met either the International Classification of Diseases, Tenth Revision (ICD-10), criteria for a schizophrenia spectrum diagnosis or an at-risk mental state for psychosis according to Yung et al. (2005); under the care of a Children and Young Peoples Mental Health Service; and able to provide written informed consent. Exclusion criteria included an ICD-10 diagnosis of organic psychosis; moderate to severe learning disability; primary diagnosis of alcohol or substance dependency; insufficient command of Spanish to provide written informed consent; scored ≥ 5 points on the Positive and Negative Syndrome Scale (PANSS) on conceptual disorganization; presented with immediate risk to self or others at the time of referral; and/or had received antipsychotic medication or psychological intervention in the 3 months prior to referral. Case managers of eligible participants were consulted about whether potential participants would

be suitable for inclusion in the study. Following this, suitable patients were invited to participate in the treatment.

Sample characteristics are shown in Table 1. The mean age of participants was 16.2 years (*SD* = 1.3); 13 participants were male, and 10 were female. The mean DUP was 14.2 months. Most of participants were in high school and living with parent(s) and/or siblings. The mean PANSS total score was 73.9.

----- PLEASE, INSERT TABLE 1 ABOUT HERE-----

Intervention

All participants were offered medication by their usual care team psychiatrist. Psychiatrists made decisions about the type and dose of medication in line with routine practice, and psychiatrists were free to change the dose and type of medication throughout treatment if deemed necessary. The decision to start medication was made jointly between the clinician, young person, and parent/carer, including discussing the possible benefits and side effects of each drug and providing age-appropriate information. The physical health of participants was also monitored throughout the study.

Psychological intervention consisted of individual MIT and family intervention based on MIT principles. Up to 40 hours of MIT was offered over a 12-month treatment timeframe, with an additional four booster sessions over the subsequent 6 months. Family intervention was delivered by the same MIT therapist, with up to six sessions available over the 6-month treatment window. Family intervention was optional; therefore, participants and families could decide to decline this component of psychological intervention if they wished. Considering a context of routine practice in a public service, the minimal exposure to treatment for post-test analysis was 12 or more MIT sessions.

MIT description

MIT was originally designed for personality disorders (Dimaggio et al., 2007; 2015, 2020) and adapted for the treatment of psychosis (Salvatore et al., 2012, 2018), in line with the principles established by Lysaker et al. (2011). Its main goal is to progressively promote metacognition and awareness of problematic forms of subjective experience and of the schemata driving social behaviour. Once this is achieved and patients are better able to think about mental states, a therapist then facilitates individuals to question their rigid and maladaptive ideas about the self and others with the aim of developing new interpretations to fulfil previously suppressed wishes that they thought beyond their reach. With both personality disorders and schizophrenia spectrum disorders, MIT uses step-by-step procedures to stimulate metacognitive skills throughout therapy (Dimaggio et al., 2015, 2020). However, with patients presenting have schizophrenia spectrum diagnoses, the therapist often begins by promoting the functioning of the most basic levels of metacognition. For example, if a patient is unable to recognize that their thoughts are their own (rather than thinking that the thoughts are introduced into his mind by an outside entity), the therapist first focuses on minimal interventions aimed principally at "restoring" the patient's agency over their own thoughts. Moreover, for persons with schizophrenia diagnoses, the therapist considers moment-to-moment, and session-to-session fluctuations in the patient's level of metacognitive functioning, particularly in the context of emotionally charged material. Eliciting specific narrative episodes is used in MIT to identify and enrich details of clients' inner experience in order to form deeper understanding of interpersonal schemas, rather than relying on the client's immediate interpretation. Narrative autobiographical episodes—i.e., detailed accounts of personally relevant events—offer opportunities to explore patients' subjective experience, problematic emotions, meaning-making style, and biased interpretations of the self's and others' ideas and intentions. Such episodes offer insights into what a patient thinks and feels "in the moment" whilst engaging in intersubjective dialogue, whilst also informing the therapist about the patient's self-image, how they relate to others,

and their metacognitively representations (Dimaggio et al., 2020). Therapists can also tactfully divert patients from abstract and intellectualized or impoverished and fragmented narratives.

Finally, MIT stresses the importance of regulating the therapeutic relationship and working to prevent and repair alliance ruptures. This is essential throughout the course of treatment because any intervention, no matter how technically correct, is at risk during instances of relationship rupture (Safran & Muran, 2000). Maintaining a constantly validating attitude is thus a fundamental aspect of regulating the therapeutic relationship (Linehan, 1993). Validating consists of constantly expressing empathetic understanding, acceptance, and support. This can be encapsulated as communicating the following within therapy: "I understand what you're telling me (or what you're doing), I can see the reasons, motivations, and emotions causing it, even if at first these aspects seem detrimental or counter-productive to your wellbeing".

