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Efficacy of a combined intervention program for the reduction of internalized stigma in people with severe mental illness

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ABSTRACT

Background: Internalized stigma (IS) is a key factor in the recovery, quality of life and functioning of people with severe mental illness (SMI), and effective intervention programs are needed to reduce IS in all its dimensions. The aim of this report was to design and evaluate the effectiveness of a new psychological intervention group program for the reduction of IS in people with SMI.

Methods: A 9-session hands-on intervention program was designed with a group format in which different therapeutic techniques were combined. To evaluate the effectiveness of the program, 80 people with SMI and high levels of IS were selected and randomly assigned to one of two groups: program ($n = 41$, experimental group) or conventional treatment ($n = 39$, control group).

Results: Mixed analysis of variance showed improvements in total IS and all of its dimensions (cognitive, emotional and behavioral) ($p \leq 0.01$) and in depressive symptomatology ($p = 0.01$) in the experimental group after the treatment phase.

Conclusion: The results indicate that the program effectively reduces IS and its dimensions as well as other relevant associated variables in a sample of people with SMI.

1. Introduction

People with severe mental illness (SMI), in addition to dealing with the characteristic symptoms of this illness, face stigma in many forms (Rüsch et al., 2005). Structural stigma (referring to laws and institutions) and social stigma (stereotyped beliefs, negative feelings and discriminatory behaviors of the general population) restrict the rights and opportunities of people with SMI, leading to rejection in the social environment and favoring exclusion, social inequality and discrimination when seeking a job or housing (Livingston and Boyd, 2010; Corrigan and Watson, 2002). When people with SMI internalize this social stigma, internalized stigma (IS) is produced. Internalizing the stigma is a subjective process that involves the acceptance and application to oneself of the negative stereotypes of mental illness.

In this way, the described dimensions are in continuous interaction, perpetuating the phenomenon. From our point of view, the fight against stigma must take place in all dimensions, with programs and campaigns focused on the social context, as well as individual programs that support people to own their status and defend their rights. In the present work, with a clinical point of view, we focus on the individual dimension centering on internalized stigma.

There are 3 dimensions of IS: 1) cognitive, which corresponds to stereotypes as knowledge structures, for example, "*people with SMI are incompetent*"; 2) emotional, which refers to prejudice and emotional reactions derived from existing stereotypes, for example, a lack of trust in one's own ability; and 3) behavioral, which comprises self-discrimination behaviors, such as abandoning activities or isolation (Corrigan and Watson, 2002).

IS has been the subject of many studies to date because it is prevalent in people with SMI and has a substantial negative impact on recovery processes (Boyd et al., 2014; Brohan et al., 2010). Specifically, high levels of IS are associated with low levels of self-esteem and self-efficacy (Werner et al., 2008; Fung et al., 2007), a lower quality of life and poorer well-being and general health (Sibitz et al., 2011; Han and Kim, 2018; Pearl et al., 2017), worse psychosocial functioning (Muñoz et al., 2011), and an increase in depressive and anxious symptomatology in this population group (Sibitz et al., 2011, Han and Kim, 2018, Pearl et al., 2017, Muñoz et al., 2011; Lysaker et al., 2010); IS is also associated with a greater severity of psychiatric symptoms characteristic of SMI (Livingston and Boyd, 2010). Furthermore, hope and recovery expectations are lower in people with high self-stigma (Muñoz et al., 2011; Lysaker et al., 2010), which results in seeking help less frequently and lower adherence to treatments (Tsang et al., 2010).

