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This is the Published version of the following publication

McCann, Terence, Cotton, SM and Lubman, DI (2015) Social problem solving in carers of young people with a first episode of psychosis: A randomized controlled trial. *Early Intervention in Psychiatry*. ISSN 1751-7885

The publisher's official version can be found at  
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## Brief Report

## Social problem solving in carers of young people with a first episode of psychosis: a randomized controlled trial

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## Abstract

**Aim:** Caring for young people with first-episode psychosis is difficult and demanding, and has detrimental effects on carers' well-being, with few evidence-based resources available to assist carers to deal with the problems they are confronted with in this situation. We aimed to examine if completion of a self-directed problem-solving bibliotherapy by first-time carers of young people with first-episode psychosis improved their social problem solving compared with carers who only received treatment as usual.

**Methods:** A randomized controlled trial was carried out through two early intervention psychosis services in Melbourne, Australia. A sample of 124

carers were randomized to problem-solving bibliotherapy or treatment as usual. Participants were assessed at baseline, 6- and 16-week follow-up.

**Results:** Intent-to-treat analyses were used and showed that recipients of bibliotherapy had greater social problem-solving abilities than those receiving treatment as usual, and these effects were maintained at both follow-up time points.

**Conclusions:** Our findings affirm that bibliotherapy, as a low-cost complement to treatment as usual for carers, had some effects in improving their problem-solving skills when addressing problems related to the care and support of young people with first-episode psychosis.

**Key words:** carer, first-episode psychosis, problem solving, self-help manual.

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Received 11 June 2015; accepted 22 October 2015

## INTRODUCTION

Problem-solving therapy is a cognitive-behavioural-based intervention that concentrates on equipping individuals with problem-solving skills and attitudes to adapt to challenging situations in their everyday lives.<sup>1</sup> Even though problem-solving skills training is incorporated in many first-episode psychosis (FEP) interventions,<sup>2</sup> first-time primary carers often experience considerable problems in their caregiving role.<sup>3,4</sup> Most are inadequately prepared to undertake the role,<sup>3</sup> and many feel poorly supported by clinicians.<sup>5</sup> A systematic review and meta-analysis of interventions to improve carers' experience of caring for people with severe mental illness concluded that carer-focused interventions appear to enhance their quality of life and experience of caring while also reducing

psychological distress, and should be offered as an integral component of service delivery for individuals with severe mental illness.<sup>6</sup> Although carer interventions, overall, are effective in improving outcomes, they are often difficult to access.<sup>7</sup>

Given the frequency of caring-related problems,<sup>3,4</sup> difficulties in accessing and lack of suitability of some programmes,<sup>7</sup> it is important to examine ways to increase carers' problem-solving skills and their access to programmes. In so doing, this may improve their ability to cope with caring-related problems and their access to programmes, and, potentially, improve outcomes in care recipients.<sup>8</sup> Although previous studies have assessed social problem-solving (or problem solving in the real world) outcomes in people with mental illnesses, such as depression,<sup>9-11</sup> or in carers of older adults with cognitive impairment,<sup>12</sup> to our knowledge, no

studies have assessed problem solving among carers of young people with FEP. Bibliotherapy (i.e. self-help therapy in book form) is an alternative, cost-effective, less therapist-intensive and easily accessible approach to enhancing carers' problem-solving abilities.<sup>13–15</sup> We aimed to evaluate if carers of young people with FEP who completed a problem-solving bibliotherapy (PSB) intervention reported a higher level of problem solving compared with those who only received gold standard specialist treatment (defined here as treatment as usual (TAU)). Our hypothesis was that the PSB group would have better problem solving compared with the TAU group, as assessed at 6- and 16-week follow-up.

The study was part of a randomized controlled trial (RCT) focusing on the effectiveness of bibliotherapy for carers of young people with FEP.<sup>16–18</sup>

### METHOD

Family caregivers were recruited through case managers of two specialist FEP centres: Orygen Youth Health and the Recovery and Prevention of Psychosis Service, both in Melbourne, Australia. Study inclusion criteria were (i) first-time carer (have never been previously in a caregiver role); (ii) less than 3 years in the role; and (iii) able to converse in conversational English. Exclusion criteria were (i) previous recipient of specialist family interventions for FEP and (ii) recent personal history of severe mental illness.