At the onset of treatment for FEP the patient's metacognitive capacity is usually low, therefore the therapist actively regulates the therapeutic relationship to avoid any potential ruptures, whilst also developing relational engagement, a positive atmosphere within sessions and working to reduce emotional distress. The therapist also works to teach the patient behavioural strategies for coping with distress whilst simultaneously promoting improvements in the patient's ability to reflect on their own mind. Moreover, to prevent and repair alliance ruptures it is important that therapists maintain a reflective stance even when clients incorporate them within their maladaptive system. At the second stage, once it becomes possible to elicit the autobiographical episodes during which the psychosis emerged, the therapist works to reduce the symptoms by promoting further improvements in the patient's ability to reflect on their own mind, using an intervention hierarchy (Lysaker et al., 2011; Salvatore et al., 2012, 2018). This hierarchy aims to stimulate identification of problematic feelings and understanding the link between interpersonal activating events, problematic feelings, and the onset of the psychosis. This enables the individual to make more complex psychological

links between problematic interpersonal schemata and the FEP; and promotes more sophisticated metacognitive mastery of the FEP. At the third stage, the therapist works with the client to form a more nuanced understanding of the other's mind, with the aim that the patient's reading of others' intentions becomes less exclusively driven by negative schemata such as that others will be dominant and malevolent.

MIT for psychosis has many similarities with metacognitive reflection and insight therapy (MERIT) (Lysaker & Klion, 2018), and both draw on similar practice elements (for example, attention to the patient's agenda, exploration of narrative episodes, and interventions to promote both self-reflectivity and metacognitive mastery) to progressively promote metacognition. Both also highlight the importance of tactful regulation of the therapeutic relationship. The key difference is that unlike MERIT, MIT assumes that persons with significant psychopathology attribute meaning to events according to a series of maladaptive interpersonal schemas. Therefore, a major task of therapy is enabling an awareness of such schemas whilst promoting different and more flexible interpretations of personal events. A second difference is that whereas MERIT has been developed to be theoretically integrative and technically eclectic, MIT is integrative and makes greater use of specific techniques drawn from the CBT tradition.

Therapists, training, and treatment fidelity

The intervention was led by a Clinical Psychologist with over 6 years' experience in metacognitive-oriented therapies, alongside a co-therapist (a resident in training in clinical psychology). Prior to starting MIT, both therapists completed a 6-hr theoretical training program with material provided by the authors of the original protocol. To increase fidelity and adherence to protocol, the QUT–MIT Fidelity Scale (Gordon-King et al., 2018) was used. Transcripts of sessions were randomly selected and were scored by independent assessors using the QUT–MIT Fidelity Scale. Therapy sessions were reviewed, and each competency were rated from 1 – 5 (1=no evidence of competency,

3=evidence of satisfactory competency, 5=evidence of very strong competency). Item scores were averaged to produce a final score. Both therapists received weekly supervision by an external clinical psychologist with substantial experience in metacognitive-oriented psychotherapies. In these sessions, QUT–MIT Fidelity Scale scores were discussed, and therapists received supervision on how they conduct the therapy.

Feasibility and acceptability outcomes

Feasibility and acceptability were evaluated in terms of adherence of participants, treatment fidelity assessed by the QUT–MIT Fidelity Scale, therapy attendance and participant's treatment satisfaction.

Measures

Recovery experience from psychosis was the primary outcome, assessed with the 15-item version of the *Questionnaire about the Process of Recovery* (QPR) (Law, Neil, Dunn, & Morrison, 2014.) Participants respond to the statements (such as 'I feel that my life has a purpose') on a five-point scale from strongly disagree to strongly agree, according to their experiences in the last 7 days. In this study, the Cronbach's alpha of the QPR scores was 0.89.

Psychotic symptoms were the secondary outcome, assessed using the Spanish adaptation of the *Positive and Negative Syndrome Scale* (PANSS) (Peralta & Cuesta, 1994). Inter-rater reliability between 2 blind raters was assessed regularly throughout the trial obtaining adequate inter-rater reliabilities (mean = 0.89; *SD* = 0.12).

