Original

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Brief day hospital mentalization based group psychotherapy for schizophrenia spectrum disorders: A feasibility study

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Background. Mentalization-based therapy (MBT), a manualized psychodynamically and developmentally oriented psychotherapy, has been proven effective in controlled studies in non-psychotic patients with severe mental disorders. Although MBT is currently being used to treat schizophrenia spectrum disorders (SSD), to date no prospective studies have evaluated outcomes and treatment-related adverse effects. Brief mentalization-based group psychotherapy (B-MBGT) is a 12-week program based on the explicit mentalizing techniques of MBT. The study was conducted at a day hospital (DH) and the main objective was to examine the feasibility of B-MBGT to treat patients with SSD.

Method. Open study to assess the safety of B-MBGT in 72 patients who met DSM-IV criteria for schizophrenia, schizophreniform disorder, schizoaffective disorder, or unspecified psychotic disorder. All patients underwent both B-MBGT and Integrated Psychological Therapy (IPT). Consequently, a secondary aim was to compare these two therapies in terms of acceptance and subjective efficacy.

Results. Adverse reactions were scarce and the most common of the reported ones, discomfort during the group treatment session, was considered mild in most cases. Compared to IPT, B-MBGT yielded significant higher scores on four subjective efficacy parameters.

Conclusion. B-MBGT in DH is both feasible and safe in SSD patients and most patients in this study considered B-MBGT to be beneficial. Controlled studies are needed to determine the effectiveness of B-MBGT.

Keywords: Schizophrenia, Psychosis, Psychotherapy, Mentalization, Social Cognition, Adverse Effects

Psicoterapia de grupo breve basada en la mentalización en hospital de día para trastornos del espectro esquizofrénico: Un estudio de viabilidad

Introducción. La terapia basada en la mentalización (TBM), una psicoterapia manualizada de orientación psicodinámica y en la teoría del desarrollo, ha demostrado efectividad en estudios controlados en pacientes con trastornos mentales graves no psicóticos. Aunque la TBM se utiliza en el tratamiento de los trastornos del espectro esquizofrénico (TEE), hasta la fecha no se han realizado estudios prospectivos para evaluar los resultados y los efectos adversos. La terapia de grupo breve basada en la mentalización (B-TGBM) es un programa de 12 semanas basado en las técnicas de mentalización explícita de la TBM. El estudio se realizó en un hospital de día (HD) y el objetivo principal fue examinar la viabilidad de la B-TGBM en pacientes con TEE.

Método. Estudio abierto para evaluar la seguridad de la B-TGBM en 72 pacientes que cumplían criterios DSM-IV de esquizofrenia, trastorno esquizofreniforme, trastorno esquizoafectivo o trastorno psicótico no especificado. Todos los pacientes realizaron B-TGBM y terapia psicológica integrada (IPT). Consecuentemente, un objetivo secundario fue comparar la aceptación y la eficacia subjetiva de estas dos terapias.

Resultados. Las reacciones adversas fueron escasas y la más común de las registradas, malestar durante la sesión de grupo, se consideró leve en la mayoría de los casos. Comparada con la IPT, la B-TGBM presentó puntuaciones significativamente superiores en cuatro de los parámetros de eficacia subjetiva.

Conclusión. La B-TGBM en HD es viable y segura en pacientes con TEE y la mayoría de los pacientes en este estudio la consideraron beneficiosa. Se necesitan estudios controlados para determinar la efectividad de la B-TGBM.

Palabras clave: Esquizofrenia, Psicosis, Psicoterapia, Mentalización, Cognición Social, Efectos Adversos.

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INTRODUCTION

Schizophrenia, one of the world's top ten leading causes of disability, is a complex disorder, which involves "the most basic functions that give the normal person a feeling of individuality, uniqueness and self-direction"[1]. Variation in the incidence and prevalence of schizophrenia between populations is greater than was once believed[2]. Several studies have shown that prevalence of schizophrenia range from 4 to 7 per 1000[3]. Research also has revealed a reverse association between social stability and cohesiveness and non-affective psychosis[4].

Antipsychotic drugs are usually the first line of treatment for schizophrenia and use of these medications is associated with lower mortality rates, especially suicide, and these drugs are effective in preventing relapse[2,5,6]. Nonetheless, available evidence shows that disability among patients with schizophrenia has changed little over the past century, despite the availability of medications that reduce psychotic symptoms in most patients[7]. For this reason, interest in adjunctive non-pharmacological treatments is growing.

In recent years, several different lines of investigation in neuroscience have found that schizophrenia is a disorder of the 'social brain'[8]. Disorders of the 'social brain' include the negative symptoms "asociality" and "avolition", abnormal cortical activation patterns during social tasks, and deficits in social cognition and social skills[9]. Social cognition appears to be an independent construct[10] that is different from positive symptoms and only partially accounted for by negative symptoms and neurocognitive impairment[2]. Social cognition is a multifaceted construct that refers to the cognitive ability to perceive, interpret, and generate responses to social interactions[11].

Research on social cognition in schizophrenia has shown that social cognitive deficits constitute a persistent feature of the disorder that remain present throughout the course of schizophrenia even when patients receive clinically effective psychopharmacological and psychosocial treatment[2,12]. On the other hand, impairments in social cognition are closely associated with poor social and community functioning in schizophrenic patients[2,10,13].