Given the negative consequences in the lives of people with SMI, several psychological intervention programs have been designed to reduce IS. The therapeutic strategies used in these programs include

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psychoeducation (Çuhadar and Çam, 2014; Fung et al., 2011; Yanos et al., 2011), the development of coping skills (Fung et al., 2011; Yanos et al., 2011; Lucksted et al., 2011) and cognitive restructuring (Díaz-Mandado et al., 2015; Yanos et al., 2011). Additionally, as described in the literature, there are programs that provide alternative views to the aforementioned traditional approach, focusing on the importance of self-revelation (Morrison et al., 2016) or working from the perspective of narratives (Yanos et al., 2011; Russinova et al., 2014). However, newer interventions based on third-generation therapies, such as mindfulness and acceptance and commitment therapy (ACT), have been delivered with good results, implying a change in the approach to the problem (Yılmaz and Kavak, 2018; Luoma et al., 2008). Notably, in most of the interventions, different conventional therapeutic strategies, such as psychoeducation, cognitive restructuring and the development of coping skills, are combined; however, at present, there are no programs described in the literature that apply or combine alternative techniques, such as ACT or mindfulness, with the aforementioned conventional strategies.

In efficacy studies that have employed rigorous methodology, such as controlled and randomized clinical trials, there are programs that reduce some dimensions of IS (Russinova et al., 2014; Díaz-Mandado et al., 2015; Wood et al., 2016; Yanos et al., 2015; Mittal et al., 2012; Corrigan et al., 2015; Morrison et al., 2016) and target other related recovery variables, such as self-esteem and adherence to psychosocial treatment (Fung et al., 2011), recovery expectations (Morrison et al., 2016), and depressive symptomatology (Corrigan et al., 2015; Morrison et al., 2016).

1.1. Aims of the study

The aim of this study was to design and evaluate the efficacy of a new intervention program in which various therapeutic strategies with proven efficacy are combined, with the goal of reducing IS and all of its dimensions (cognitive, emotional and behavioral) while simultaneously achieving improvement in other relevant clinical and psychosocial recovery variables.

2. Methods

2.1. Design

This study was a controlled clinical trial. The assignment of the participants to the groups was random. The participants in the control group received only conventional treatment ($n = 39$), based on psychotherapeutic attention mixed with the attendance to a variety of activities focus in the sociocommunitarian integration and occupational therapy, and those assigned to the experimental group received, in addition to conventional treatment, the IS reduction treatment program *"Self-affirmation, Stigma and Revelation"*.

The evaluation, which consisted of a battery of validated instruments, was carried out individually and applied during 2 different periods: prior to starting the program and one week after the end of the intervention.

2.2. Treatment protocol

The intervention program for the reduction of IS, "*Self-affirmation, Revelation and Stigma*", is a 9-session structured and hands-on group intervention (5–8 persons per group), with each session lasting one and a half hours.

2.2.1. Treatment manual

Developed by our research group, the treatment manual includes a guide for therapists to explain the purpose and meaning of each session. For each of the 9 sessions, the objectives to be met, the procedure and the content are specified. In addition, the manual describes and provides instructions for the different activities that must be carried out and includes supporting material for the therapist and different worksheets and homework for the group attendees.

2.2.2. The program

The program is applied by a psychologist with experience in the intervention, and in 5 of the 9 sessions, a cotherapist helps to ensure the reliability of the program. Additionally, a peer acts as a facilitator in session 8, in which the main therapist is present only as an aide.

The sessions in the program always have the same structure: introduction to the session, review of the homework, session content, homework and closure. In terms of content and structure, the program is composed of 6 blocks, which correspond to different therapeutic objectives.

2.2.3. First block. (Session 1)

The aim of the first block is to increase the knowledge of the participants concerning concepts related to stigma associated with SMI through psychoeducational strategies. As homework, participants must identify an example of social and internalized stigma.

2.2.4. Second block. (Session 2–3)

The aim of the second block is to question and replace distorted beliefs related to SMI using cognitive restructuring. Emphasis is placed on dispelling certain myths about mental health as participants are taught the A-B-C model and work through Socratic dialogue. As homework, the participants must ask some close persons about certain ideas related to stigma to refute them.

2.2.5. Third block. (Session 4)

The third block complements the cognitive restructuring techniques using strategies derived from ACT, such as cognitive defusion, the use of metaphors and mindfulness, so that the person learns to relate from acceptance of and distancing from negative thoughts and thoughts that are resistant to cognitive restructuring, either by their nature of reality or recurrence. As homework, the participants must record some of their negative thoughts and the strategy to eliminate them. Additionally, the participants are provided a mindfulness record if they want to use it as a strategy.