Metacognition was assessed with the *Metacognitive Assessment Scale–Abbreviated* (MAS–A) (Inchausti et al., 2018; Lysaker et al. 2005; Semerari et al. 2003). The MAS–A is a rating scale for assessing different forms of metacognitive activity within personal narratives, with total score ranging from 0 to 28, generated by summing the scores of the four subscales. Higher scores on subscales indicate higher capacity to integrate and effectively use intersubjective information. Participants' narratives were obtained using the Spanish adaptation of the *Indiana Psychiatric*

Illness Interview (IPII) (Lysaker, Clements, Plascak-Hallberg, Knipscheer, & Wright, 2002). The MAS–A was scored from IPII transcripts. In this study, inter-rater reliability for MAS-A scores revealed a significant intra-class correlation for all 4 subscales ranging from $r = .81$ ($p < .05$) for 'Decentration' to $r = .93$($p < .01$) for the total score.

Statistical analyses

Statistical analyses were performed using SAS (SAS Institute Inc., Cary, NC, USA). According to guidelines for pilot studies as specified by Arain, Campbell, Cooper, & Lancaster (2010), data collection was aimed at statistically testing clinical impressions of the intervention and model future studies. Paired sample *t*-tests and effect size calculations (Cohen's *d*) were performed on the outcome measures.

Results

----- PLEASE, INSERT TABLE 2 ABOUT HERE-----

At study end, 21 out of 23 (91.3%) participants had received twelve or more sessions of MIT and completed end of therapy assessments. The average number of individual MIT sessions received was 31 (range 12-40). Most of participants (*n*=18) received at least 26 hours of MIT (more than 2 monthly sessions), and three participants between 12-26 hours. There were no serious adverse events related to the study (as measured through therapist records). Participant's satisfaction systematically monitored at the end of the MIT sessions was between moderate and high. Table 2 shows the magnitude of change in the study outcomes. Participants reported potential gains in subjective recovery on the QPR scale, equivalent to a potential large effect size, including the 95% confidence interval (CI) for the estimate. For PANSS scores, the largest potential improvement was in the emotional distress subscale, also with a potential large effect size, followed by significant potential improvements in the negative, positive, and disorganized symptoms subscales, all with preliminary medium effect sizes (all $d > 0.5$) and 95% CI in the medium to large range. There were

no potential changes from baseline to end of treatment in the excitative symptoms subscale. Finally, preliminary pre-post improvements were noted on MAS-A Self-reflectivity, Mastery and Total scores, all with potential medium to large effect sizes ($d > 0.8$).

Discussion

This pilot study primarily sought to examine the feasibility and acceptability of MIT in routine practice for adolescents aged 14-18 with FEP or an at-risk mental state for psychosis, focussing on subjective sense of recovery as the primary outcome. A further aim was to estimate the potential effects of MIT on psychotic symptoms, as measured by magnitude of clinical gains and in the hypothetical change mechanism of metacognition. MIT demonstrated feasibility and acceptability via concordance with the core components of the original protocol and participant's treatment adherence. Therapists also noted that active participation in fortnightly supervision was essential for successful application of MIT for psychosis.

The treatment was highly acceptable to patients, with only 2 dropouts from 23 participants (8.6%) and 21 participants received at least twelve sessions from MIT. The two dropouts were motivated by issues unrelated to the study or the psychopathology of the participants (moving to another city for family work issues). Previous more robust studies using metacognitive-oriented therapies in psychosis suggested dropout rates from 30-48.5% (Vohs et al. 2015; de Jong et al. 2019), and Hamilton, Moore, Crane, & Payne (2011) reported a 30% dropout rate across any psychological therapy for psychosis. The minimum "dose" criterion of twelve MIT sessions may have enabled high treatment adherence in the context of naturalistic clinical practice. Further, we suggest that flexibility regarding appointments was also crucial to the high participants engagement in this study. Qualitative data from participants and family members indicated that the assertive outreach approach taken on this study (flexibility regarding time of appointment, text or letter reminders and flexibility regarding rearrangement of appointment) was valued. Moreover, youth-specific factors, including school and college exams, moving away to university, preference to book appointments

via parents (who are often managing multiple appointments and commitments) and frequently changing mobile telephone numbers and/or e-mail addresses were noted as challenges to maintaining engagement. Of note, high attendance rates are emerging as a transdiagnostic feature of MIT, across formats, geographical settings and presenting diagnosis (Gordon-King et al., 2018; Inchausti et al., 2020; Popolo et al., 2021; Simonsen et al., 2021).