Over the last 10 years, a number of specific treatment programs have been designed to directly address the social cognition impairments in people with schizophrenia[14,15]. The approach used by these specific programs depends on how the impairments in social cognition are conceptualized: 1) quantitatively as "deficits" secondary to inabilities or restricted abilities and, therefore, they apply social cognitive remediation techniques[14]. 2) qualitatively as "dysfunctions" or imbalances secondary to poor performance of existing abilities. What all dysfunction models share is their special focus on the thinking process rather than on the content of thinking itself (i.e. the accuracy of thoughts and beliefs) in order to stimulate the capacity to think about thinking—the metacognitive or mentalizing capacity[15].

Mentalizing is a form of social cognition that allows us to perceive and interpret human behavior in terms of intentional mental states[16]. Mentalization based treatment (MBT) is a time-limited treatment which structures interventions that promote the further development of mentalizing. Although MBT was initially developed for borderline personality disorders (BPD), there is growing recognition that mentalization deficits can occur across all severe psychological disorders[17], including schizophrenia spectrum disorders (SSD)[18-20]. It has been increasingly recognized that individuals with SSD may present disturbances in thinking abilities related to awareness of the self and others[21]. This hypothesis has received support from studies showing early impairments in mentalizing along the psychosis continuum[17,22,23]. Moreover, growing evidence links mentalizing imbalances to core psychotic symptoms and to social dysfunction in people with SSD[22,24]. MBT for psychotic disorder (MBT-P) is a time-limited treatment that fosters the development of mentalizing in patients with non-affective psychotic disorders[17,19]. Multiple case reports have documented the value of this treatment approach[17,18,21,24] which it is currently being evaluated in a RCT[19].

Our group has developed a brief mentalization-based group psychotherapy (B-MBGT) based on our previous experience in developing a psychotherapeutic program to treat patients with severe personality disorders[25,26]. We also carried out an observational, ambispective study to assess a 12-week B-MBGT program in a sample of patients with severe psychotic disorders. The findings from that open study, in which 81% of the patients met DSM-IV criteria for SSD, yielded preliminary evidence suggesting that B-MBGT might be safe and feasible in individuals with schizophrenia[27].

Lately, awareness of the importance of early assessment of new psychotherapy approaches has been growing, especially to determine whether these are safe or "harmful" for patients[28-30]. The purpose of the present feasibility study was to examine prospectively the safety, acceptance, and perceived subjective benefits of B-MBGT in a sample of patients diagnosed with SSD.

MATERIAL AND METHODS

Study and design

This was a descriptive, prospective, observational study. Patients diagnosed with schizophrenia spectrum disorders

participated in a 12-week B-MBGT program. The primary aims of the study were to assess the safety, acceptance and subjective efficacy of this therapy. Given that all patients underwent both B-MBGT[15,27] and Integrated Psychological Therapy[31] (IPT) simultaneously, a secondary aim of this study was to compare these two therapies in terms of patient acceptance and subjective efficacy.

The study was conducted at a day hospital (DH) which is part of the public mental health network in the metropolitan area of Barcelona (Spain). The study was approved by the local ethics committee (CEIC-Parc de Salut Mar Barcelona), and all patients signed an informed consent form.

Participants and procedure

The initial study sample (n=101) was selected from all consecutive patients diagnosed with SSD and admitted to the DH from April 2014 to November 2017. The DH offers a 4-month treatment plan for these patients. Treatment is delivered from Monday through Friday on an outpatient basis. Patients are admitted to the DH unless they present grossly disorganized behavior, severe suicide risk, daily substance intoxication or withdrawal symptoms, or severe antisocial behavior. In addition to psychopharmacologic treatment, patients admitted to the DH may be offered a range of group therapies, including B-MBGT and IPT. However, patients are excluded from participating in group therapy if they meet any of the following conditions: a) have any previously-scheduled activities (job or vocational rehabilitation, part-time job, etc.) that would interfere with participation; b) fail to attend and tolerate 2-3 weeks of structurally low-demand activities conducted at the beginning of the DH stay (welcoming group, good morning group, health workshop, etc.); c) have insufficient knowledge of the Spanish language

Inclusion criteria for this study were as follows: 1) non-affective psychotic disorder according to the Mini-International Neuropsychiatric Intervieterview[32] (MINI); 2) DSM-IV[33] criteria for schizophrenia, schizophreniform disorder, schizoaffective disorder (SAD), or unspecified psychotic disorder (schizophrenia spectrum); and 3) participation in both the B-MBGT and the IPT. Exclusion criteria were: a) severe (>6) poverty of speech as defined in the PANNS[34] and/or b) severe (>5) conceptual disorganization as defined in the Brief Psychiatric Rating Scale[35]. Patients who did not meet criteria for SSD also participated in both groups (B-MBGT and IPT) but were excluded from the present study. All patients were assessed by a referral therapist by means of a clinical interview in accordance with the DSM-IV criteria. The assessment protocol included the MINI[32], a sociodemographic survey (Table 1), a questionnaire on adverse events (Table 2), and a modified questionnaire on perceived inter-

vention benefit[36] (this questionnaire was not available in five cases). Of the initial sample of 101 patients, seventeen refused to participate in any therapeutic activities —they implemented an intensive outpatient psychiatric treatment lasting from 15-45 days— nine had already planned other activities at the same time and day of the week that the B-MBGT was conducted and three patients were excluded: in two cases, due to exclusion criteria a, and in one case due to exclusion criteria b. Thus, the final sample included 72 patients. Thirty-four (47.2%) patients met schizophrenia criteria, 3 (4.2%) schizophreniform disorder criteria, 23 (31.9%) schizoaffective disorder and 12 (16.7%) unspecified psychotic disorder.

The proportion of SAD was higher than would be expected[3]. Inasmuch as a post-hoc analysis was carried out to assess significant differences between, schizophrenia (SCZ) group (schizophrenia, schizophreniform disorder and unspecified psychotic disorder) and SAD group, in terms of baseline demographic and clinical characteristics and also in terms of adverse reactions, acceptance and subjective efficacy.

