Dissemination of a Brief Psychoeducational Intervention for Bipolar Disorder in Community Mental Health Settings

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Abstract: Various efficacious psychosocial interventions for Bipolar Disorder (BD) share common elements, with psychoeducation being a main component. Recent treatment guidelines for BD recommend psychoeducation, especially when delivered in brief, cost-effective formats. Its format has several implications for the feasibility of its dissemination in the health care system. The Life Goals Program (LGP) is an evidence-based, cost-effective psychoeducational treatment for BD. Despite its demonstrated benefits for patients and the healthcare system, most patients do not have access to this type of treatment. The goal of this study is to examine the dissemination of the LGP and its effectiveness in three community mental health care centers in Quebec, Canada. A sample of 15 healthcare service providers received thorough training in the delivery of the LGP and delivered the treatment to 73 patients with BD. The treatment consisted of six 90-minute sessions described in the treatment manual with session six being repeated with a family member attending. Treatment integrity and clinical effectiveness were assessed with objective measures. The intervention was successfully implemented, with high rates of treatment fidelity and positive impacts on clinical outcomes. Patients demonstrated marked gains in knowledge about BD, increased acceptance of the illness, reductions in depressive symptoms and improvements in medication behaviors. Treatment effect sizes were moderate to large. Results show that the LGP can be successfully implemented in routine mental health settings given the brief format of the intervention, its proven cost effectiveness, and its less extensive training requirements.

Keywords: Life Goals Program, Collaborative Care, Psychosocial Treatment, Evidence-based Treatments, Psychological Treatment, Mood Disorders.

INTRODUCTION

Bipolar disorder (BD) is a severe mental illness characterized by phases of depression and mania or hypomania, affecting 2.2% of Canadians [1]. People with BD tend to experience recurrent relapses [2], and many experience substantial residual or inter-episode symptoms [3, 4]. Also frequently associated with BD are complex comorbidity [2, 5, 6], high rates of suicidality [7], high rates of service use [8, 9] and reduced quality of life [10]. The first line of treatment for BD is pharmacotherapy, including mood stabilizers, anticonvulsants and antipsychotic medications [11]. However, even with pharmacological treatment, relapse, recurrence and mood instability remain a matter of course for many patients [12]. Psychosocial interventions are therefore recommended to help patients better manage their condition and improve the course of illness. These include psychoeducation, cognitive behavioral therapy (CBT), family-focused therapy and interpersonal and social rhythm therapy.

Despite some key differences, the various psychosocial interventions for BD share many common elements [13]. Notably, all major psychosocial interventions for BD contain a psychoeducational component. Psychoeducation is offered both as a component of a larger treatment and as a stand-alone treatment for patients with BD [14]. Psychoeducation is broadly defined as the provision of information to patients regarding the nature of the illness, its treatments and coping strategies [15]. This approach has been widely tested across medical disorders, including BD [16]. Based on the success of treatment trials, psychoeducation is now recommended in the treatment guidelines for BD issued by the Canadian Network for Mood and Anxiety Treatments (CANMAT) and the International Society for Bipolar Disorders (ISBD) [17]: "*Therefore, providing psychological treatments – and, in particular, brief psychoeducation, which has been demonstrated to be as effective as CBT at a much lower cost – is an essential aspect of managing patients with BD"* (p. 4).

The availability of psychoeducational interventions in a variety of formats has several implications for the feasibility of widespread, cost-effective dissemination. For example, efficacious psychoeducational interventions vary greatly in terms of length and intensity, ranging from briefer versions consisting of 5 to 12 sessions, to longer comprehensive packages of up to 21 sessions [18-20]. The Life Goals Program

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(LGP) is a manualized psychoeducational intervention that was developed specifically for BD [21]. The LGP is a brief group treatment consisting of six 90 minute sessions focused on better understanding and managing BD and designed to be delivered by mental health nurses (Phase I). After completing this highly structured psychoeducational phase, patients have the option to continue in an open-ended group format designed to help them achieve their life goals (Phase II).

This brief group treatment has been studied extensively and applied both clinically and in research, both as part of a multicomponent collaborative care model for patients with BD [22, 23] and as a stand-alone treatment [24-29]. Research on this intervention has been promising. In fact, Phase I of the LGP (i.e., six sessions) has been demonstrated to be as effective as individual cognitive-behavioral therapy (CBT) in reducing relapse and improving course of illness in a large Canadian RCT involving 204 patients enrolled in four academic centers [29]. Furthermore, since the LGP is designed to be delivered in group format by mental health nurses, the LGP was provided in that study at a substantially lower cost per patient than individual CBT ($180 versus $1200) for similar clinical benefit.

Unfortunately, despite significant developments in the treatment of BD and promising results for the efficacy of psychoeducation, it is estimated that 52% of men and 38% of women affected by the disorder in Canada have never received treatment [1]. In fact, many scientifically sound, evidence-based treatments are not made available to the individuals who could benefit from them [30]. In a time of strained healthcare resources and heightened attention to bridging the gap between research and practice, the dissemination of evidence-based, cost-effective treatments is critical. Two studies have attempted to do this by implementing psychoeducational interventions for BD in routine mental health settings [27, 31].