Regarding magnitude of change in post-treatment outcome it is important to note that this is the first application of MIT to adolescents with early psychosis. Based on our preliminary results, MIT is associated with potential improved subjective recovery. These preliminary improvements appear to go in conjunction with improvements in metacognition. Therefore, it is possible that the subjective experience of recovery emerges via metacognitive change, which drives an individual's reinterpretation of their maladaptive schemas (e.g., "I though the other would…. but now I realize that…"), promoting formation of healthier, adaptive ideas about the self and their social context. These results are consistent with previous and more robust studies of MERIT in FEP (Leonhardt, Ratliff, & Vohs, 2018), schizophrenia and schizoaffective disorder (de Jong et al., 2019). In de Jong's et al. (2019) RCT, they reported improvements in self-reflectivity and mastery, suggesting that improvements in understanding the other's mind may require longer-term interventions, with 40 of more sessions. Our 1-year intervention may support this hypothesis. This is also consistent with MIT procedures, which initially promote self-reflection; and only once patients have improved capacity to see themselves in a clearer and more detached way, can therapists start helping the individual to form a more nuanced understanding of others. Based on our preliminary results, it is plausible to suppose that FEP patients could be more sensitive or amenable to metacognitive change than patients with prolonged psychosis. This is consistent with the importance of implementing early intervention programs in psychosis (McGorry, 2015).

The theoretical framework for MIT suggests that changes in the PANSS are in part attributable to gains in awareness of mental states and the capacity to use it in order to deal with social problems

(Semerari et al., 2003). Thus, metacognition could also be the mechanism of change underpinning improvements in managing emotional distress. We found that MIT was associated with patient's improved awareness of their own mental states and their capacity to take a critical stance towards their understanding of social interactions, questioning maladaptive assumptions (e.g., others are going to criticize or reject them). Our preliminary findings are thus congruent with previous studies showing improvements in self-reflectivity are associated with a lower impact of emotional painful experiences on patients' subjective distress (García-Mieres, De Jesús-Romero, Ochoa, & Feixas, 2020). This also supports previous evidence that developing a richer understanding of one's own mind is a necessary condition for subjective experience of recovery after a FEP (García-Mieres, Lysaker, & Leonhardt, 2021).

Our study also found potential improvements in positive, negative, and disorganized symptoms. Although our study had an inferior methodology and presented important limitations, the magnitude of post-intervention changes on positive and negative was potentially similar to CBT RCT in a comparable youth sample (Morrison et al. 2021). Of note, MIT does not try to challenge delusional beliefs, as this requires high level self-reflection skills, which are unlikely to be present in patients with FEP (Trauelsen et al., 2016), especially in the context of emotional stress. With the support of a validating atmosphere, the goal for a patient is to change their idea of not being able to cope with symptom-related suffering, whilst at the same time adopting a set of strategies (metacognitive mastery) that enable development of a sense of agency over their symptoms. This will then reinforce the patient's ability to take action to solve his or her psychological problems. The magnitude of the change in negative (higher than in positive symptoms) and disorganized symptoms can also be understood as relating advances in metacognition, consistent with previous studies suggesting a close relationship between metacognition and these variety of symptoms (Lysaker et al., 2005, 2019; Salvatore et al., 2012; Vohs et al. 2015). This may be due to the consistent focus in MIT on patients

wishes, and the therapists focus on helping patients discern what they strive for, validating their core aspirations and goals, and developing a sense of agency to sustain goal-directed behaviours.

We note several limitations to our study. First, no control group was used. Future studies with larger sample sizes and including control groups should urgently be conducted to support or reject our findings. Future Studies should also compare MIT with an active control condition to determine the efficacy of MIT vis a vis extant intervention. Another limitation was that although adherence was good therapists received minimal training. Future studies should look at the effect of including therapists with more prolonged training and assessing fidelity to protocol. As only 2 therapists participated in the study there are questions regarding the extent to which outcomes are attributable to the MIT protocol as opposed to therapists' individual skills. Future studies therefore need to include a larger range of therapists. On a related point, outcomes were only assessed at two time points. Modelling on outcomes and mechanisms of change on a session-by-session basis would facilitate analyses using contemporary case-series approaches such as multi-level modelling, enabling estimation of the relative contribution of baseline factors, therapy protocol and therapist skills. The effects of the medication on the results of the psychotherapeutic intervention were also not controlled. Finally, absence of follow-up limited our capacity to assess the stability of outcomes over time and the impact on relapse prevention.