Intervention

B-MBGT is a group psychotherapy technique based on MBT, a manualized psychodynamically and developmentally oriented psychotherapy developed by Bateman and Fonagy[16,20] that combines individual and group therapy. Mentalization is a multidimensional construct that is organized around four polarities, one of which involves explicit vs implicit mentalization[20]. Explicit mentalization is conscious, verbal, and reflective; it requires attention, intention, awareness, and effort[16,37]. By contrast, implicit or automatic mentalization is nonconscious, nonverbal, and unreflective. The therapy assessed in this study, which has been described in detail elsewhere[27], is based on the explicit mentalizing techniques and the exercises included in the MBT manual[16]. The B-MBGT is a weekly course lasting 50 minutes per session for a maximum of 12 sessions (weeks). The maximum number of patients per group is 10 (usually 6-8 patients per group). Supervision is provided in weekly sessions of up to 45 minutes. Group therapists have extensive psychotherapeutic experience in public hospitals. They also have training in AFNCCF MBT for BPD, and one of them is Certified Practitioner.

IPT is an effective and evidence-based comprehensive treatment for psychotic patients. For the purposes of this study, we used the "cognitive differentiation" as well as the "verbal communication" subprograms[31,38]. IPT group therapists also have extensive psychotherapeutic experience.

Table 1	Demographic and clinical characteristics of patients							

Variable	Total (SSD) (n=72)		SCZ (n=49)		SAD (n=23)		X²	p
	n	%	n	%	n	%		
Male	40	55.6	30	61.2	10	43.5	1.34	0.247
Female	32	44.4	19	38.8	13	56.5		
Never married	50	69.4	38	77.6	12	52.2	4.75	0.093
Living arrangements							12.85	0.002
With family of origin	46	63.9	38	77.6	8	34.8		
With his/her own family	10	13.9	5	10.2	5	21.7		
Alone	16	22.2	6	12.2	10	43.5		
Employment							5.34	0.254
Employed	7	9.7	3	6.1	4	17.4		
Unemployed	33	45.8	25	51.0	8	34.8		
Statutory sick pay	3	4.2	1	2.0	2	8.7		
Disability Pension	23	31.9	15	30.6	8	34.8		
Income Support	6	8.3	5	10.2	1	4.3		
Education							1.30	0.861
College graduate	5	6.9	3	6.1	2	8.7		
High school	15	20.8	9	18.4	6	26.1		
Job training	9	12.5	7	14.3	2	8.7		
Primary school graduate or less	43	59.7	30	61.2	13	56.5		
Psychiatric inpatient admission								
Latest 12 months	53	73.6	33	67.3	20	87.0	2.17	0.141
Lifetime	61	84.7	39	79.6	22	95.7	2.00	0.157
Compulsory (latest 6 months)	29	40.3	19	38.8	10	43.5	0.20	0.903
Any substance use disorder								
Current	23	31.9	16	32.7	7	30.4	0.00	1.000
Lifetime	34	47.2	23	46.9	11	47.8	0.00	1.000
	Mean	SD	Mean	SD	Mean	SD	t or z	p
Age	35.9	10.2	34.9	10.1	38.3	10.1	-1.33	0.187
Number of psychiatric admissions								
Latest 12 months	1.1	1.2	1.0	1.2	1.3	1.0	-1.71	0.088
Lifetime	3.6	4.4	2.9	4.1	5.1	4.7	-2.65	0.008

SSD: Schizophrenia spectrum disorder; SCZ: Include Schizophrenia, schizophreniform disorder and unspecified psychotic disorder; SAD: Schizoaffective disorder; X2: Chi-square statistics; SD: Standard Deviation; t: t-Test value; z: z Ratio; p: p value

Table 2	Outcome variables. Safety (n=72)			
	Adverse event		**Adverse reaction**	
Event	**n**	**%**	**n**	**%**
Psychiatric inpatient admission	2	2.8	0	0.0
Emergency Room visit	2	2.8	0	0.0
Suicide attempt	1	1.4	0	0.0
Self-injury	0	0.0	-	-
Antipsychotic dose changes (UN)	5	6.9	0	0.0
Pharmacological dose changes (UN)	9	12.5	1	1.4
Clinical consultation (UN)	23	31.9	3	4.2
DH discharge (UN)	5	6.9	0	0.0
Discharge of the MBGT	1	1.4	1	1.4
Leaving the group session	5	6.9	4	5.6
Reporting discomfort in the session	19	26.4	18	25.0

DH: Day hospital; UN: Unexpected

Outcome variables and data sources

The main outcome variable in the present study was patient safety. Safety was assessed according to the guidelines of the Spanish Agency of Drugs and Health Care Products[39]. A list of potential undesirable events that might occur during the B-MBGT was drawn up (Table 2). One week after each session, all undesirable events experienced by patients (defined as an "adverse event") were recorded on the ad hoc questionnaire. These events were then assessed by the referring therapist and/or the treating psychiatrist to determine whether the event could have been therapy-related (defined as an "adverse reaction"). In addition, the group therapists were questioned to further assess the event. Any discrepancy was resolved by consensus decision. The criteria for differentiating an adverse event from an adverse reaction have been described previously[27]. All adverse events and reactions were attributed to B-MBGT and registered both as dichotomous variables (present or absent) and as count variables (number of events).