In a first study, Sajatovic *et al*. implemented the LGP in a community health center in the USA [27]. One hundred and sixty four patients were randomized to either treatment as usual or the LGP plus treatment as usual. Treatment was delivered by a doctoral-level registered nurse and a master's level psychiatric counselor supervised by the study co-principal investigator. No significant differences were found between groups in medication adherence attitudes and behaviors, although participation rates in the study and attendance to LGP sessions were low. In fact, only 49% of patients attended at least four of the six LGP sessions and 37% did not participate in any session following randomization. Furthermore, no objective measure of treatment fidelity was used, raising questions as to whether the intervention was implemented as specified in the LGP manual. As noted by the authors, this result underscores the difficulty of implementing controlled trials for BD in community mental health centers.

In a second study, Candini *et al*. implemented a longer 21 session group psychoeducation intervention for BD in two Italian Departments of Mental Health [31]. The intervention was based on a program developed in Barcelona [19]. It was administered by two clinical psychologists who received intensive training on the intervention, in the form of a 5 day training program taught by one of the program's developers, and followed by an additional month of training at the Barcelona program in Spain. A total of 102 patients were entered into the study. Given that this was an effectiveness study conducted in routine clinical conditions, and for ethical reasons, patients were not randomized, but were instead entered into a 1-year wait list control group, prior to receiving the intervention. Results showed that the number of patients hospitalised during the 1-year follow-up period, the mean number of hospitalisations per patient, and the mean number of hospitalisation days was significantly lower for patients who received psychoeducation. Furthermore, 80% of patients receiving psychoeducation completed treatment and took part in all 21 sessions. The authors conclude that structured group psychoeducation can be successfully implemented in routine mental health services when delivered by specifically trained clinical psychologists.

These studies, when taken together, provide mixed results. Is psychoeducation effective when provided in longer formats like in the Candini *et al*. study [31], or is it simply less effective when patients do not actually receive most of the intervention, as in the Sajatovic *et al*. study [27]? Furthermore, both studies employed highly trained and closely supervised therapists to administer the intervention. Would these results generalize to lesser trained clinicians working in mental health settings?

In an attempt to answer these questions, we examined the dissemination of the LGP and its effectiveness in three community mental health care centers in Quebec City, Canada. Specifically, we were

interested in examining whether we could train mental health clinicians from broad professional backgrounds to successfully implement a brief group psychoeducation intervention like the LGP. We were also interested in assessing whether the LGP would still demonstrate effectiveness when administered in a less highly controlled, more naturalistic healthcare environment.

METHODS

Participants

The participants of the current study were (a) 15 clinicians selected naturalistically by the treatment sites to administer the program, and (b) 73 patients with BD who received the treatment.

Treatment Administrators

A total of 15 clinicians at three treatment sites administered the psychoeducational treatment. All 15 clinicians were female, with an average age of 40.4 years (*SD* = 11.2). Depending on the treatment site, clinicians were nurses (*n* = 2), psychologists (*n* = 2), social workers (*n* = 2), occupational therapists (*n* = 2), or community support workers (*n* = 7). Treatment administrators had an average of 12.9 years clinical experience (*SD* = 11.1). The treatment sites included one out-patient clinic in a local psychiatric hospital (training site) and two community health centers.

Patients

The patient sample included 73 individuals with BD referred to the psychoeducation program by their physicians (see Table **1**)[1]. To be eligible for the study, participants had to have (a) received a DSM-IV diagnosis of a bipolar disorder from a physician; and (b) have agreed to participate in the LGP at one of the three sites. Exclusion criteria were: (a) acute symptoms requiring immediate intervention (suicide risk, severe depression, mania); and (b) an active substance abuse problem requiring intervention. Selection criteria were intentionally inclusive in order to ensure a representative sample of the individuals who would be entered into such a treatment at a community mental health service center. Based on these basic criteria, each site was responsible for selecting its own group members, as they would be naturalistically outside of a research framework. Patient and clinician participants all completed informed consent forms prior to entering the study. This study was approved by each site's respective Research Ethics Board.

Table 1: Sociodemographic and Clinical Characteristics of Clinical Participants

Characteristic	Result
Age – *M* (*SD*)	41.4 (13.6)
Sex – *N* (%) female	53 (72.6)
Education – *N* (%)	
Secondary diploma or less	27 (37.0)
Post-secondary diploma/degree	37 (50.7)
Graduate degree	3 (4.1)
Other	3 (4.1)
Actively employed – *N* (%)	19 (26.0)
Marital status – *N* (%)	
Married/common law	36 (59.3)
Single	24 (32.9)
Widowed/separated/divorced	10 (13.7)
Hospitalizations – *N* (%)	
0	18 (24.7%)
1-2	27 (37.0%)
3-4	11 (15.1%)
5+	15 (20.5%)
Medications – *N* (%)	
Mood stabilizers	48 (65.8%)
Antidepressants	28 (38.4%)
Antipsychotics	45 (61.6%)
Anxiolytics/hypnotics	27 (37.0%)
Number of medications – *M* (*SD*)	2.7 (1.3)

Note: Percentages may not sum to 100% due to missing data and rounding.