To conclude, our preliminary data suggest MIT is a highly acceptable intervention for FEP young patients without observed adverse events. We show promising evidence that working with therapeutic strategies that target directly metacognitive skills may be a useful treatment for indirectly improving psychotic symptomatology, emotional distress linked with the experience of the disorder, and the subjective experience of recovery after FEP. The results of this pilot study suggest that incorporating metacognitive approaches for the treatment of early psychosis in community mental health services or hospitals reduces the burden of suffering of young patients and their families, and improves their psychosocial prognosis.

Compliance with Ethical Standards

The authors declare that they have no competing interests.

This study was conducted in compliance with local regulations and internationally established principles of the Declaration of Helsinki (64th World Medical Association General Assemble, Fortaleza, Brazil, 2013). The Clinical Research Ethics Committee of Rioja Salud approved the study and protocol. Before inclusion, all patients were required to sign an informed consent form.

References

Arain, M., Campbell, M. J., Cooper, C. L., & Lancaster, G. A. (2010). What is a pilot or feasibility study? A review of current practice and editorial policy. *BMC medical research methodology*, *10*, 67. https://doi.org/10.1186/1471-2288-10-67

Chadwick, P. (2008). *Person-Based Cognitive Therapy for Distressing Psychosis*. Wiley.

Davidson, L., & Roe, D. (2007) Recovery from versus recovery in serious mental illness: One strategy for lessening confusion plaguing recovery. *Journal of Mental Health, 16*(4), 459-470. https://doi.org/10.1080/09638230701482394

de Jong, S., van Donkersgoed, R., Timmerman, M. E., Aan Het Rot, M., Wunderink, L., Arends, J., van Der Gaag, M., Aleman, A., Lysaker, P. H., & Pijnenborg, G. (2019). Metacognitive reflection and insight therapy (MERIT) for patients with schizophrenia. *Psychological medicine*, *49*(2), 303–313. https://doi.org/10.1017/S0033291718000855

Dimaggio, G., Montano, A., Popolo, R., & Salvatore, G. (2015). *Metacognitive Interpersonal Therapy for Personality Disorders: A treatment manual*. Routledge.

Dimaggio, G., Ottavi, P., Popolo, R., & Salvatore, G. (2020). *Metacognitive Interpersonal Therapy: Body, imagery, and change*. Routledge.

Dixon, L. B., Goldman, H. H., Bennett, M. E., Wang, Y., McNamara, K. A., Mendon, S. J., Goldstein, A. B., Choi, C. W., Lee, R. J., Lieberman, J. A., & Essock, S. M. (2015). Implementing Coordinated Specialty Care for Early Psychosis: The RAISE Connection Program. *Psychiatric Services*, *66*(7), 691–698. https://doi.org/10.1176/appi.ps.201400281

García-Mieres, H., De Jesús-Romero, R., Ochoa, S., & Feixas, G. (2020). Beyond the cognitive insight paradox: Self-reflectivity moderates the relationship between depressive symptoms and general psychological distress in psychosis. *Schizophrenia Research*, *222*, 297–303. https://doi.org/10.1016/j.schres.2020.05.027

García-Mieres, H., Lysaker, P. H., & Leonhardt, B. L. (2021). Personal Recovery in Adults with Early Psychosis: A Comparison with Adults with Prolonged Schizophrenia. *Psicothema*, in press.

Garret, M. (2019). *Psychotherapy for Psychosis. Integrating Cognitive-Behavioral and Psychodynamic Treatment*. Guilford Press.

Gordon-King, K., Schweitzer, R. D., & Dimaggio, G. (2018). Metacognitive Interpersonal Therapy for Personality Disorders Featuring Emotional Inhibition: A Multiple Baseline Case Series. *The Journal of Nervous and Mental Disease*, *206*(4), 263–269. https://doi.org/10.1097/NMD.0000000000000789

Hamilton, S., Moore, A. M., Crane, D. R., & Payne, S. H. (2011). Psychotherapy dropouts: Differences by modality, license, and DSM-IV diagnosis. *Journal of Marital and Family Therapy*, *37*(3), 333–343. https://doi.org/10.1111/j.1752-0606.2010.00204.x

Harding, C. M., Brooks, G. W., Ashikaga, T., Strauss, J. S., & Breier, A. (1987). The Vermont longitudinal study of persons with severe mental illness, I: Methodology, study sample, and overall status 32 years later. *The American Journal of Psychiatry*, *144*(6), 718–726. https://doi.org/10.1176/ajp.144.6.718