A second outcome variable was acceptance of the B-MBGT, which was evaluated according to the following three factors: 1) number of premature withdrawals from the group, 2) number of patients expressing an explicit desire to withdraw from the group, and 3) frequency and number of absences from the group therapy sessions. Subjective effica-

cy was evaluated after all group therapy sessions had been completed using a modified questionnaire on perceived intervention benefit developed by Moritz and Woodward[36]. Patient acceptance and subjective efficacy for the two treatments (B-MBGT and IPT) were compared.

Statistical analysis

The SPSS program (v. 25.0) was used for the statistical analysis. Count and continuous variables were described as means with standard deviation (SD) (count variables were also described as median and range), and categorical variables as absolute frequencies and percentages. All values were calculated, except when expressly indicated, with reference to the total sample. The McNemar's test for correlated proportions was used to compare acceptance in SSD patients who attended both group therapy modalities. The Wilcoxon signed-rank test was used to compare acceptance (as a count variable) and subjective efficacy in these patients. Demographic and clinical group differences (SCZ vs SAD) were compared using chi-square statistics with Yates correction. The Mann–Whitney U test was used to compare acceptance (as a count variable) and subjective efficacy between the two diagnostic groups. Values of $p<0.05$ were considered significant.

To calculate the sample size for estimating the proportion of adverse events we used the following formula:

$$ss = \frac{Z^2 * (p) * (1-p)}{c^2}$$

Z = Z value (1.96 for 95% confidence level)

p = percentage picking a choice, expressed as decimal (5%=0.05)

c = confidence interval, expressed as decimal (5%=0.05)

For a confidence level of 95%, a confidence interval of 5% and an expected proportion of 5%, 73 patients were needed according to the aforementioned formula.

RESULTS

Sample description

The demographic and clinical profile of the total sample is provided in Table 1. Notably, only 9.7% of the patients had been employed in the 6 months prior to admission. A little less than two-thirds (59.7%) of patients had not completed

high school. Almost three quarters (73.6%) of patients in the study required psychiatric hospitalization during the previous year and 40.3% of participants required compulsory psychiatric hospitalization in the last 6 months. The average number of lifetime hospitalizations was 3.6 admissions/patient (SD=4.4; median=2; range=0-23). Comorbid substance use disorder was present in 31.9% of patients.

Most people with schizophrenia (SCZ) were living with their family of origin while 43.5% of patients with SAD lived alone. No significant between-diagnostic group differences (SCZ vs SAD) were present in terms of baseline clinical variables, with a single exception; in SAD group the average number of lifetime hospitalizations (median=4; range=0-19) was higher than in SCZ group (median=1; range=0-23) (Table1).

Outcome variables

Thirty-seven patients (51.4%) experienced an adverse event during the study (Table 2); however, there was sufficient evidence in only 21 cases (29.2%) to suspect that this event might be therapy-related (i.e., an adverse reaction). The average number of adverse events was 1.4 events/patient (SD=1.9; median=1; range=0-8) and the average number of adverse reactions was 1.3 reactions/patient (SD= 0.6; median=1; range=0-3). Of all the adverse events assessed, only four —unexpected pharmacological dose changes (1.4%) or clinical consultation (4.2%), leaving the group session (1.4%) and discomfort during the group session (25.0%)— were considered adverse reactions (Table 2). The most common adverse reaction was discomfort during the group session (18 patients, 25.0%), but in most of the cases (15 patients, 83.3% of patients reporting discomfort) the discomfort was considered only mild. No significant between-diagnostic group differences (SCZ vs SAD) in the rate of adverse reactions were observed.

In terms of therapy acceptance, only one (1.4%) patient dropped out due to B-MBGT and three (4.2%) of the patients who received IPT dropped out. One patient (1.4%) reported a desire to withdraw from the B-MBGT and 5 (6.9%) expressed a desire to leave the IPT group during the "cognitive differentiation" subprogram (notably, all five of these patients had at least a high school education) (Table 3). Ten patients (13.9%) left the DH ahead of schedule, but this was unrelated to participation in the B-MBGT or the IPT group.

A little less than three quarters (70.8%) of patients missed at least one B-MBGT session, but in most cases, the absence was not B-MBGT-specific but rather because the patient did not come to the DH that particular day; there was only sufficient evidence to suspect that the absence from the session was therapy-related in 5 patients (6.9%). As it mentioned above, all patients underwent both B-MBGT

and IPT; no significant between-group differences (B-MBGT vs IPT) were present in terms of missed sessions (Table 3). On the other hand, no significant between-diagnostic group differences (SCZ vs SAD) were present in terms of missed sessions.

Mean scores on the perceived intervention benefit questionnaire (Table 4) were significantly higher for B-MBGT than IPT on four subjective efficacy parameters (resistance, boring, useful to daily routine and recommend to others); IPT score significant better on applicability in everyday life (Figure 1). No significant between-diagnostic group differences (SCZ vs SAD) in subjective efficacy parameters were observed.

DISCUSSION

The main aims of the present study were to determine the safety, patient acceptance, and subjective efficacy of B-MBGT. The results indicate that this therapy is safe and well-accepted by patients with SSD, both for people suffering from SCZ and SAD. Most patients also believed that the therapy was beneficial. Importantly, these results were obtained in a sample of patients with clinically severe non-affective psychotic disorders: a large majority of participants (84.7%) had been hospitalized at least once since diagnosis and 40.3% of them had required compulsory psychiatric hospitalization in the last 6 months. A large proportion (47.2%) of patients had comorbid substance use disorders and only 9.7% were employed in the last 6 months.