Procedure

Training

Before the start of the study, therapists in the Quebec City area were invited to attend a one-day training session on the Life Goals Program given by authors and other colleagues. The main clinician at each of the three sites attended this hands-on workshop. All clinicians were given a copy of the program manual in its French-language version. For each treatment site, the main clinician first observed one complete group (all sessions) given at the training site (step 1). They then co-lead one group at their own site with the clinician from the training site (step 2). Afterwards, they lead one group at their site with a co-therapist from their own site (step 3). This three-step procedure was strongly recommended for the training of all new clinicians that joined in at different phases of

the study. During the training and the course of the study, clinicians had access to telephone support provided by the clinician from the training site on an as-needed basis.

Treatment

A total of seventeen psychoeducation groups were run over the course of the study at three treatment sites. Each group was co-administered by two clinicians at each site. The treatment consists of the six sessions described in the treatment manual, with session six being repeated with a family member attending as suggested in the manual, for a total of seven sessions [32, 21]. The first session is an orientation, where the program is presented, some basic information about BD is provided, and the group discusses the stigma surrounding BD. The second and third sessions focus on mania. Participants learn about the symptoms in detail, identify their own typical symptoms and early warning signs, and prepare their *Personal Mania Profile*. The fourth and fifth sessions follow the same structure as the previous two, but with a focus on depression instead of mania, and the production of a *Personal Depression Profile* to guide them in their recovery from episodes and maintenance of stability. In the sixth session, discussions focus on treatment alternatives, the importance of a healthy lifestyle, and collaboration with the treatment team, leading to the development of a *Personal Care Plan*. At the seventh session (optional in the treatment manual but mandatory in this study), participants are joined by a family member and the content of session six is reviewed in summary form. Each session is described in detail in the treatment manual and broken down into specific *Key Points* to be presented and broader *Objectives* to be achieved.

Measures

Participants provided basic sociodemographic information, and then completed a battery of questionnaires. Clinician participants completed session ratings after each session. Patient participants completed a battery of questionnaires prior to beginning treatment and after completion[2]. Like the treatment, all measures were used in their French-language formats.

Treatment Fidelity

A package of treatment compliance rating scales was developed to assess treatment fidelity. For each of the seven sessions, administrators were asked to evaluate 1) their degree of completion of the "Key Points" set out in the treatment manual, 2) their achievement of the "Objectives" in the treatment manual, and 3) their experience administering the group ("Quality of Administration"). Key Points and Objectives were extracted directly from the treatment manual, as presented in session-by-session grids in the appendix [21]. Administrators rated their completion of each Key Point on a three point scale (yes, partial, no). For the manual's Objectives, they rated completion on a five-point Likert scale (1 = not achieved, 5 = fully achieved). To assess the quality of the group administration, eight items were developed based on the treatment manual and prior group experience. Examples include administrators' ease in presenting the content, their use of standardized treatment materials, and their ability to moderate discussions, answer participants' questions, and comply with the session agenda. These items were rated on a five-point Likert scale, where a higher score indicated more successful administration. A treatment quality score was calculated as the mean of the three ratings.

Treatment Impact

Primary Outcome Measures

The *Self-Assessment for Manic-Depressive Disorders* (SAMDD) [21] is a questionnaire drawn from the LGP treatment manual to measure participants' knowledge of bipolar disorder. It contains nine items, in various formats, testing respondents on the material covered over the six sessions. Scores range from 0 to 25, a high score indicating more advanced knowledge of the disorder. The *Medication Adherence Rating Scale* (MARS) [33] is a 10 item self-report questionnaire developed from the Drug Attitude Inventory (DAI) [34] and the Medication Adherence Questionnaire (MAQ) [35]. Its questions address behaviours and attitudes about medications, as well as side effects. The MARS is valid and reliable, with a Cronbach's alpha of .75 and strong correlations with the DAI (r = .82), the MAQ (r = .79), and serum levels of the medication (r = .60). The *Emotional/Rational Disease Acceptance Questionnaire* (ERDA) [36] is a 32 item scale that measures the level of acceptance of the illness. Its items are rated on a Likert scale (0 to 4), where a higher score indicates a higher level of acceptance. The instrument has demonstrated good internal consistency (α = .93 in the original study and .88 in the current data).

Secondary Outcome Measures

The *Altman Self-Rating Mania Scale* (ASRM), developed by Altman *et al*. is a 5 item self-report scale used to measure current manic or hypomanic symptoms [37]. The items are presented in multiple choice forms and are rated from 0 to 4 based on symptom severity, a higher score indicating a greater degree of (hypo)manic symptoms. With a cut-off of six, the ASRM has a sensitivity of 93% and a specificity of 33% [38]. It is also significantly correlated with clinician-rated mania scores based on the CARS-M (r = .34). The *Beck Depression Inventory-2nd Edition* (BDI-II) is a validated measure of depressive symptoms experienced during the past two weeks [39]. It consists of 21 multiple-choice questions based on the DSM-IV criteria for depression, a higher score reflecting more severe depression. The BDI-II has strong internal consistency (α = .91) and test-retest reliability (r = .93 at one week), while responses are correlated with clinician-administered assessments of depression using the HAM-D (r = .71). The *Client Satisfaction Questionnaire* (CSQ-8) is a brief, eight-item questionnaire that evaluates clients' satisfaction with mental health services [40]. Questions are rated on a 4 point Likert scale, where a high score indicates a high level of satisfaction. The CSQ-8 has strong internal consistency (α = .92) and is highly correlated with the original long form (r = .93).