Inchausti, F., García-Poveda, N. V., Ballesteros-Prados, A., Ortuño-Sierra, J., Sánchez-Reales, S., Prado-Abril, J., Aldaz-Armendáriz, J. A., Mole, J., Dimaggio, G., Ottavi, P., & Fonseca-Pedrero, E. (2018). The Effects of Metacognition-Oriented Social Skills Training on Psychosocial Outcome in Schizophrenia-Spectrum Disorders: A Randomized Controlled Trial. *Schizophrenia Bulletin*, *44*(6), 1235–1244. https://doi.org/10.1093/schbul/sbx168

Inchausti, F., Moreno-Campos, L., Prado-Abril, J., Sánchez-Reales, S., Fonseca-Pedrero, E., MacBeth, A., Popolo, R., & Dimaggio, G. (2020). Metacognitive Interpersonal Therapy in Group for personality disorders: Preliminary results from a pilot study in a public mental health setting. *Journal of Contemporary Psychotherapy*, *50*(3), 197–203. https://doi.org/10.1007/s10879-020-09453-9

Kessler, R. C., Amminger, G. P., Aguilar-Gaxiola, S., Alonso, J., Lee, S., & Ustün, T. B. (2007). Age of onset of mental disorders: a review of recent literature. *Current Opinion in Psychiatry*, *20*(4), 359–364. https://doi.org/10.1097/YCO.0b013e32816ebc8c

Kingdon, D. G., & Turkington, D. (2008). *Cognitive Therapy of Schizophrenia*. Guilford Press.

Law, H., Neil, S. T., Dunn, G., & Morrison, A. P. (2014). Psychometric properties of the questionnaire about the process of recovery (QPR). *Schizophrenia research*, *156*(2-3), 184–189. https://doi.org/10.1016/j.schres.2014.04.011

Leonhardt, B. L., Ratliff, K., & Vohs, J. L. (2018). Recovery in First-Episode Psychosis: A Case Study of Metacognitive Reflection and Insight Therapy (MERIT). *American Journal of Psychotherapy*, *71*(4), 128–134. https://doi.org/10.1176/appi.psychotherapy.20180032

Linehan, M. (1993). *Cognitive-Behavioral Treatment of Borderline Personality Disorder (Diagnosis and Treatment of Mental Disorders)*. Guilford.

Lysaker, P. H., & Dimaggio, G. (2014). Metacognitive capacities for reflection in schizophrenia: implications for developing treatments. *Schizophrenia Bulletin*, *40*(3), 487–491. https://doi.org/10.1093/schbul/sbu038

Lysaker, P. H., & Klion, R. E. (2018). Recovery, meaning-making, and severe mental illness: a comprehensive guide to metacognitive reflection and insight therapy (1st ed.). Routledge.

Lysaker, P. H., Carcione, A., Dimaggio, G., Johannesen, J. K., Nicolò, G., Procacci, M., & Semerari, A. (2005). Metacognition amidst narratives of self and illness in schizophrenia: associations with neurocognition, symptoms, insight and quality of life. *Acta psychiatrica Scandinavica*, *112*(1), 64–71. https://doi.org/10.1111/j.1600-0447.2005.00514.x

Lysaker, P. H., Clements, C. A., Plascak-Hallberg, C. D., Knipscheer, S. J., & Wright, D. E. (2002). Insight and personal narratives of illness in schizophrenia. *Psychiatry*, *65*(3), 197–206. https://doi.org/10.1521/psyc.65.3.197.20174

Lysaker, P. H., Hamm, J. A., Vohs, J., Kukla, M., Pattison, M. L., Leonhardt, B. L., & Lysaker, J. T. (2018). Understanding the Course of Self-disorders and Alterations in Self- Experience in Schizophrenia: Implications from Research on Metacognition. *Current Psychiatry Reviews*, *14*(3), 160–170. https://doi.org/10.2174/1573400514666180816113159

Lysaker, P. H., Minor, K. S., Lysaker, J. T., Hasson-Ohayon, I., Bonfils, K., Hochheiser, J., & Vohs, J. L. (2019). Metacognitive function and fragmentation in schizophrenia: Relationship to cognition, self-experience and developing treatments. Schizophrenia research. Cognition, 19, 100142. https://doi.org/10.1016/j.scog.2019.100142

Lysaker, P. H., Vohs, J. L., Ballard, R., Fogley, R., Salvatore, G., Popolo, R., & Dimaggio, G. (2013). Metacognition, self-reflection and recovery in schizophrenia. *Future Neurology*, *8*(1), 103-115. https://doi.org/10.2217/fnl.12.78