2.2.6. Fourth block. (Session 5)

The main objective of the fourth block is to increase self-esteem and set personal life goals, favoring empowerment and the performance of valuable roles. Through psychoeducation and the use of metaphors, participants are encouraged to identify their positive qualities as well as achievement-oriented goals and how to carry them out. As homework, the participants have to write some good qualities of themselves that they or others have observed and try to put in practice an action to achieve one of their goals.

2.2.7. Fifth block. (Session 6–8)

The aim of the fifth block is for people to develop adaptive coping strategies in the face of the stigmatizing social situations experienced, with an emphasis on strategies to make one's own mental illness known. Sessions 6 and 7 are dedicated to identifying feared situations, learning assertive responses and searching for social support. Exposure to these situations is initially achieved through role playing and behavioral trials, encouraging participants to face the feared situations in real life when they are prepared. As homework, the participants must identify feared and discriminatory situations and try to face them if they feel ready with a strategy that they consider useful.

Session 8 is dedicated only to disclosure or not about the mental illness and how to implement it. This session is based on an adaptation of Corrigan's *Honest, Open, Proud* program (Corrigan et al., 2015), which as in the original program, is facilitated by a peer. As homework, the

participants must write their own story and decide whether they want to disclose to someone.

Reviewing the homework in this final session, we are able to support those people who expose themselves to their feared situations, as well as those who decide to disclose their mental illness, also serving as role models.

2.2.8. Sixth block. (Session 9)

As the last session of the program, the aim of the sixth block is to maintain achievements and provide an overview of the results.

2.3. Study population

The participants were recruited through the Social Care and Rehabilitation Network from the centers where they usually went for treatment. All participants met the following inclusion criteria: age between 18 and 67 years; severe and lasting mental illness (schizophrenia, manic-depressive disorder, severe and recurrent depression, paranoia and other psychoses) with disabilities and difficulty in community integration; and high IS levels above average in some dimensions.

The exclusion criteria were presentation with acute psychotic symptoms, severe cognitive impairment, and manic and/or agitated states that prevented the completion of the evaluation or intervention protocol.

The sample size was calculated by G-Power: $N = 84$, $\alpha = 0.05$, effect size = 0.2 (repeated measures ANOVA, within/between factors). After contacting 167 individuals, 43 were excluded because they did not meet the inclusion criteria, and 44 refused to participate; therefore, the final sample size was 80 people.

The assignment of the participants to the groups was random. The participants in the control group received only conventional treatment ($n = 39$), and those assigned to the experimental group received, in addition to conventional treatment, the IS reduction treatment program "*Self-affirmation, Stigma and Revelation*" ($n = 41$).

2.4. Variables and instruments

Next, the variables and instruments with which the participants were measured are detailed.

2.4.1. Internalized stigma

Total IS and its different dimensions (emotional, cognitive and behavioral) were considered. To evaluate IS, the *Internalized Stigma of Mental Illness Scale* (ISMI) (Ritsher et al., 2003) was used in its Spanish version (González-Domínguez et al., 2018). This scale comprises 29 items with Likert-type responses rated from 1 to 4 (strongly agree to totally disagree.) The items are grouped into 5 factors: alienation (emotional dimension), stereotyping (cognitive dimension), social isolation (behavioral dimension), perceived discrimination and stigma resistance. This scale is widely used for evaluating IS and has been translated into many languages with multiple adaptations (Boyd et al., 2014, González-Domínguez et al., 2018); in our study, the scale had a high reliability (internal consistency, $\alpha = 0.94$).

2.4.2. Subjective recovery

Subjective recovery includes the perceptions and expectations of the people affected by an illness concerning their own recovery process. This variable was evaluated using the *Recovery Assessment Scale* (RAS) (Corrigan et al., 2004). Specifically, a short version of this scale was used and was previously used in a similar population (Tsang et al., 2016) (internal consistency, $\alpha = 0.89$).