In order to obtain a better understanding of the potential harmful effects of B-MBGT, we registered all undesirable events (regardless of their potential cause) and attributed all of these adverse events and reactions to B-MBGT, even though it is highly unlikely that all events would be due to this treatment. This very conservative approach was justified because in most drug tolerance studies, classifying an adverse event as an adverse reaction is not a straightforward decision. Nevertheless, even using this methodology, the incidence of undesirable events that might indicate significant clinical worsening (e.g., hospital admission, psychiatric emergency, suicidal behavior and self-injury, and unexpected antipsychotic dose changes) was very low and none of these events were considered adverse reactions (Table 2). Although more than 30% of all patients experienced an undesirable event that suggested a slight change in clinical condition (e.g., unexpected clinical consultation and unexpected changes in prescribed medications), only four (5.6%) of these events was considered an adverse reaction.

The main adverse reaction was discomfort during the group session (25%), which mostly occurred secondary to cognitions or images evoked, or in relation to the theme for

| Table 3	Outcome variables. Acceptance: B–MBGT vs IPT (n=72)					
	B–MBGT		**IPT**			
Variable	**n**	**%**	**n**	**%**	**D**	**p**
Discharge of the B–MBGT	1	1.4	3	4.2	2.78	0.50
Desire to leave the group	1	1.4	5	6.9	5.55	0.13
Missing group sessions	51	70.8	53	73.6	2.78	0.50
1 session	17	23.6	19	26.4	2.78	0.50
2 sessions	17	23.6	14	19.4	4.17	0.25
3 sessions	10	13.9	10	13.9	0.00	1.00
≥ 4 sessions	7	9.7	10	13.9	4.17	0.25
	Mean	**SD**	**Mean**	**SD**	**Z**	**p**
Number of missing group sessions	1.6	1.4	1.7	1.6	-1.79	0.07
	Median	**Range**	**Median**	**Range**		
Number of missing group sessions	1	0-6	1	0-7		
D: Difference between the proportions (expressed as a percentage); SD: Standard Deviation; Z: Wilcoxon signed-rank test; p: p value						
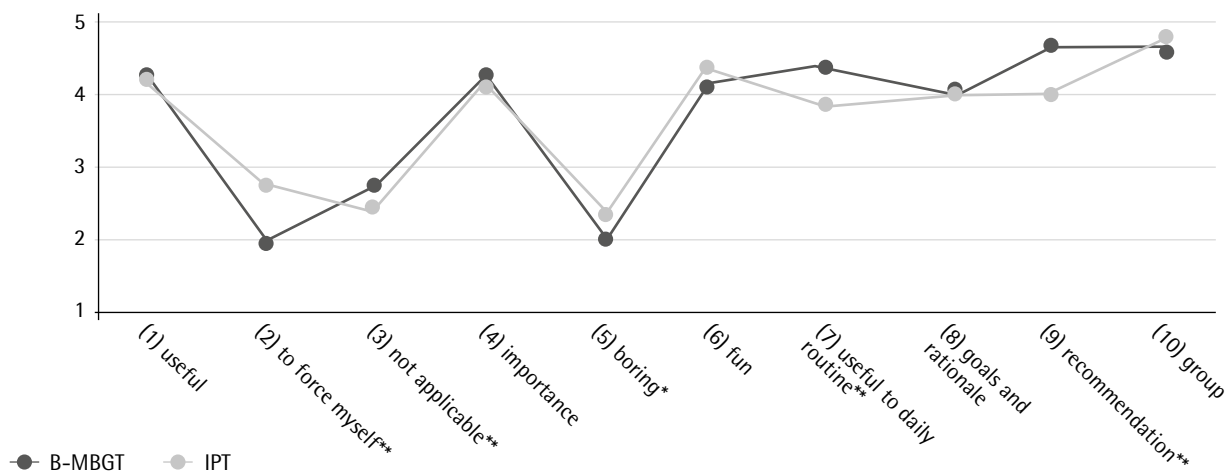
| Figure 1 | B–MBGT vs IPT (intervention benefi)) (*p<0.05; **p<0.01) |

a given session. This proportion is much higher than the one we found in our previous pilot study[27] (7.3%) in which these data were collected retrospectively and constitutes the main difference, although not the only one, between both studies. Nevertheless, even when discomfort was reported, in most cases (83.3%), it was only mild, and, except in one case, patients were able to regulate their emotions without aban-

doning the group session. The aim of mentalization-based group therapy is to engage patients in a dialogue to foster and maintain mentalizing in the context of stressful interpersonal interactions[40]. However, it is important that this dialogue be conducted in a more controlled way than in other interpersonal group therapies, mainly due to the type of patient. As Karterud[40] points out "groups composed of

Table 4	Comparison of the perceived intervention benefit: B–MGBT vs IPT (n=67*)			
	B–MBGT (mean, SD)	IPT (mean, SD)	Z	p
1. The group was useful and sensible.	4.2 (0.5)	4.2 (0.7)	–0.40	0.69
2. I had to force myself to go to the group regularly.	2.0 (1.0)	2.7 (1.2)	–3.93	0.00
3. In every-day life, I do not apply the lessons learned.	2.8 (1.0)	2.4 (1.0)	–3.10	0.00
4. The group was an important part of my treatment.	4.2 (0.9)	4.1 (0.8)	–0.31	0.76
5. I would have liked to spend the time doing something else.	2.0 (0.9)	2.3 (1.0)	–2.25	0.02
6. The training was fun.	4.1 (0.6)	4.3 (0.9)	–1.87	0.06
7. A lot of what I learned during group is useful to my daily routine.	4.3 (0.6)	3.7 (1.1)	–3.57	0.00
8. The goals and rationale of the group were clear to me.	3.9 (1.0)	3.9 (1.1)	–0.91	0.36
9. I would recommend the group to others.	4.6 (0.6)	4.0 (1.1)	–3.44	0.00
10. I found it beneficial that mentalization/IPT was administered in a group.	4.6 (0.5)	4.6 (0.5)	–1.21	0.23
TOTAL	41.0 (3.8)	39.4 (5.7)	–1.53	0.13

*The questionnaire was not available in five cases; Z: Wilcoxon signed-ranks test

people with severe psychopathology, when left to themselves with regard to means and ends, tend to alternate between chaos and pseudomentalizing" and, consequently, members of such groups will often be emotionally overwhelmed. For this reason, the group therapist should take control of the group by creating a predictable structure, which is exactly what we do in B-MBGT.