Lysaker, P.H., Buck, K.D., Carcione, A., Procacci, M., Salvatore, G., Nicolò, G. & Dimaggio, G. (2011). Addressing Metacognitive Capacity in the Psychotherapy for Schizophrenia: A conceptual model of the key tasks and processes. *Psychology and Psychotherapy: Theory, Research and Practice*, *84*, 58-69. https://doi.org/10.1348/147608310X520436

McGorry, P. D. (2015). Early Intervention in Psychosis. *Journal of Nervous & Mental Disease*, *203*(5), 310–318. https://doi.org/10.1097/NMD.0000000000000284

Morrison, A. P., Pyle, M., Byrne, R., Broome, M., Freeman, D., Johns, L., James, A., Husain, N., Whale, R., MacLennan, G., Norrie, J., Hudson, J., Peters, S., Davies, L., Bowe, S., Smith, J., Shiers, D., Joyce, E., Jones, W., Hollis, C., … Maughan, D. (2021). Psychological intervention, antipsychotic medication or a combined treatment for adolescents with a first episode of psychosis: the MAPS feasibility three-arm RCT. *Health Technology Assessment*, *25*(4), 1–124. https://doi.org/10.3310/hta25040

Morrison, A., Renton, J., Dunn, H., Williams, S., & Bentall, R. (2003). Cognitive Therapy for Psychosis: A Formulation-Based Approach (1st ed.). Routledge. https://doi.org/10.4324/9780203493465

Peralta, V., & Cuesta, M. J. (1994). Psychometric properties of the positive and negative syndrome scale (PANSS) in schizophrenia. *Psychiatry research*, *53*(1), 31–40. https://doi.org/10.1016/0165-1781(94)90093-0

Popolo, R., MacBeth, A., Lazzerini, L., Brunello, S., Venturelli, G., Rebecchi, D., Morales, M. F., & Dimaggio, G. (2021). Metacognitive interpersonal therapy in group versus TAU + waiting list for young adults with personality disorders: Randomized clinical trial. *Personality disorders*. https://doi.org/10.1037/per0000497

Safran, J. D., & Muran, C. (2000). *Negotiating the Therapeutic Alliance: A Relational Treatment Guide*. Guilford.

Salvatore, G., Buonocore, L., Ottavi, P., Popolo, R., & Dimaggio, G. (2018). Metacognitive Interpersonal Therapy for Treating Persecutory Delusions in Schizophrenia. *American Journal of Psychotherapy*, *71*(4), 164–174. https://doi.org/10.1176/appi.psychotherapy.20180039

Salvatore, G., Lysaker, P. H., Gumley, A., Popolo, R., Mari, J., & Dimaggio, G. (2012). Out of illness experience: metacognition-oriented therapy for promoting self-awareness in individuals with psychosis. *American Journal of Psychotherapy*, *66*(1), 85–106. https://doi.org/10.1176/appi.psychotherapy.2012.66.1.85

Salvatore, G., Lysaker, P. H., Popolo, R., Procacci, M., Carcione, A., & Dimaggio, G. (2012). Vulnerable self, poor understanding of others' minds, threat anticipation and cognitive biases as triggers for delusional experience in schizophrenia: a theoretical model. *Clinical Psychology & Psychotherapy*, *19*(3), 247–259. https://doi.org/10.1002/cpp.746

Semerari, A., Carcione, A., Dimaggio, G., Falcone, M., Nicolò, G., Procacci, M., & Alleva, G. (2003). How to evaluate metacognitive functioning in psychotherapy? The metacognition

assessment scale and its applications. *Clinical Psychology & Psychotherapy*, *10*, 238-261. https://doi.org/10.1002/cpp.362

Silverstein, S. M., & Bellack, A. S. (2008). A scientific agenda for the concept of recovery as it applies to schizophrenia. *Clinical Psychology Review*, *28*(7), 1108–1124. https://doi.org/10.1016/j.cpr.2008.03.004

Simonsen, S., Popolo, R., Juul, S., Frandsen, F. W., Sørensen, P., & Dimaggio, G. (2021). Treating Avoidant Personality Disorder with Combined Individual Metacognitive Interpersonal Therapy and Group Mentalization-Based Treatment: A Pilot Study. *The Journal of Nervous and Mental Disease*. https://doi.org/10.1097/NMD.0000000000001432