ANALYSES

First, a descriptive profile of the degree of success of program implementation is provided. Treatment fidelity was calculated as the proportion of Key Points successfully presented, the average achievement of Objectives (standardized percentage scores), and Quality of Administration (standardized percentage scores). These three scores were averaged to produce a total treatment quality score. Next, the treatment's impact on clinical participants is examined. Clinical participants' pre- and post-treatment scores are compared using paired sample t-tests, with the Cohen's d statistic as an indicator of effect size. Treatment effects are broken down by treatment site using change scores (post-test minus pre-test) and non-parametric Kruskal-Wallis tests. Analyses were conducted with SPSS-21, with significance criterion of $\alpha < .05$.

RESULTS

A total of 73 patient participants entered the study, participating in one of 17 psychoeducational groups administered by two of 15 clinicians[3]. Group and clinician characteristics are described in Table **2**. Although the initial training session was attended only by the initial start-upclinicians (26.7%), consistent with the sustainability mechanism, the majority of clinicians observed a complete group prior to administering one and all clinicians co-administered a group prior to

Table 2: Characteristics of the Three Treatment Sites and Group Administrators

Treatment Component	Total	Site 1	Site 2	Site 3
Groups administered	17	6	6	5
Participants entered	73	32	22	19
Participants per group – *M (SD)*	4.3 (1.9)	5.3 (1.6)	3.7 (1.4)	3.8 (2.6)
Treatment completion – *N* (%)	58 (79.5%)	26 (81.3%)	20 (90.9%)	12 (63.2%)
Patient satisfaction CSQ-8 – *M (SD)*	27.92 (3.51)	29.09 (2.89)	27.00 (3.96)	26.63(3.42)
Group administrators – *n*	15	3	4	8
Age	40.4 (11.17)	38.67(14.57)	52 (5.48)	35.25(8.22)
Education				
Community college diploma	6	0	0	6
University – bachelor's degree	7	2	3	2
University – graduate degree	2	1	1	0
Years' clinical experience – *M* (*SD*)	12.93 (11.09)	15.33 (12.86)	15.75 (14.24)	10.63 (9.93)
Attended initial training session – *N* (%)	4 (26.7%)	2 (67%)	1 (25%)	1 (12.5%)
Observed group prior to administering	12 (86%)	3 (100%)	4 (100%)	5 (71%)
Co-administered prior to administering	15 (100%)	3 (100%)	4 (100%)	8 (100%)

leading one as the primary clinician. The educational background of the clinicians selected by each site varied, as did the number of years of clinical experience.

Treatment Fidelity

Table **3** presents clinicians' ratings of treatment fidelity and the quality of administration of each session. As a whole, treatment fidelity was strong.

Table 3: Treatment Fidelity and Session Duration as a whole and by Treatment Site

Treatment Component	Total	Site 1	Site 2	Site 3
Session 1				
Duration (minutes)	93	93	87	102
Key points (% Yes)	97.06%	100.00%	100.00%	88.25%
Objectives	97.50%	99.17%	98.33%	93.75%
Quality of Administration	96.75%	97.00%	96.50%	96.75%
Session 2				
Duration (minutes)	96	93	89	113
Key points	100.00%	100.00%	100.00%	100.00%
Objectives	95.00%	98.83%	94.50%	90.00%
Quality of Administration	98.88%	100.00%	99.33%	96.50%
Session 3				
Duration (minutes)	109	108	108	113
Key points	96.88%	97.17%	100.00%	91.75%
Objectives	93.75%	96.00%	96.67%	86.00%
Quality of Administration	97.38%	97.67%	100.00%	93.00%
Session 4				
Duration (minutes)	101	100	93	113
Key points	100.00%	100.00%	100.00%	100.00%
Objectives	95.44%	100.00%	97.83%	85.00%
Quality of Administration	98.31%	99.33%	99.67%	94.75%
Session 5				
Duration (minutes)	104	96	110	110
Key points	99.47%	100.00%	98.67%	100.00%
Objectives	96.53%	97.33%	96.67%	94.67%
Quality of Administration	98.93%	99.67%	98.83%	97.67%
Session 6				
Duration (minutes) - *M*	128	130	133	105
Key points	75.69%	78.17%	85.33%	57.50%
Objectives	93.50%	99.33%	96.00%	81.00%
Quality of Administration	96.87%	97.83%	96.33%	96.00%
Session 7				
Duration (minutes)	131	121	152	110
Key points	84.79%	90.40%	85.67%	73.67%
Objectives	93.21%	82.20%	86.83%	97.67%
Quality of Administration	98.13%	98.50%	97.17%	99.33%
Mean Treatment Quality	95.41%	97.38%	96.40%	90.96%

Clinicians felt that they achieved greater than 90% of treatment Objectives, demonstrated greater than 90% successful administration in all seven sessions and successfully presented greater than 90% of Key Points for five sessions. However, Session 6 appears to have posed some problems, with lower fidelity rates. The average completion of the Key Points for session 6 was 75.7% across the three treatment sites. Lower fidelity rates were also observed in session 7 (repetition of session 6 with a family member), with an average completion of Key Points of 84.8%.