A caregiver is defined as the key person (aside from health, social or voluntary care provider) responsible for assisting with activities of daily living, and supporting and advocating on behalf of the young person with FEP.<sup>3</sup> They provide emotional, social, financial and indirect physical care.

### Randomization

Carers were randomized to PSB or TAU control group using a computer-generated randomization list. Randomization was carried out in blocks of 10, and forwarded to the research officer responsible for recruitment. This researcher allocated the next available number on entry into the RCT, but to prevent selection bias and ensure allocation concealment the code was not revealed until completion of baseline assessment.

### Procedure

Informed by the findings of an earlier qualitative study of carers of young people with FEP,<sup>3,19,20</sup> which

highlighted that carers experienced multiple problems in caring, we developed a self-directed, problem-solving focused intervention to promote carers' well-being and support them in their caregiving role. The PSB group completed the PSB *Reaching Out: Supporting a Family Member or Friend with First-Episode Psychosis* (in addition to receiving TAU), which contained five modules:

- 1 Strengthening carer well-being and coping skills
- 2 Getting the best out of support services
- 3 Promoting the well-being of the person with FEP: preventing relapse and understanding treatment
- 4 Dealing with the effects of the illness Part A: communication, lack of motivation, social withdrawal, risky and unrestrained behaviour, disturbed sleep, hallucinations and delusions
- 5 Dealing with the effects of the illness Part B: weight gain, reluctance to take medication, substance misuse, aggression and suicidal behaviour

Carers completed all modules independently over 5 weeks. Although they covered each module at their own pace, and at a convenient place and time, they were asked not to complete more than one module each week. Each module took up to 2 h to finish and comprised reading and exercise materials. Inter-rater reliability was achieved by training research officers to comply with a written procedure for communicating with, and data collection from, participants. Weekly 10-min telephone calls from a research officer were used to assess treatment adherence, where standardized questions were asked about the content of particular modules. In addition, participants were able to obtain clarification about the material included in the modules.

*Treatment as usual:* 'Gold standard' specialist support, coordinated by an outpatient case manager and consultant psychiatrist, within an enriched assertive case management framework. This included the family being involved and incorporated within the young person's treatment plan, provision of plain language information about psychosis and provision of additional support based on assessment of need and phase of illness. On accessing the service, the family were given at least one telephone call from a family peer support service, which provided information and emotional support, with the option of being able to receive additional follow-up telephone and face-to-face meetings. Families were encouraged to take part in individual meetings with the case manager and doctor. They were also invited to participate in a three-session psychoeducation group; however, few accepted this invitation.

## Measure

Because a problem-solving approach was adopted in the manual, the Social Problem-Solving Inventory-Revised Short Form (SPSI-R:S),<sup>21</sup> a self-report instrument, was used to assess carers' strengths and weaknesses in dealing with everyday problems. Five scale scores (positive problem orientation, negative problem orientation, rational problem solving, impulsivity/carelessness, avoidance) are obtained along with a total score, each of which is measured on a scale with a mean of 100 and standard deviation of 15 points, with higher scores implying 'good' social problem-solving ability.

## Statistical analysis

Using IBM-SPSS 19 (IBM, Armonk, NY, USA), differences between PSB and TAU groups at baseline were assessed with independent samples *t*-tests and chi-square ( $\chi^2$ ). Intent-to-treat principles were adopted in the main analysis. Mixed model repeated measures (MMRM) analysis of variance was used to assess differences between groups at 6- and 16-week follow-up. Between-group factor was group (PSB vs. TAU) and within-group factor was assessment time point (baseline, 6- and 16-week follow-up). Based on these models, three criteria were assessed: (i) main effect for group (overall, irrespective of time, assessment of significant differences between PSB and TAU groups); (ii) main effect for time (overall, irrespective of group, assessment of significant changes over time); and (iii) interaction between group and time (establishes if groups differed significantly over time). A Toeplitz covariance matrix model was adopted to model relationships between assessments at different time points. Within each MMRM, planned comparisons (using *t* statistics) were used to assess differences between groups from baseline to follow-up time points (6 and 16 weeks of end point analysis). For all analyses, *alpha* ( $\alpha$ ) was established at 0.05 level.