2.4.3. Self-esteem

Self-esteem was evaluated with the *Rosenberg Self-Esteem Scale (RSES)* (Rosenberg, 1965) This instrument uses a scale of 0–30 where a score <15 may indicate problematic low self-esteem (internal consistency, $\alpha = 0.90$).

2.4.4. Social functioning

Social functioning was evaluated with the isolation, interpersonal communication, and prosocial behavior subscales of the *Social Functioning Scale (SFS)* (Birchwood et al., 1990). A self-administered questionnaire that consists of 76 items is widely used in this population (internal consistency, $\alpha = 0.66$).

2.4.5. Quality of life

Quality of life was evaluated using *Baker's Satisfaction with Life Domains Scale* (SLDS) (Baker and Intagliata, 1982), which is an instrument that is easy to apply and brief and is one of the most widely used to evaluate quality of life in people with SMI, especially with schizophrenia (Carlson et al., 2009)) (internal consistency $\alpha = 0.86$).

2.4.6. Well-being and general health

Well-being and general health were evaluated using the short version of the *General Health Questionnaire* (GHQ-12) (Goldberg and Hillier, 1979). This is a screening device for identifying minor psychiatric disorders in the general population and within community or nonpsychiatric clinical settings such as primary care or general medical outpatients. The reliability in our study sample had an internal consistency of $\alpha = 0.88$.

2.4.7. Depressive symptomatology

Depressive symptomatology was evaluated using the short version of the *Center for Epidemiologic Studies Depression Scale, Brief version (CES-D),* a screening test of 20 items for depression and depressive disorder (Kohout et al., 1993). The reliability of the scale in our sample had Cronbach's $\alpha = 0.79$.

2.4.8. Social anxiety

Social anxiety was evaluated using the *Interaction Anxiousness Scale (IAS)* (Leary, 1983), a 15-item self-report measure that evaluates anxiety experienced in social interactions. The reliability of the scale in our study sample was an internal consistency of $\alpha = 0.86$.

2.4.9. Psychiatric symptoms

Psychiatric symptoms were evaluated using the *Clinician-Rated Dimensions of Psychosis Symptom Severity APA, 2013* (Barch et al., 2013). This instrument is an 8-item measure that assesses the severity of mental health symptoms that are important across psychotic disorders, including delusions, hallucinations, disorganized speech, abnormal psychomotor behavior, negative symptoms (*i.e.*, restricted emotional expression or abolition), impaired cognition, depression, and mania. The internal consistency of the scale in our study sample was $\alpha = 0.90$.

2.5. Statistical analysis

To ensure the absence of significant differences in the main variables between the control and experimental groups prior to the intervention, differences tests were performed using Chi-square statistics for categorical variables and Student's *t*-test for continuous variables.

For the analysis of the efficacy of the intervention, a 2×2 mixed group analysis of variance (ANOVA) (group x measurement time) was performed for each outcome variable. The effect of the interaction between the groups and the time of the evaluation was studied as an indicator of the efficacy of the treatment. In those measurements in which significant differences were observed in the interaction of the main effects, *post hoc* contrast tests were performed using the Bonferroni correction to correct the multiple comparisons and to isolate the effect of the program on the results and determine if the improvements in the results over time were related to the program intervention or to the conventional treatment.

All the statistical analyses in this study adopted a level of significance of 0.05 and were carried out using the statistical program SPSS version 20.0 (SPSS, 2012).

3. Results

3.1. Description of the sample

Adherence to treatment was assessed by the percentage of attendance at program sessions. If a person did not attend at least 6 of the 9 sessions, it was assumed that he or she had not completed the intervention. The average attendance of those who completed the intervention program was 7.88 sessions (SD = 1.10). In relation to the sociodemographic characteristics of the sample, 38.8% were women and 61.8% were men. The mean age of the total group was 46.94 years (SD = 10.74), with the mean age of the men being 47.04 years (SD = 8.9) and that of the women being 46.77 years (SD = 13.32). The duration of illness, expressed as the mean number of years since the onset of symptoms, of the total sample was 23 (SD = 1.089). The duration of clinical treatment, according to the average number of years from first contact with the Mental Health Department, was 18.95 (SD = 10.60), and psychosocial treatment, according to the average number of years from first contact with the Social Care Network, was 8.01 (SD = 5.82).