Examining treatment fidelity by treatment site, sites 1 and 2 demonstrated similarly high rates across the sessions. Site 1 achieved average scores of 95.3%, 98.3% and 98.6% for all Key Points, Objectives and Quality of Administration respectively across the seven sessions. At Site 2, these rates were 95.7%, 95.3%, and 98.3%. Site 3 appears to have experienced less ease with some aspects of the treatment compared to the other two sites, achieving lower average fidelity scores of 87.5% for Key Points, 89.5% for Objectives, and 96.2% for Quality of Administration. Group comparisons show that these observed differences between treatment sites were statistically significant for Key Points (p = .03) and Objectives (p = .01), but not for Quality of Administration (p = .13). Session duration averaged 106 minutes, representing an average of 16 minutes longer than the 90 minute duration projected by the treatment manual. Sessions six and seven both exceeded two hours on average (127 and 131 minutes respectively).

Treatment Impact

Among the 73 participants, 58 (79.5%) completed the treatment. Pre-post analyses are conducted on the 51 participants (70%) who completed the treatment and provided data both before and after the treatment. Pre-test and post-test results are presented in Table **4**.

Regarding *primary outcome measures*, repeated-measure *t*-tests show a significant increase in knowledge about BD after participating in the LGP, with a large effect size. Participants also demonstrated significant increases in the rational and emotional acceptance of the illness. There was a non-significant trend toward improved medication behaviours at the end of the program. In addition to these results, *secondary outcome measures* show a significant decrease in depressive symptoms, as well as a high level of patient satisfaction as reported on the CSQ-8, with a mean score of 27.92 (SD = 3.55) out of a maximum of 32. Manic symptoms remained low throughout the study and no significant changes were observed at the end of treatment.

The treatment's impact was further examined by treatment site to further explore the individual success of each site at effective implementation. There were no significant differences between the three sites for the participants' pre-treatment scores on any outcome variable. An analysis of change scores reveals a significant difference in the amount of learning about BD among the treatment sites, χ^2 (2) = 14.12, p = .001. Participants at Site 1 increased their knowledge by an average of 3.26 points (SD = 3.03) on the SAMDD, while those at Site 2 increased by an average of 1.27 points (SD = 2.40). At Site 3, clinical participants reported less learning about BD, since the post-treatment mean SAMDD score was reduced by M = 0.70 points (SD = 1.83) compared to pre-treatment scores. There was no significant difference in the treatment effect by site on any of the other patient variables (ps between .21 and .87). The proportion of participants who completed the treatment showed a trend toward a significant difference by treatment site (χ^2(2) = 4.92, p = .085), the lowest rate of completion being at Site 3.

DISCUSSION

Results of this study suggest that the Life Goals Program (LGP) manualized psychoeducational intervention for BD may be successfully disseminated into a first-line treatment environment when delivered by mental health professionals selected naturalistically within these environments and with more modest intervention training and educational backgrounds than in the original treatment trials. Uptake of the LGP was strong and subjective fidelity to the treatment manual was high, while the treatment had a positive impact for patients. These results are encouraging as the successful dissemination of a brief, cost-effective psychosocial treatment has the potential to provide substantial long-term gains for individuals with BD, as well as substantial benefits to the healthcare network [28, 29].

In terms of the treatment's impact on patients as a whole, results are consistent with previous studies on psychoeducation [14]. Patients demonstrated marked gains in knowledge about BD, as well as reductions in the symptoms of depression and improvements in medication behaviors. Furthermore, an interesting finding of this study is the intervention's possible impact

Table 4: Clinical Participant Evaluations before and after Treatment, with Significance Tests

Measure	Pre-treatment	Post-treatment	*t*	*df*	*p*	*d*
SAMDD	19.44 (2.50)	21.25 (2.82)	-4.155	47	< .001	.85
MARS – Behaviors	2.61 (1.00)	2.82 (0.95)	-1.943	48	.058	.39
MARS – Attitudes	3.18 (0.91)	3.33 (0.88)	-0.805	48	.425	.17
MARS – Side effects	1.18 (0.86)	1.24 (0.83)	-0.553	48	.583	.11
ERDA – Emotional acceptance	35.00 (13.43)	39.49 (10.38)	-2.929	46	.005	.63
ERDA – Rational acceptance	29.79 (7.75)	32.77 (7.25)	-3.022	46	.004	.63
BDI-II	18.48 (11.19)	14.66 (10.23)	3.295	49	.002	.66
ASRM	2.82 (3.33)	2.39 (3.05)	0.787	48	.435	.16

Note: SAMDD: Self-Assessment for Manic-Depressive Disorders (knowledge); ERDA: Emotional and Rational Disease Acceptance questionnaire; MARS: Medication Adherence Rating Scale; BDI-II: Beck Depression Inventory 2nd Edition; ASRM: Altman Self-Rating Mania Scale.

on disease acceptance. Since high levels of self-stigma among individuals with BD are associated with a more severe course of illness [41], an intervention that increases the acceptance of the illness may hold potential for reducing self-stigma and gradually improving outcome.