## RESULTS

### Participant flow and sample characteristics

A total of 216 family carers were assessed for eligibility and 57.4% ( $n = 124$ ) met inclusion criteria and consented to participate. Sixty-one were randomized to PSB and 63 to TAU groups. Based on a self-report screening questionnaire, a significantly longer time had passed since diagnosis in the PSB compared with the TAU group ( $t(120) = 2.15$ ,  $P = 0.033$ ). No other between-group differences were identified, at

baseline, on the demographic variables. Nineteen participants dropped out of the study (15.3%): eight from PSB (13.1%) and 11 from TAU group (17.5%). The dropout rate did not differ significantly between groups ( $\chi^2(1) = 0.45$ ,  $P = 0.502$ ).

### Demographic details

The majority of the carers were female (82.3%), a parent of the client (91.1%), lived with the client (82.3%), born in Australia (65.3%) and had tertiary qualifications (59.7%). The majority of the clients were in the recovery phase (85.3%). Carers reported that their support role had affected their mental health (76.4%,  $n = 94$ ), employment (62.7%,  $n = 69$ ), physical health (59.3%,  $n = 73$ ) and socialization (59.3%,  $n = 73$ ) adversely.

### Social problem solving

For the SPSI, there was a significant group by time interaction for the impulsivity/carelessness subscale ( $F(2, 136.6) = 5.76$ ,  $P = 0.004$ ). The rate of improvement in impulsivity/carelessness, from baseline to 6 weeks ( $t(157.9) = -3.22$ ,  $P = 0.002$ ) and baseline to 12 weeks ( $t(110.1) = -2.65$ ,  $P = 0.009$ ), was greater in the PSB than the TAU group. Although the two groups appear to differ at baseline, this difference was not significant ( $P = 0.053$ ). For the remaining SPSI subscales, there were no significant interactions between group and time, between the PSB and TAU groups, from baseline to 6 weeks and from baseline to 12 weeks. The main effect for time for the rational problem-solving subscale was significant ( $F(2, 124.3) = 3.74$ ,  $P = 0.027$ ), with significant reductions seen from baseline to 6 weeks ( $P = 0.018$ ), and baseline to 12 weeks ( $P = 0.012$ ) in both groups.

## DISCUSSION

We found partial support for our hypothesis about the effect of PSB on carers' problem-solving skills. PSB improved social problem solving in impulsivity/carelessness, but not social problem solving in positive problem orientation, negative problem orientation and avoidance. A possible explanation for the mixed effect of our approach on problem solving is that the intensity of the problem focus was too low and the duration of the programme was too short.<sup>1</sup> However, as this is the first study to use PSB, no similar comparison can be made of carers' problem-solving abilities in a FEP context. Our study's retention rate compares



favourably with other FEP intervention studies of carers,<sup>22–24</sup> which may be due to the problem-solving and plain language approach adopted, weekly telephone calls and convenience of completing PSB at a place, time and pace appropriate to carers' circumstances. Moreover, the good retention rate in the PSB group may be attributable to carers' favourable perceptions of the helpfulness of the manual.<sup>18</sup>

Although our study is the first to assess problem solving in this cohort, it has three limitations. First, it may be underpowered and require a larger sample of carers to show greater effect. Second, mediating factors, such as carer burden and frequency of contact with the young people with FEP, and severity of illness, were not investigated; these could be addressed in a future study. Finally, carers with limited or no English were precluded from participation. A future study could address this by translating the manual into other languages.

Bibliotherapy has some social problem-solving skill benefits for first-time carers when dealing with problems associated with the care and support of young people with FEP. It is a low-cost and low-intensity intervention, and can make a useful contribution, as an adjunct to routine support provided to carers by clinicians. Moreover, PSB helps increase carers' access to support, albeit in book form, especially for those whose caring and other responsibilities, and geographical considerations, preclude them from accessing face-to-face carer support initiatives.

## ACKNOWLEDGEMENTS

The authors express their grateful appreciation to the carer participants as well as to the case managers and carer support programme staff for assistance with recruitment. The authors would like to extend their sincere thanks to Kingsley Crisp, John Gleeson, Brendan Murphy, Lisa Catania, Claudia Marck, Flora McCann, Belinda Dimmock and Helen Baker for their contribution to the study, and to Judith Johnston for her contribution to the writing of the manual. This work was generously supported by a grant from Australian Rotary Health Research Fund (Mental Health).

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