Table 1
Demographic and clinic characteristics of samples ($N = 80$).

	N (%)
Gender	
Female	31 (38.8%)
Male	49 (61.2%)
Civil status	
Single	64 (80%)
Married	1 (1.3%)
Widowed	2 (2.5%)
Separated	5 (6.3%)
Divorced	8 (10%)
Level of education	
No education	2 (2.5%)
Elementary	30 (37.5%)
Secondary education	37 (46.3%)
Some university course	6 (7.5%)
University	5 (6.3%)
Employment situation	
Unemployed	22 (27.5%)
Sheltered employment	5 (6.3%)
Temporary disability	4 (5%)
Permanent disability	48 (60%)
Student	1 (1.3%)
Diagnosis	
Psychotic disorder	63 (78.8%)
Mood disorders	4 (5.0%)
Personality disorder	12 (15%)
Obsessive-compulsive disorder	1 (1.3%)
Type of attention resource (n° of centers)	
Psychosocial Rehabilitation Center (3)	22 (27.5%)
Day center (3)	24 (30%)
Labor Rehabilitation Center (3)	12 (15%)
Community Social Support Team (2)	4 (5%)
Residence (3)	13 (16.3%)
Supervised apartment (3)	5 (6.3%)
Lifetime hospitalizations	
None	15 (18.8%)
1–4	48 (60%)
5–10	9 (11.3%)
>10	6 (7.5%)
Unknown	2 (2.5%)
	M (DT)
Age	46.94 (10.74)
Duration of the disorder	23 (10.89)
Duration of treatment	13.48 (8.21)

The remaining sociodemographic and clinical characteristics are provided in Table 1.

3.2. Baseline comparison

The Student's *t*-test and Chi-square test results, as shown in Table 2, indicate that there were no significant differences in any of the sociodemographic or clinical variables between the control and experimental groups prior to the intervention.

3.3. Effects of the psychological intervention program

The results of the mixed 2 (Group: experimental, control) x 2 (Time: pretreatment, posttreatment) ANOVAs showed a significant effect of the group x time interaction on the primary measures of total IS (F (1, 69) = 12.72; $p = 0.001$; $\eta^2_p = 0.16$) and all of its subscales, with the exception of stereotype resistance, as shown in Table 3. The results of the Bonferroni *post hoc* test (Table 4) revealed significant improvements in the measures of total IS and all of its subscales, except resistance to stigma, in the treatment group. No significant changes were observed in these variables in the control group.

Regarding the secondary measures related to recovery, a significant effect of the group × time interaction was found for the measures of depressive symptomatology (F (1, 69) = 6.21; $p = 0.01$; $\eta^2_p = 0.08$) and social anxiety (F (1, 69) = 5.36; $p = 0.02$; $\eta^2_p = 0.07$). As shown in the *post hoc* analyses, significant improvements in depressive symptomatology measures were detected in the treatment group, while no significant changes were observed in these variables in the control group. In contrast, social anxiety decreased in the control group after the intervention phase, a result that was not observed in the treatment group.

An increase in subjective recovery from the pretreatment evaluation to posttreatment in the treatment group was observed, but this trend was not significant (F (1, 69) = 2.05; $p = 0.15$; $\eta^2_p = 0.03$). However, there were no significant effects of the interaction on the other variables (self-esteem, quality of life, social functioning, general health or psychiatric symptoms).

4. Discussion

Participation in the group intervention program to reduce IS was associated with several benefits, including a significant improvement in the total IS as well as all of its dimensions (cognitive, emotional, and behavioral). This may be due to directly addressing the issue of stigma, as well as giving a broad range of strategies to participants.

However, in the resistance subscale, no statistically significant changes were found. This dimension is more related to a proactive and empowering attitude towards combating stigma, with the implication of social or political vindication actions. Our program, unlike others (Russinova et al., 2014; Corrigan et al., 2015), does not focus on these aspects, so we considered that a change in this dimension would be expected in the long term and understood rather as a personal decision and not as an effect of treatment.