These positive results add to those observed in several open studies [24-26, 28] and in one large RCT showing the effectiveness of the LGP as a stand-alone treatment [29], but are at odds with the negative results obtained by Sajatovic *et al*. [27]. One striking difference between that study and others is the low overall participation rates, with only 49% of patients attending at least four of the six LGP sessions and 37% not participating in any session following randomization. As noted by the authors, there appeared to be a progressive increase in effect size with LGP participation (four sessions or more), indicating that participants who participate adequately in the intervention are the ones who will have the greatest benefit. This was indeed the case in other studies using the LGP with treatment completer rates ranging from 64% to 82%. These rates are also similar to the Candini *et al*. study [31], with 80% of patients completing a longer course of psychoeducation.

Despite positive treatment uptake and effectiveness overall, certain situational factors appear to impede the implementation of the program to its full potential in some cases. As expected, site 1 (training site) fared well. Site 2 had similar results. Site 3 seems to have struggled a little more with treatment fidelity (i.e. successful implementation of the content of the LGP), which might have reduced the gain in knowledge about BD for patients. This difference may be explained by training and educational variables. For example, site 3 had the highest number of clinicians involved in the study, with eight different clinicians administering only five groups. Most clinicians at site 3 were community support workers (community college diploma), they were younger, and they had fewer years of clinical experience compared to the other two sites. Furthermore, although all clinicians co-administered a group prior to leading one, only 71% of those at site 3 observed a group before co-administering one. Given the high level of complexity involved in understanding and managing BD, this suggests that initial training and clinical experience working with severe and chronic mental illness are important factors to consider in selecting clinicians and training them in the delivery of even brief psychosocial interventions such as group psychoeducation.

Compared to other studies, we trained multiple clinicians (N = 15) to administer the intervention, most of whom had modest educational backgrounds and levels of experience with BD prior to training (only two had a master's degree). In comparison, in the Sajatovic *et al*. study [27] the LGP was administered by a doctoral level nurse and a master's level counsellor, whereas in the Candini *et al*. study [31] the Barcelona program was administered by two clinical psychologists who received extensive training by the original program developer. Given these results, our recommendation for effective widespread dissemination would be to retain clinicians who hold at least a bachelor's degree in a mental health discipline (i.e. nursing, psychology, social work, etc.), combined with some experience working with severe mental illnesses such as BD. Furthermore, it appears to be important to insure that all clinicians administering the intervention receive thorough training, as less training might lead to less uptake of the intervention [42].

Although the results are encouraging, this study has some limitations. Most notably, the absence of a control group limits the interpretation of the LGP's impact on patient outcomes. Although this may seem like a major shortcoming, it must be recalled that the study was designed as an effectiveness study in real world clinical settings and not as a randomized clinical trial. We were interested in assessing whether we could train mental health clinicians in successfully implementing the LGP and determining whether the intervention would retain the clinical benefits demonstrated in previous RCT's [29]. For ethical and feasibility reasons, we were not able to randomize patients to a control group or to enter them onto a 1-year waiting list before they received the intervention.

Furthermore, fidelity scores represent group administrators' self-reported impressions and may overestimate actual treatment fidelity. Patients' ratings are also self-reported and are subject to the effects of social desirability. Since the number of treatment sites was limited, these results may not generalize to other community health centers. Future studies should retain observer-rated measures in a variety treatment centers with varied sociodemographic characteristics and patient profiles.

CONCLUSIONS

In conclusion, this study shows that the LGP can be successfully implemented in routine mental health settings and that it retains clinical effectiveness when delivered by lesser trained professionals. Given the brief format of the intervention (six 90-minute sessions), its proven cost effectiveness, and less extensive educational requirements (e.g. bachelor's level health workers instead of specialized psychotherapists with a minimum of a master's level of education), the potential for widespread dissemination of the LGP in the health care system is interesting. Indeed, most mental health centers do not employ highly trained, master's level therapists that have extensive clinical experience with BD. As such, brief group interventions like the LGP have the potential to fill a void in a stepped-care approach for patients with BD.

ENDNOTES

[1]In Quebec, in order to receive specialized psychiatric care, patients must have a diagnosis attributed by their physician (usually a general practitioner) and be referred to either psychiatric outpatient services or to community mental health centers. Among patients with BD in the study, 27 had BD I (37%), 27 had BD II (37%), 6 had BD NOS (8.2%), and 1 (1.4%) had Cyclothymia. Although all patients had a diagnosis of BD, the specific subtype of BD was missing for 12 of them (16.4%).

[2]The current study presents only pre- and post-treatment evaluations, as follow-up assessments (6 and 12 months) are ongoing and will be presented separately.

[3]As suggested by the LGP manual (Bauer and McBride 2001, 2003), groups of 5 to 7 patients were formed. Patients who received the LGP as part of their usual care were asked to participate in the current pragmatic study. Typically, most patients accepted, but exceptionally, up to 1 or 2 patients per group declined. Unfortunately, therapists did not systematically record this information at each site, so we are unable to determine how many patients declined the study. Informal reports show that this number was low. Although the mean number of patients per group may seem low (*M* = 4.3), it is similar to the Parikh *et al*. (2012) study that enrolled only 4 patients per group for research purposes.

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REFERENCES

[1] Schaffer A, Cairney J, Cheung A, Veldhuizen S, Levitt A. Community survey of bipolar disorder in Canada: lifetime prevalence and illness characteristics. Can J Psychiatry 2006a; 51: 9-16.