B-MBGT was well-accepted by the patients. Although a substantial proportion (70.8%) of participants missed at least one session, in most cases this was because the patient was absent from the DH for the entire day, thus indicating that the absence was not B-MBGT-specific. The two most common reasons for missing a session were 1) the need to process social benefits and 2) clinical instability. The policy at our center during the first weeks of admission to the DH is not to exclude patients from attending the center, even those with clinical instability that could negatively impact their ability to attend the DH every day and/or to arrive on time. As a consequence of this policy, it is not unusual—especially during the first few weeks—for some patients to be absent from the DH at least once per week. There were no significant between-group differences (B-MBGT vs IPT) in terms of acceptance, nor does between-diagnostic group (SCZ vs SAD).

In terms of subjective efficacy, participants in this study perceived B-MBGT to be at least as helpful as group IPT, even though B-MBGT was superior to IPT on four subjective efficacy parameters (Figure 1). This result is of interest be-

cause IPT is an evidence-based comprehensive treatment originally developed for schizophrenia patients[31]. Interestingly, participants found IPT more applicable in every-day life than B-MBGT; however, they found that learning during B-MBGT was more useful for their daily life than during IPT. How to explain this supposed contradiction? It may be that the neurocognitive remediation exercises are perceived to have an immediate practical application while the reflection on the social interactions or on oneself that promotes the B-MBT is perceived as more useful for the difficulties of daily life. Despite the positive patient perceptions of B-MBGT, subjective measures such as this can by no means be considered a proxy for the results of a randomized controlled trail (RCT). All the same, the promising findings of the present feasibility study suggest that further research into the B-MBGT approach for schizophrenia spectrum disorders is warranted.

Given that, social cognitive deficits remain present even with optimal pharmacotherapy and psychotherapy[12,13] new treatment strategies are needed. However, two key aspects should be considered in developing any new treatment approach: 1) both the neurobiological and psychosocial mechanisms underlying SSD need to be accounted for, and 2) to assure the economic viability of the intervention, the psychotherapy program should be brief and efficient in order to improve scalability for widespread implementation[15,41,42].

Metacognitive or mentalization deficits (two closely-related terms often used interchangeably[19,43,44] although only

mentalizing links decrements in reflectivity with disturbed attachment[13]) has been linked with poorer function and outcomes in several key domains independent of neurocognitive deficits and symptoms in persons with schizophrenia (for revision, see Brent & Fonagy[17], Debbanne et al.[23] and Lysaker et al.[45]). On the other hand, mentalizing deficiencies may complicate the development of a therapeutic alliance and treatment engagement[46]. Some authors have suggested that changes in mentalizing capacity could lead to improvements in one of the most elusive and subjective aspects of recovery: one's self-experience[13,24]. Understanding the subjective experiences of persons with schizophrenia is consistent with the recovery movement as well as the movement for person centered interventions; both of them see the therapy as a personal process that transcends clinical recovery[13,47,48]. B-MBGT is not only a brief therapy based on mentalizing it is also a manualized treatment specifically adapted to the clinical and neurocognitive characteristics of patients with SSD[27].

Research has revealed a strong association between social fragmentation and deprivation and incidence of psychosis[4]. These and others markers of social disadvantage have been associated with childhood trauma[49]. Interestingly, available data suggest that MBT could be especially useful in a particular subgroup of people with schizophrenia: those with a history of child abuse by their caregivers[21]. Although our capacity for mentalizing is, to a certain extent, "prewired", this capacity is a developmental achievement and is dependent on the extent to which our early and later attachment relationships fosters a focus on internal mental states[50]. We do not propose a model of SSD based solely on environmental risk factors for this subgroup of patients. Our aim is rather to highlight the importance of the gene-environment interactions during the development.

The main strength of the present study is that the data were collected as part of usual health care processes and very few patients were excluded, thus reinforcing the external validity of the study. The main limitation is related to the day hospital setting, in which patients receive several different therapies (psychoeducation, social skills training, occupational therapy, etc.). Consequently, both the benefits and the adverse reactions observed in a day hospital could be attributed to any of the therapies implemented. For that reason, the study protocol attributed all adverse events to B-MBGT but even in this demanding scenario, the incidence of them was low. On the other hand, this is not a randomized controlled trial. The main aim of this observational study was to assess the subjective efficacy of this therapeutic technique in order to gain experience and improve the manualization of the therapy. Finally, we cannot fully guarantee that the low rate of adverse reactions (i.e., the safety) associated with B-MBGT would be the same in an outpatient setting which lacks the structured, safe environment provided by the DH. Therefore, although the incidence of adverse reactions with B-MBGT was low in the present setting, it would be advisable to take certain precautions[51] before administering this therapy in an outpatient setting. The most important precaution would be to require that all patients are clinically stable (i.e., no changes in treatment during the prior 8-12 weeks, except for benzodiazepines or dose reductions related to the positive clinical course) prior to enrolment.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest.

