

Intervening early in children with bipolar disorder: is there a pot at the end of the Rainbow?

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SETTING THE SCENE

Children with bipolar disorder (BD) have considerable impairments in school, peer and family functioning and high rates of illness comorbidity.¹ With age, their risk increases for suicide attempts, hospitalisation, substance abuse and medical complications. Pharmacotherapy is usually the first-line treatment for young people with BD, but paediatric patients may be less treatment-responsive than adults.² Moreover, side effects (eg, weight gain) from commonly used mood stabilising medications can compromise children's long-term health status. Three psychosocial interventions given adjunctively with medications have been tested and found effective in stabilising mood symptoms among bipolar children and adolescents: multifamily psychoeducation groups,³ dialectical behaviour therapy⁴ and family-focused therapy.⁵

SELECTED STUDIES

In their study, West *et al*⁶ conducted a randomised controlled trial of a novel intervention called child and family-focused cognitive-behavioural therapy (CFF-CBT), a protocol summarised with the acronym 'Rainbow' (box 1) for children (ages 7–13) with bipolar disorder. Rainbow integrates individual CBT with family psychoeducation and mindfulness skills sessions. In a second article, using the same cohort as the West *et al* study, Weinstein *et al*⁷ examined baseline child, parent and family variables as potential moderators of response to CFF-CBT or a treatment-as-usual (TAU) comparison group.

The investigators recruited 69 participants (mean age 9.2 years, SD=1.6) with bipolar disorder (BD), not otherwise specified (BD-NOS; 62.3%), bipolar I disorder (31.9%) or bipolar II disorder (5.8%) for a randomised controlled trial. Children with BD-NOS usually have recurrent but short (ie, 1–3 days) hypomanic or manic episodes, or fall one symptom short of the required number of Diagnostic and Statistical Manual Fifth Edition (DSM-5) symptoms for a hypomanic or manic episode. Children were on medications in all but one case; data on the type and dosage of medications were not collected. Patients were required to be on stable medications for at least 4 weeks before randomisation.

Of the 69 participants, 34 were assigned to CFF-CBT and 35 to psychotherapy treatment-as-usual (TAU) with best-practice pharmacotherapy. Both treatments were given weekly for 12 weeks and monthly for 6 months. The TAU condition consisted of hourly individual sessions in a General Psychiatry Clinic, with content decided on by the individual

therapist (psychology or social work trainees or psychiatry fellows). Fidelity assessments indicated that clinicians could learn CFF-CBT relatively easily. Follow-up assessments were performed at baseline, 4, 8 and 12 weeks post-treatment and 6 months post-treatment by trained evaluators who were unaware of the treatment assignments. The primary outcome measures, however, were based on parent-rated questionnaires that were not 'blind' to treatment conditions.

WHAT DO THESE PAPERS ADD?

- ▶ Compared to treatment-as-usual (TAU), children and parents in child and family-focused cognitive-behavioural therapy (CFF-CBT) attended more sessions (mean 11.34 vs 6.91), were less likely to drop out of treatment (11.8% vs 51.4%) and were more satisfied with treatment (mean 2.95 vs 2.67 on a 1–3 scale).
- ▶ Children in CFF-CBT had more improvement in parent-reported mania scores, lower parent-rated depression scores and a steeper response curve for depressive symptoms at post-treatment and 6-months (effect sizes of 0.48–0.69).
- ▶ Children in CFF-CBT had greater improvement in clinician-rated global functioning at 6-months ($d=0.50$).
- ▶ Children whose parents had higher subthreshold depressive symptoms at baseline showed greater improvements in depressive symptoms in CFF-CBT than in TAU ($d=0.57$).

LIMITATIONS

- ▶ The CFF-CBT group began the study with lower mania symptoms than the TAU group, suggesting non-equivalence at baseline. There was a considerable amount of dropout ($n=29$, 42%) before the 6-month follow-up, such that the rate of attrition in CFF-CBT (29.4%) and TAU (54.3%) no longer differed. Thus, conclusions based on the 6-month assessment may reflect a self-selected sample: those participants who stayed with the study long enough to complete the assessment may have been those who improved the most in their respective treatment conditions.
- ▶ The study design called for the two groups to receive an equal amount of treatment in the acute phase. In fact, the TAU group received half as many sessions ($M=6.91$, $SD=5.37$) as the CFF-CBT group ($M=11.34$, $SD=2.39$). Thus, differences in outcomes could have been due to amount as well as type of treatment.
- ▶ Although independent evaluators were blind to treatment assignment, most of the group differences were based on parent ratings. So, for example, the primary outcome of mania was a parent report measure (the Child Mania Rating Scale) that, the investigators claim, is 'more comprehensive, nuanced, and contextualised' than clinician-rated measures such as the Young Mania Rating Scale. For depressive symptoms, only parent-rated symptoms improved with time and treatment; clinician-rated depression did not differentially improve with CFF-CBT. In one scenario, parents who had completed the CFF-CBT programme and were happy with the result may have overestimated the degree of improvement, or those who received the control condition may have inflated the degree of impairment.
- ▶ Fully 97% of the participants were taking medications at the trial's outset. The number of medication changes during the trial did not