[2] Schaffer A, Cairney J, Cheung AH, Veldhuizer S, Levitt AJ. Use of treatment services and pharmacotherapy for bipolar disorder in a general population-based mental health survey. J Clin Psychiatry 2006b; 67: 386-93. http://dx.doi.org/10.4088/JCP.v67n0308

[3] Benazzi F. Inter-episode mood lability in mood disorders: residual symptom or natural course of illness? Psychiatry Clin Neurosci 2004; 58: 480-6. http://dx.doi.org/10.1111/j.1440-1819.2004.01289.x

[4] Paykel ES, Abbott R, Morriss R, Hayhurst H, Scott J. Sub-syndromal and syndromal symptoms in the longitudinal course of bipolar disorder. Br J Psychiatry 2006; 189: 118-23. http://dx.doi.org/10.1192/bjp.bp.105.013870

[5] Hawke LD, Provencher MD, Parikh SV, Zagorski B. Comorbid anxiety disorders in Canadians with bipolar

disorder: clinical characteristics and service use. Can J Psychiatry 2013a; 58: 393-401.

[6] Sublette ME, Carballo JJ, Moreno C, *et al.*Substance use disorders and suicide attempts in bipolar subtypes. J Psychiatr Res 2009; 43: 230-8. http://dx.doi.org/10.1016/j.jpsychires.2008.05.001

[7] Judd LL, Akiskal HS. The prevalence and disability of bipolar spectrum disorders in the US population: re-analysis of the ECA database taking into account subthreshold cases. J Affect Disord 2003; 73: 123-31. http://dx.doi.org/10.1016/S0165-0327(02)00332-4

[8] Das Gupta R, Guest JF. Annual cost of bipolar disorder to UK society. Br J Psychiatry 2002; 180: 227-33. http://dx.doi.org/10.1192/bjp.180.3.227

[9] Stensland MD, Jacobson JG, Nyhuis A. Service utilization and associated direct costs for bipolar disorder in 2004: an analysis in managed care. J Affect Disord 2007; 101: 187-93. http://dx.doi.org/10.1016/j.jad.2006.11.019

[10] Brissos S, Dias VV, Carita AI, Martinez-Arán A. Quality of life in bipolar type I disorder and schizophrenia in remission: clinical and neurocognitive correlates. Psychiatry Res 2008; 160: 55-62. http://dx.doi.org/10.1016/j.psychres.2007.04.010

[11] Rivas-Vazquez RA, Johnson SL, Rey GJ, Blais MA, Rivas-Vazquez A. Current treatments for bipolar disorder: a review and update for psychologists. Prof Psychol Res Pr 2002; 33: 212-23. http://dx.doi.org/10.1037/0735-7028.33.2.212

[12] Judd LL, Schettler PJ, Akiskal HS, *et al*. Long-term symptomatic status of bipolar I vs. bipolar II disorders. Int J Neuropsychopharmacol 2003; 6: 127-37. http://dx.doi.org/10.1017/S1461145703003341

[13] Miklowitz DJ, Goodwin GM, Bauer MS, Geddes JR. Common and specific elements of psychosocial treatments for bipolar disorder: a survey of clinicians participating in randomized trials. J Psychiatr Pract 2008; 14: 77-85. http://dx.doi.org/10.1097/01.pra.0000314314.94791.c9

[14] Weber Rouget B, Aubry JM. Efficacy of psychoeducational approaches on bipolar disorders: a review of the literature. J Affect Disord 2007; 98: 11-27. http://dx.doi.org/10.1016/j.jad.2006.07.016

[15] Sperry L. Psychopharmacology and psychotherapy: strategies for maximizing treatment outcomes. New York: Brunner/Mazel; 1995.

[16] Huxley NA, Parikh SV, Baldessarini RJ. Effectiveness of psychosocial treatments in bipolar disorder: state of the evidence. Harv Rev Psychiatry 2000; 8: 126-40. http://dx.doi.org/10.1080/hrp_8.3.126

[17] Yatham LN, Kennedy SH, Parikh SV, *et al*. Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) collaborative update of CANMAT guidelines for the management of patients with bipolar disorder: update 2013. Bipolar Disord 2013; 15: 1-44. http://dx.doi.org/10.1111/bdi.12025

[18] Perry A, Tarrier N, Morriss R, McCarthy E, Limb K. Randomised controlled trial of efficacy of teaching patients with bipolar disorder to identify early symptoms of relapse and obtain treatment. BMJ 1999; 318: 149-53. http://dx.doi.org/10.1136/bmj.318.7177.149

[19] Colom F, Vieta E, Martínez-Arán A, *et al*. A randomized trial on the efficacy of group psychoeducation in the prophylaxis of recurrences in bipolar patients whose disease is in remission. Arch Gen Psychiatry 2003; 60: 402-7. http://dx.doi.org/10.1001/archpsyc.60.4.402

[20] Colom F, Vieta E. Psychoeducation manual for bipolar disorder. New York: Cambridge University Press; 2006.

[21] Bauer MS, McBride L. Structured group psychotherapy for bipolar disorder: the life goals program. 2nd ed. New York: Springer; 2003.