ACKNOWLEDGEMENTS

REFERENCES

1. World Health Organization (WHO). The ICD-10 Classification of Mental and Behavioural Disorders: Clinical Descriptions and Diagnostic Guidelines. Geneva: WHO; 1992.
2. Galletly C, Castle D, Dark F, Humberstone V, Jablensky A, Killackey E et al. Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for the management of schizophrenia and related disorders. Aust New Zeal J Psychiatry. 2016;50(5):410-72.
3. Grupo de trabajo de la Guía de Práctica Clínica sobre la E y el TI. Guía de Práctica Clínica Sobre La Esquizofrenia y El Trastorno Psicótico Incipiente. Madrid: Ministerio de Sanidad y Consumo; 2009.
4. Jongsma HE, Gayer-Anderson C, Lasalvia A, Quattrone D, Mulè A, Szöke A, et al. Treated Incidence of Psychotic Disorders in the Multinational EU-GEI Study. JAMA Psychiatry. 2018;75(1):36-46.
5. National Institute for Health and Care Excellence. Psychosis and Schizophrenia in Adults: Treatment and Management. London; March 2014.
6. Tiihonen J, Tanskanen A, Taipale H. 20-Year Nationwide Follow-Up Study on Discontinuation of Antipsychotic Treatment in First-Episode Schizophrenia. Am J Psychiatry. 2018;175(8):765-73.
7. Green MF, Kern RS, Braff DL, Mintz J. Neurocognitive deficits and functional outcome in schizophrenia: are we measuring the "right stuff"? Schizophr Bull. 2000;26(1):119-36.
8. Burns J. The social brain hypothesis of schizophrenia. World Psychiatry. 2006;5(2):77-81.
9. Mehta UM, Thirthalli J, Aneelraj D, Jadhav P, Gangadhar BN, Keshavan MS. Mirror neuron dysfunction in schizophrenia and its functional implications: A systematic review. Schizophr Res. 2014;160(1-3):9-19.
10. Wölwer W, Combsb DR, Frommann N PD. Treatment Approaches with a Special Focus on Social Cognition: Overview and Empirical Results. In: Roder V MA, ed. Neurocognition and Social Cognition in Schizophrenia Patients. Basel: Karger; 2010. p. 61-78.
11. Kern RS, Horan WP. Definition and Measurement of Neurocognition and Social Cognition. In: Roder V MA, ed. Neurocognition and Social Cognition in Schizophrenia Patients. Basel: Karger; 2010. p. 1-23.

12. Addington J, Addington D. Facial affect recognition and information processing in schizophrenia and bipolar disorder. Schizophr Res. 1998;32(3):171-81.

13. Lysaker PH, Kukla M, Belanger E, White DA, Buck KD, Luther L, et al. Individual Psychotherapy and Changes in Self-Experience in Schizophrenia: A Qualitative Comparison of Patients in Metacognitively Focused and Supportive Psychotherapy. Psychiatry. 2015;78(4):305-16.

14. Combs DR, Drake E, Basso MR. Chapter 10 – An Overview of Social Cognitive Treatment Interventions. In: Social Cognition and Metacognition in Schizophrenia. 2014. p.163-78.

15. Lana F, Cruz MA, Pérez V, Martí-Bonany J. Social Cognition Based Therapies for People with Schizophrenia: Focus on Metacognitive and Mentalization Approaches. In: Steggles G, ed. Schizophrenia Treatment. Dover, USA: SM Group Open Access eBooks; 2016. p. 1-15.

16. Bateman A, Fonagy P. Mentalization-Based Treatment for Borderline Personality Disorder. Oxford: Oxford University Press; 2006.

17. Brent BK, Fonagy P. A Mentalization-Based Treatment Approach to Disturbances of Social Understanding in Schizophrenia. In: Lysaker P, Dimaggio G BM, eds. Social Cognition and Metacognition in Schizophrenia. London: Elsevier; 2014. p. 245-59.

18. Debbané M, Benmiloud J, Salaminios G, Solida-Tozzi A, Armando M, Fonagy P et al. Mentalization-Based Treatment in Clinical High-Risk for Psychosis: A Rationale and Clinical Illustration. J Contemp Psychother. 2016;46(4):217-25.

19. Weijers J, ten Kate C, Eurelings-Bontekoe E, Viechtbauer W, Rampaart R, Bateman A, et al. Mentalization-based treatment for psychotic disorder: protocol of a randomized controlled trial. BMC Psychiatry. 2016;16(1):191.

20. Bateman AW, Fonagy P. Mentalization-Based Treatment for Personality Disorders. A Practical Guide. Oxford: Oxford University Press; 2016.

21. Brent B. Mentalization-based psychodynamic psychotherapy for psychosis. J Clin Psychol. 2009;65(8):803-14.

22. Fett A-KJ, Viechtbauer W, Dominguez M-G, Penn DL, van Os J, Krabbendam L. The relationship between neurocognition and social cognition with functional outcomes in schizophrenia: A meta-analysis. Neurosci Biobehav Rev. 2011;35(3):573-88.

23. Debbané M, Salaminios G, Luyten P, Badoud D, Marco Armando M, Solida-Tozzi A, et al. Attachment, Neurobiology, and Mentalizing along the Psychosis Continuum. Front Hum Neurosci. 2016;10:406.

24. Brent BK, Holt DJ, Keshavan MS, Seidman LJ, Fonagy P. Mentalization-based treatment for psychosis: linking an attachment-based model to the psychotherapy for impaired mental state understanding in people with psychotic disorders. Isr J Psychiatry Relat Sci. 2014;51(1):17-24.

25. Lana F, Sánchez-Gil C, Ferrer L, López-Patón N, Litvan L, Marcos S et al. Effectiveness of an integrated treatment for severe personality disorders. A 36-month pragmatic follow-up. Rev Psiquiatr Salud Ment. 2015;8(1):3-10.