Box 1 Elements of the RAINBOW Programme^{6 7}

R=Routines (developing consistent daily habits)
 A=Affect Regulation
 I=I can do it! (improving self-esteem and self-efficacy)
 N=No negative thoughts/live in the now
 B=Be a good friend/balanced lifestyle
 O=Oh, how do we solve this problem? (communication and problem-solving skills)
 W=Ways to find support

differ across groups, but data given on the types of medications prescribed or dosages are sparse. Indeed, distinguishing the effects of pharmacotherapy from those of psychotherapy in randomised trials is a methodological quandary. Ideally, treating pharmacologists would be blind to concurrent psychosocial treatments, and the effects of CFF-CBT or other novel treatments could be distinguished from the impact of specific pharmacological agents or dosing strategies. It is worth noting the reverse problem in maintenance pharmacotherapy studies, in which there has been little or no effort to account for the effects of psychotherapy received during the same interval as medications. Thus, we never know whether an active drug and a placebo condition differ on variables such as requests for psychotherapy or number of sessions received, which may increase when patients are not experiencing adequate symptom improvement.

- ▶ As the authors note, their finding that youth whose parents had subthreshold depression at intake did better with CFF-CBT than TAU in degree of improvement in depression is inconsistent with findings from other child or adolescent depression trials.^{8 9} For example, Beardslee *et al*⁸ found that adolescents with a history of depression who participated in a group cognitive-behavioral therapy prevention programme had fewer onsets of depression over 33 months if mothers were not depressed at intake; those whose mothers had depression at baseline responded equally to the CBT prevention programme and the usual care comparator. In the West *et al*⁶ paediatric bipolar trial, however, the interaction between parental depression, treatment and time is best understood as variability in the within-group symptom trajectories.⁷ Children responded similarly to CFF-CBT (ie, showed comparable levels of improvement in depression scores) independently of their parents' levels of depression. In contrast, in TAU, children whose parents had higher depressive symptoms showed a poorer response compared to those whose parents had low symptom scores. More information on what treatment was actually delivered in the TAU condition might further clarify the nature of this interaction.

WHAT'S NEXT IN THIS RESEARCH?

The early stages of BD, during which many children show subthreshold symptoms and impairment, may be an optimal time to introduce preventative interventions. Long-term studies need to examine whether specific psychotherapies, including CFF-CBT and other configurations of family or individual therapy, are effective in preventing the full onset of BD in genetically vulnerable children (ie, those with a first-degree relative with BD). Further, multisite studies of community implementation of evidence-based therapies need to identify barriers at the patient, clinician, family or care organisational level that reduce treatment adoption and sustained use in practice.

CONCLUDING REMARKS

The addition of mindfulness skills to traditional CBT and psychoeducation will be attractive to many clinicians who are using mindfulness in other contexts. In my own work, I have found that incorporating mindfulness exercises into sessions of family-focused therapy can be quite useful to patients and parents. We do not know whether mindfulness skills add to the therapeutic effects of CBT or family-focused therapy in children with mood disorders.

The flexibility of the CFF-CBT approach may have advantages for a paediatric disorder that is constantly 'shape-shifting'. In a large sample of clinically-referred children in practice settings who had depression,

anxiety or conduct disorders, a modular approach that allowed clinicians to apply treatment procedures flexibly and in different sequences—including individual CBT for depression or anxiety or parent training for conduct disorders—was associated with steeper trajectories of symptom improvement than standardised CBT or usual care.¹⁰ In the case of bipolar disorder, implementing individual, family or multifamily treatment protocols flexibly may lead to greater engagement of parents and children and lower treatment costs. We may learn what treatment arrangements and combinations of strategies, at what levels of intensity, are most effective for children with diverse presentations of bipolar illness.

A strength of the work by West *et al* and Weinstein *et al* is the immediate translation of research findings into clinical recommendations. For example, the authors recommend directly addressing parental well-being while teaching coping skills to the child. Such an approach is suggested by the finding of non-equivalent outcomes among children of parents with high versus low levels of subthreshold depression in TAU. Likewise, families who score high on family cohesion respond better to CFF-CBT than children from families who score low in cohesion. Thus, psychoeducational or skill-based treatments may be enhanced by addressing family cohesion at the outset. Addressing cohesion usually means encouraging families to perform tasks that require greater interdependence between members, such as holding conjoint meetings every week in which matters related to communication, problem-solving or individual well-being are discussed; or setting up 'homework' tasks that require more direct contact between the child and the less involved parent. These strategies may enhance the uptake of psychoeducational treatments, possibly enhancing the long-term outcome of youth with this disabling illness.

Competing interests None declared.

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