Trauelsen, A. M., Gumley, A., Jansen, J. E., Pedersen, M. B., Nielsen, H.-G. L., Trier, C. H., Haahr, U. H., & Simonsen, E. (2016). Metacognition in first-episode psychosis and its association with positive and negative symptom profiles. *Psychiatry Research*, *238*, 14–23. https://doi.org/10.1016/j.psychres.2016.02.003

Vohs, J. L., Leonhardt, B. L., James, A. V., Francis, M. M., Breier, A., Mehdiyoun, N., Visco, A. C., & Lysaker, P. H. (2018). Metacognitive Reflection and Insight Therapy for Early Psychosis: A preliminary study of a novel integrative psychotherapy. *Schizophrenia Research*, *195*, 428–433. https://doi.org/10.1016/j.schres.2017.10.041

Vohs, J. L., Lysaker, P. H., Liffick, E., Francis, M. M., Leonhardt, B. L., James, A., Buck, K. D., Hamm, J. A., Minor, K. S., Mehdiyoun, N., & Breier, A. (2015). Metacognitive Capacity as a Predictor of Insight in First-Episode Psychosis. *Journal of Nervous & Mental Disease*, *203*(5), 372–378. https://doi.org/10.1097/NMD.0000000000000291

Yung, A. R., Yuen, H. P., McGorry, P. D., Phillips, L. J., Kelly, D., Dell'Olio, M., Francey, S. M., Cosgrave, E. M., Killackey, E., Stanford, C., Godfrey, K., & Buckby, J. (2005). Mapping the onset of psychosis: the Comprehensive Assessment of At-Risk Mental States. *The Australian and New Zealand journal of psychiatry*, *39*(11-12), 964–971. https://doi.org/10.1080/j.1440-1614.2005.01714.x

Table 1.

Sample characteristics.

Characteristics	***n = 23***
Mean age in years (*SD*)	16.2 (1.3)
Gender (%)	
Male	13 (56,5)
Female	10 (43,5)
DUP in months (*SD*)	14.2 (9.7)
Highest level of education (%)	
Secondary	11 (45.8)
Further	12 (54.2)
Living arrangements (%)	
Living with parent(s) and/or siblings	19 (82.6)
Living in supported accommodation	3 (13)
Living with other family member(s)	1 (4.4)
Psychosis ICD-10 diagnosis	19 (82.6)
At-risk mental state for psychosis	4 (17.4)
Comorbid ICD-10 diagnosis	
None	16 (69.6)
One comorbid disorder	6 (26.1)
Two comorbid disorders	1 (4.3)

DUP = duration of untreated psychosis; ICD-10 = International Classification of Diseases, Tenth Revision.

Table 2.

Magnitude of change in the study outcomes.

Measure	Baseline (*n*=23)	Posttreatment (*n*=21)	*t*–value	*p*–value	*d*–value (95% CIs)
QPR score	44.5 (9.15)	56.45 (7.10)	4.86	<0.01**	1.46 (1.06, 2.04)
PANSS scores					
Positive	21.32 (4.13)	18.31 (4.71)	2.24	0.03**	0.68 (0.45, 1.00)
Negative	16.71 (3.62)	13.94 (4.28)	2.31	0.03**	0.72 (0.48, 1.05)
Disorganised	20.16 (4.68)	17.61 (3.57)	2.04	0.05*	0.61 (0.40, 0.90)
Excitement	17.20 (3.21)	15.71 (4.66)	1.22	0.23	0.37 (0.21, 0.57)
Emotional distress	25.14 (4.15)	18.75 (6.90)	3.68	<0.01**	1.12 (0.79, 1.59)
Total	73.90 (9.71)	61.12 (12.25)	3.81	<0.01**	1.16 (0.83, 1.64)
MAS–A scores					
Self-reflectivity	4.03 (0.81)	4.96 (0.87)	3.67	<0.01**	1.11 (0.45,1.72)
Others	2.54 (0.72)	2.92 (0.78)	1.68	0.10	0.51 (-0.10, 1.10)
Decentration	0.95 (0.79)	1.17 (0.71)	0.97	0.34	0.29 (-0.31, 0.88)
Mastery	3.08 (0.60)	3.90 (0.65)	4.35	<0.01**	1.85 (1.15, 2.56)
Total	10.60 (2.56)	12.95 (2.74)	2.94	<0.01**	0.87 (0.25, 1.49)

*p<.05 **p<.01 MAS–A=Metacognition Assessment Scale–Abbreviated; PANSS=Positive and Negative Syndrome Scale; QPR=Questionnaire about the Process of Recovery.