26. Lana F, Sanchez-Gil C, Adroher N, Pérez V, Feixas G, Josep Martí-Bonany J, et al. Comparison of treatment outcomes in severe personality disorder patients with or without substance use disorders: a 36-month prospective pragmatic follow-up study. Neuropsychiatr Dis Treat. 2016;12:1477-88.

27. Lana F, Marcos S, Mollà L, Vilar A, Pérez V, Romero M, et al. Mentalization Based Group Psychotherapy for Psychosis: A Pilot Study to Assess Safety, Acceptance and Subjective Efficacy. Int J Psychol Psychoanal. 2015;1(1):2-6.

28. McKenna P, Kingdon D. Has cognitive behavioural therapy for psychosis been oversold? BMJ. 2014;348:g2295.

29. Barlow DH. Negative effects from psychological treatments: A perspective. Am Psychol. 2010;65(1):13-20.

30. Bateman AW. Treating Borderline Personality Disorder in Clinical Practice. Am J Psychiatry. 2012;169(6):560-3.

31. Roder V, Mueller DR, Brenner HD, Spaulding WD. Integrated Psychological Therapy IPT for the Treatment of Neurocognition, Social Cognition, and Social Competency in Schizophrenia Patients. Boston: Hogrefe Publishing; 2010.

32. Sheehan D V, Lecrubier Y, Sheehan KH, Amorim P, Janavs J, Weiller E, et al. The Mini-International Neuropsychiatric Interview (M.I.N.I.): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. J Clin Psychiatry. 1998;59(Suppl 20):22-33.

33. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (4th Ed.). Washington, DC: APA; 1994.

34. Peralta Martín V, Cuesta Zorita MJ. [Validation of positive and negative symptom scale (PANSS) in a sample of Spanish schizophrenic patients]. Actas Luso Esp Neurol Psiquiatr Cienc Afines. 1994;22(4):171-7.

35. Overall J, Gorham D. The brief psychiatric rating scale. Psychol Rep. 1962;10(6):799-812.

36. Moritz S, Woodward TS. Metacognitive Training for Schizophrenia Patients (MCT): A Pilot Study on Feasibility, Treatment Adherence, and Subjective Efficacy. Ger J Psychiatry. 2007;10:69-78.

37. Fonagy P, Luyten P. A developmental, mentalization-based approach to the understanding and treatment of borderline personality disorder. Dev Psychopathol. 2009;21(04):1355-81.

38. Roder V, Mueller DR, Mueser KT, Brenner HD. Integrated psychological therapy (IPT) for schizophrenia: is it effective? Schizophr Bull. 2006;32 Suppl 1(Suppl 1):S81-93.

39. Agencia Española de Medicamentos y Productos Sanitarios. Información Para Las Notificaciones de Sospechas de Reacciones Adversas a Medicamentos Por Parte de Profesionales Sanitarios. Madrid; 2015.

40. Karterud S. Mentalization- Based Group Therapy (MBT-G) A Theoretical, Clinical, and Research Manual. Oxford: Oxford University Press; 2015.

41. Lana F, Sanchez-Gil C, Perez V, Martí-Bonany J. A stepped care approach to psychotherapy in borderline personality disorder. Ann Clin psychiatry. 2016;28(2):140-1.

42. Geddes JR, Miklowitz DJ. Treatment of bipolar disorder. Lancet. 2013;381(9878):1672-82.

43. Lysaker PH, Buck KD, Carcione A, Procacci M, Salvatore G, Dimaggio G. Addressing metacognitive capacity for self reflection in the psychotherapy for schizophrenia: A conceptual model of the key tasks and processes. Psychol Psychother. 2011;84(1):58-69.

44. Ridenour J, Knauss D, Hamm JA. Comparing Metacognition and Mentalization and Their Implications for Psychotherapy for Individuals with Psychosis. J Contemp Psychother. 2019;49:79-85.

45. Lysaker PH, Hillis J, Leonhardt BL, Kukla Marina, Buck KD. Metacognition in Schizophrenia Spectrum Disorders: Methods of Assessment and Associations with Psychosocial Function, Neurocognition, Symptoms, and Cognitive Style. In: Lysaker PH, Dimaggio G, Brüne M, eds. Social Cognition and Metacognition in Schizophrenia: Psychopathology and Treatment Approaches. London: Academic Press; 2014. p.99-114.

46. Brent BK. A Mentalization-Based Approach to the Development of the Therapeutic Alliance in the Treatment of Schizophrenia. J Clin Psychol. 2015;71(2):146-56.

47. Davidson L, O'Connell M, Tondora J, Styron T, Kangas K. The Top Ten Concerns About Recovery Encountered in Mental Health

System Transformation. Psychiatr Serv. 2006;57(5):640-5.

48. Davidson L, Roe D. Recovery from versus recovery in serious mental illness: One strategy for lessening confusion plaguing recovery. J Ment Heal. 2007;16(4):459-70.

49. Lee C, Coe CL, Ryff CD. Social Disadvantage, Severe Child Abuse, and Biological Profiles in Adulthood. J Health Soc Behav. 2017;58(3):371-86.

50. Luyten P, Fonagy P. The neurobiology of mentalizing. Personal Disord. 2015;6(4):366-79.

51. González-Isasi A, Echeburúa E, Mosquera F, Ibáñez B, Aizpuru F, González-Pinto A. Long-term efficacy of a psychological intervention program for patients with refractory bipolar disorder: a pilot study. Psychiatry Res. 2010;176(2-3):161-5.