Significant improvements were observed in depressive symptomatology in the group undergoing treatment; this improvement in depression may be due to the reduction of IS because both variables are highly related. In other programs, a reduction in depressive symptomatology was also observed; however, the results were limited to a portion of the study population (women) (Corrigan et al., 2015) or limited over time because improvements in follow-up were not maintained (Morrison et al., 2016). Despite the possible relationships of IS with subjective recovery and improvement in IS itself in previous studies (Çapar and Kavak, 2018; Cunningham and Lucksted, 2017), in the present study, a change was observed but not statistically significant.

On the other hand, a decrease in social anxiety symptoms was found in the control group but not in the experimental group. This may be due

Table 2
Baseline significant differences for Treatment Group *versus* Control Group.

	Treatment group ($N = 41$)	Control group ($N = 39$)	Statistic (p)
Age	45.95 ± 11.71	47.97 ± 9.67	$t = 0.84$ ($p = 0.40$)
Gender. female n (%)	12 (29.3)	19 (48.7)	$X^2 = 3.19$ ($p = 0.11$)
Civil status n (%)			$X^2 = 3.28$ ($p = 0.35$)
Single	34 (82.9)	30 (76.9)	
Married	0	1 (2.6)	
Widowed	0	2 (5.1)	
Divorced	7 (17.1)	6 (15.4)	
Level of education n (%)			$X^2 = 2.31$ ($p = 0.51$)
No education	1 (2.4)	1 (2.6)	
Elementary	17 (41.5)	13 (33.3)	
Secondary education	22 (53.7)	21 (53.8)	
University	1 (2.4)	4 (10.3)	
Employment situation n (%)			$X^2 = 8.63$ ($p = 0.07$)
Unemployed	16 (39)	6 (15.4)	
Working	1 (2.4)	4 (10.3)	
Students	1 (2.4)	0	
Temporary disability	1 (2.4)	3 (7.7)	
Permanent disability	22 (53.7)	23 (66.7)	
Duration of the disorder	23.10 ± 11.07	22.85 ± 10.84	$t = -0.10$ ($p = 0.92$)
Years in the mental health network	18.98 ± 10.42	18.92 ± 10.92	$t = -0.22$ ($p = 0.98$)
Years in the social attention network	7.20 ± 5.16	8.87 ± 6.40	$t = 1.30$ ($p = 0.20$)
Diagnoses n (%)			$X^2 = 1.97$ ($p = 0.58$)
Psychosis disorders	32 (78)	31 (79.5)	
Mood disorders	3 (7.3)	1 (2.6)	
Obsessive-compulsive disorder	0	1 (2.6)	
Personality disorder	6 (14.6)	6 (15.4)	
Number of hospitalizations n (%)			$X^2 = 3.60$ ($p = 0.31$)
None	7 (17.9)	8 (20.5)	
1–4	23 (59)	25 (64.1)	
5–10	7 (17.9)	2 (5.1)	
>10	2 (5.1)	4 (10.3)	
Type of attention resource n (%)			$X^2 = 7.34$ ($p = 0.20$)
Psychosocial Rehabilitation Centre	9 (22)	13 (33.3)	
Day centre	13 (31.7)	11 (28.2)	
Labour Rehabilitation Centre	9 (22.0)	3 (7.7)	
Community Social Support Team	1 (2.4)	3 (7.7)	
Residence	8 (19.5)	5 (12.8)	
Supervised apartment	1 (2.4)	4 (10.3)	
CPDS	5.66 ± 4.50	7.28 ± 3.23	$t = 1.86$ ($p = 0.67$)
CES-D	4.71 ± 2.83	4 ± 2.81	$t = -1.12$ ($p = 0.27$)
IAS	49.17 ± 11.10	52.64 ± 10.30	$t = 1.45$ ($p = 0.15$)
ISMI Total	2.25 ± 0.49	2.24 ± 0.47	$t = -0.09$ ($p = 0.93$)
ISMI Alienation	2.39 ± 0.61	2.42 ± 0.63	$t = 0.24$ ($p = 0.81$)
ISMI Assignment	2.01 ± 0.54	2 ± 0.45	$t = -0.19$ ($p = 0.85$)
ISMI Discrimination	2.41 ± 0.72	2.38 ± 0.71	t = −0.19 ($p = 0.85$)
ISMI Isolation	2.37 ± 0.68	2.30 ± 0.60	$t = -0.46$ ($p = 0.64$)
ISMI Non-resistance	2.11 ± 0.48	2.15 ± 0.56	$t = 0.40$ ($p = 0.69$)
RSE	27.34 ± 5.7	26.38 ± 5.98	$t = -0.73$ ($p = 0.47$)
RAS-18 Total	66.78 ± 9.34	65.31 ± 12.06	$t = -0.61$ ($p = 0.54$)
GHQ-12	12.24 ± 7.12	12.77 ± 6.88	$t = 0.34$ ($p = 0.74$)
SLDS	67.44 ± 13.57	69.95 ± 14.77	$t = 0.79$ ($p = 0.43$)
SFS Total	29.78 ± 8.74	27.51 ± 8.28	$t = -1.19$ ($p = 0.24$)