[22] Bauer MS, McBride L, Williford WO, *et al*., and Coauthors for the cooperative studies program 430 study. Collaborative care for bipolar disorder: part II. Impact on clinical outcome, function, and costs. Psych Serv 2006; 57: 937-45. http://dx.doi.org/10.1176/appi.ps.57.7.937

[23] Simon GE, Ludman EJ, Bauer MS, Unützer J, Operskalski B. Long-term effectiveness and cost of a systematic care program for bipolar disorder. Arch Gen Psychiatry 2006; 63: 500-8. http://dx.doi.org/10.1001/archpsyc.63.5.500

[24] Bauer MS, McBride L, Chase C, Sachs G, Shea N. Manual-based group psychotherapy for bipolar disorder: a feasibility study. J Clin Psychiatry 1998; 59: 449-55. http://dx.doi.org/10.4088/JCP.v59n0902

[25] de Andrés RD, Aillon N, Bardiot MC, *et al*. Impact of the life goals group therapy program for bipolar patients: an open study. J Affect Disord 2006; 93: 253-7. http://dx.doi.org/10.1016/j.jad.2006.03.014

[26] Provencher MD, Baruch P, Tremblay J, St-Amand J. A feasibility study of group psychoeducation for bipolar disorder in Quebec City. Bipolar Disord 2007; 9 (Suppl 1): 87. doi:10.1111/j.1399-5618.2007.00511.x.

[27] Sajatovic M, Davies MA, Ganocy SJ, *et al*. A comparison of the Life Goals Program and treatment as usual for individuals with bipolar disorder. Psych Serv 2009; 60: 1182-9. http://dx.doi.org/10.1176/appi.ps.60.9.1182

[28] Aubry J-M, Charmillot A, Aillon N, *et al*. Long-term impact of the life goals group therapy program for bipolar patients. J Affect Disord 2012; 136: 889-94. http://dx.doi.org/10.1016/j.jad.2011.09.013

[29] Parikh SV, Zaretsky A, Beaulieu S, *et al*. A randomized controlled trial of psychoeducation or cognitive-behavioral therapy in bipolar disorder: a Canadian Network for Mood and Anxiety Treatments (CANMAT) study. J Clin Psychiatry 2012; 73: 803-10. http://dx.doi.org/10.4088/JCP.11m07343

[30] U.S. Department of Health and Human Services. Mental health: a report of the Surgeon General-Executive Summary. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health; 1999.

[31] Candini V, Buizza C, Ferrari C, *et al*. Is structured group psychoeducation for bipolar patients effective in ordinary mental health services? A controlled trial in Italy. J Affect Disord 2013; 151: 149-55. http://dx.doi.org/10.1016/j.jad.2013.05.069

[32] Bauer MS, McBride L. Thérapie de groupe pour le trouble bipolaire: une approche structurée. Paris: Médecine & Hygiène; 2001.

[33] Thompson K, Kulkarni J, Sergejew AA. Reliability and validity of a new Medication Adherence Rating Scale (MARS) for the psychoses. Schizophr Res 2000; 42: 241-7. http://dx.doi.org/10.1016/S0920-9964(99)00130-9

[34] Hogan TP, Awad AG, Eastwood R. A self-report scale predictive of drug compliance in schizophrenics: reliability and discriminative validity. Psychol Med 1983; 13: 177-83. http://dx.doi.org/10.1017/S0033291700050182

[35] Morisky DE, Green LW, Levine DM. Concurrent and predictive validity of a self-reported measure of medication adherence. Med Care 1986; 24: 67-74. http://dx.doi.org/10.1097/00005650-198601000-00007

[36] Büssing A, Matthiessen PF, Mundle G. Emotional and rational disease acceptance in patients with depression and alcohol addiction. Health Qual Life Out 2008; 6: 4. http://dx.doi.org/10.1186/1477-7525-6-4

[37] Altman EG, Hedeker D, Peterson JL, Davis JM. The Altman Self-Rating Mania Scale. Biol Psychiatry 1997; 42: 948-55. http://dx.doi.org/10.1016/S0006-3223(96)00548-3

[38] Altman EG, Hedeker D, Peterson JL, Davis JM. A comparative evaluation of three self-ratingscales for acute mania. Biol Psychiatry 2001; 50: 468-71. http://dx.doi.org/10.1016/S0006-3223(01)01065-4

[39] Beck AT, Steer RA, Brown GK. Manual for the Beck Depression Inventory-II. San Antonio,TX: Psychological Corporation; 1996.

[40] Sabourin S, Gendreau P. Assessing client satisfaction with mental health treatment among French-Canadians. Appl PsycholInt Rev 1988; 37: 327-35. http://dx.doi.org/10.1111/j.1464-0597.1988.tb01146.x

[41] Hawke LD, Parikh SV, Michalak EE. Stigma in bipolar disorder: a review of the literature. J Affect Disord 2013b; 150: 181-191. http://dx.doi.org/10.1016/j.jad.2013.05.030

[42] Herschell AD, Kolko DJ, Baumann BL, Davis AC. The role of therapist training in the implementation of psychosocial treatments: a review and critique with recommendations. Clin Psychol Rev 2010; 30: 448-66. http://dx.doi.org/10.1016/j.cpr.2010.02.005

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