CPDS; *Clinician-Rated Dimensions of Psychosis Symptom Severity;* CES-D: *Center for Epidemiologic Studies Depression Scale. Brief version*; IAS: *Interaction Anxiousness Scale*; ISMI: *Internalized Stigma of Mental Illness Scale*; RSE*: Rosenberg Self-Esteem Scale*; RAS-18: *Recovery Assessment Scale*; GHQ-12: *General Health Questionnaire*; SLDS: *Baker's Satisfaction with Life Domains Scale*; SFS: *Social Functioning Scale.*

to the familiarity of the control group with the treatment received or to random and nonspecific effects and changes in the subjects. Participation in the program exposed the participants to stigmatizing social situations, which they often avoided before the program, providing a possible justification for not observing a decrease in social anxiety in the experimental group. This may explain why there was no immediate decrease in social anxiety in the experimental group; therefore, it is necessary for the participants to maintain the achievements obtained and experience social situations in the future.

Other variables, such as severity of symptoms, self-esteem, general health, life satisfaction and social functioning, did not show significant differences after application of the program. Perhaps changes in these variables might be observed in the long term, after people have experienced a greater number of social and/or life experiences.

In relation to the program content, we consider the combination of different strategies, sessions focused on cognitive-behavioral interventions and techniques derived from ACT, as important. This combination of strategies has been previously used in other areas and pathologies with good results (Ciarrochi and Bailey, 2008; Hallis et al., 2016). It is possible that in this way, a broader scope provides more resources to the person, and each participant can select the strategies that are most useful based on personal characteristics or specific situational demands.

Regarding the different coping strategies that the program teaches for certain stigmatizing situations, we consider it important to highlight the session based on the *Honest Open Proud* program (Corrigan et al., 2015). Outreach has shown benefits in previous studies, and we believe that having the support of a mentor allows participants to hear and share stories in the first person that promote empowerment and make visible the real possibility of recovery from the disease.

Table 3
Treatment effects.

	TIME 1 (Pre-treatment)		TIME 2 ANOVA 2 × 2 (Post-treatment)		ANOVA 2 × 2	
	Experimental	Control	Experimental	Control	Group × Time	
	M(SD)	M (SD)	M (SD)	M (SD)	F (1.69)	η_{p2}
ISMI Total	2.22 (0.47)	2.23 (0.48)	1.97 (0.41)	2.24 (0.48)	**12.72****	0.16
ISMI-Alienation	2.34 (0.61)	2.43 (0.64)	2.00 (0.52)	2.40 (0.64)	**6.94****	0.09
ISMI-Assignment	1.99 (0.52)	1.98 (0.46)	1.73 (0.48)	2.02 (0.46)	**9.30****	0.12
ISMI-Discrimination	2.35 (0.68)	2.34 (0.70)	2.08 (0.66)	2.42 (0.66)	**8.67****	0.11
ISMI-Isolation	2.35 (0.62)	2.28 (0.61)	2.07 (0.53)	2.33 (0.60)	**8.36****	0.11
ISMI-Non-resistance	2.09 (0.49)	2.16 (0.57)	2.02 (0.43)	2.09 (0.53)	0	–
CES-D	4.62 (2.64)	3.92 (2.80)	3.41 (2.29)	4.08 (2.81)	**6.21***	0.08
IAS	48.88 (10.77)	51.86 (10)	48.24 (11.02)	47.38 (10.02)	**5.36***	0.07
CDPS	5.44 (4.41)	7.27 (3.14)	5.12 (4.27)	7. 08 (3.51)	0.27	–
RSE	27.29 (5.92)	26.49 (6.11)	28.85 (4.15)	27.92 (5.16)	0.03	–
RAS-18	66.85 (9.38)	65.51 (12.36)	69.15 (8.50)	65.43 (12.62)	2.05	–
GHQ-12	11.50 (7.02)	12.76 (7.07)	10.18 (4.17)	11.95 (6.26)	0.12	–
SLDS	69.35 (13.38)	70.03 (14.60)	71.18 (12.79)	71.05 (13.76)	0.23	–
SFS	30.68 (8.54)	27.49 (8.44)	30.68 (8.96)	28.65 (8.90)	0.38	–

CPDS; *Clinician-Rated Dimensions of Psychosis Symptom Severity;* CES-D: *Center for Epidemiologic Studies Depression Scale. Brief version*; IAS: *Interaction Anxiousness Scale*; ISMI: *Internalized Stigma of Mental Illness Scale*; RSE*: Rosenberg Self-Esteem Scale*; RAS-18: *Recovery Assessment Scale*; GHQ-12: *General Health Questionnaire*; SLDS: *Baker's Satisfaction with Life Domains Scale*; SFS: *Social Functioning Scale;* * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$.; $\eta p2$ = *effect size*
The bold in the tables was used to highlight the significative results.

On the other hand, we would like to note the importance of the homework for each session. We consider that homework facilitates the continuation of what has been worked on in the program, as well as putting into practice strategies in a real environment, something that is impossible to achieve in a therapeutic environment. This has already been highlighted by other studies that establish homework as a fundamental part of the therapeutic process (Stewart and Schröder, 2015).

As the main limitation of the study, we highlight the lack of follow-up measures that show the stability of the changes obtained over time and that could perhaps show improvements in those variables that were initially nonsignificant or if anxiety levels decreased in the long term. Additionally, this would also allow us to know if those participants who finally faced their feared situations or who revealed their condition obtained better results. Another limitation is the lack of measures on which technique was most useful within the program and not knowing if any session in which specific techniques or strategies were included was more effective than the others.

In conclusion, the intervention program is a hands-on and structured group program designed to reduce IS through the combination of various therapeutic techniques, targeting the population suffering from SMI. The program effectively reduces IS and its dimensions in addition to other related variables.

Table 4
Outcome measurements for treatment group at baseline (T1) and post-intervention (T2): *post hoc* Bonferroni Test.

Variables	Grupo	F(1.69)	η_p^2
ISMI Total	experimental	**21.89*****	0.24
	control	0.075	–
ISMI-Alienation	experimental	**16.19*****	0.19
	control	0.15	–
ISMI-Assignment	experimental	**13.89*****	0.17
ISMI-Discrimination	control	0.27	–
ISMI-Isolation	experimental	**10.17****	0.13
	control	0.87	–
ISMI-Non-resistance	experimental	**11.26****	0.14
	control	0.46	–
CES-D	experimental	**9.26****	0.12
	control	0.18	–
IAS	experimental	0.30	–
	control	**15.30*****	0.18

ISMI: *Internalized Stigma of Mental Illness Scale;* CES-D: *Center for Epidemiologic Studies Depression Scale;* IAS: *Interaction Anxiousness Scale;* * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$.
The bold in the tables was used to highlight the significative results.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.schres.2019.07.010.

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