

Psychosocial treatments for children and adolescents

Introduction

Bipolar disorder is a chronic psychiatric illness that can have devastating effects on afflicted individuals and their families. It is the sixth leading cause of disability worldwide, and prevalence is estimated to be around 1% in the general adult population. The age of onset of bipolar disorder typically occurs during late adolescence or early adulthood, although onset can occur in childhood. Early-onset bipolar disorder is commonly associated with impairment in multiple domains, including increased risk of psychiatric hospitalisation, antisocial behaviour, addictions and suicidal behaviour. The need to optimise treatments for these patients for whom medication could be long-term and associated with adverse side effects, has increased the interest in the role of psychological treatments.

Method

We have included only systematic reviews (systematic literature search, detailed methodology with inclusion/exclusion criteria) published in full text, in English, from the year 2010 that report results separately for people with a diagnosis of bipolar or related disorders. Due to the high volume of systematic reviews we have now limited inclusion to systematic meta-analyses. Where no systematic meta-analysis exists for a topic, systematic reviews without meta-analysis are included for that topic. Reviews were identified by searching the databases MEDLINE, EMBASE, and PsycINFO. Hand searching reference lists of identified reviews was also conducted. When multiple copies of review topics were found, the most recent and/or comprehensive review was included.

Review reporting assessment was guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist which describes a preferred way to present a meta-analysis¹. Reviews reporting less than 50% of items have been excluded from the library. The PRISMA flow diagram is a suggested way of providing information about studies included and excluded with reasons for

exclusion. Where no flow diagram has been presented by individual reviews, but identified studies have been described in the text, reviews have been checked for this item. Note that early reviews may have been guided by less stringent reporting checklists than the PRISMA, and that some reviews may have been limited by journal guidelines.

Evidence was graded using the Grading of Recommendations Assessment, Development and Evaluation ([GRADE](#)) Working Group approach where high quality evidence such as that gained from randomised controlled trials (RCTs) may be downgraded to moderate or low if review and study quality is limited, if there is inconsistency in results, indirect comparisons, imprecise or sparse data and high probability of reporting bias. It may also be downgraded if risks associated with the intervention or other matter under review are high. Conversely, low quality evidence such as that gained from observational studies may be upgraded if effect sizes are large or if there is a dose dependent response. We have also taken into account sample size and whether results are consistent, precise and direct with low associated risks (see end of table for an explanation of these terms)². The resulting table represents an objective summary of the available evidence, although the conclusions are solely the opinion of staff of NeuRA (Neuroscience Research Australia).

Results

We found two systematic reviews that met our inclusion criteria^{3, 4}. These are presented below in alphabetical order.

- Moderate to low quality evidence suggests cognitive behavioural therapy, educational, and family therapies may improve mood symptoms and increase knowledge about the disorder in children or youth who have bipolar disorder. More research is needed to assess Interpersonal Social Rhythms Therapy and Dialectical Behavioural Therapy.

Frias A, Palma C, Farriols N

Psychosocial interventions in the treatment of youth diagnosed or at high-risk for pediatric bipolar disorder: A review of the literature

Revista de Psiquiatria y Salud Mental 2015; 8: 146-56

[View review abstract online](#)

Comparison	Interventions for children and adolescents with childhood bipolar disorder.
Summary of evidence	Moderate to low quality evidence (mostly small samples, appears consistent, unable to assess precision, direct) suggests CBT, educational and family therapies may improve mood symptoms in youth with bipolar disorder. More research is needed to assess Interpersonal Social Rhythms Therapy and Dialectical Behavioural Therapy.

Symptoms

Family Focused Therapy (FFT)

1 RCT of adolescents with bipolar disorder (N = 58, mean age ~15) found those allocated to FFT recovered from depression significantly earlier than treatment as usual, with no differences in relapse rates, time to recovery from symptoms of mania, or time spent in manic episodes.

1 RCT of adolescents with bipolar disorder (N = 145) found those allocated to FFT showed less severe manic symptoms during the second year of intervention compared to enhanced care, with no differences on the time to recovery or episode recurrence, or on the percentage of time healthy.

1 case series of adolescents with bipolar disorder (N = 20, mean age ~15) found significant reductions in total mood symptoms, depressive symptoms, and problem behaviours. Particularly strong reductions in depressive symptoms were reported in the 14 participants from families with high levels of expressed emotion.

1 case series of adolescents with bipolar disorder and comorbid alcohol or cannabis misuse (N = 10, mean age ~17) found significant improvements in mood symptoms, particularly in depression, but only slight reductions in substance use.

Cognitive Behavioural Therapy (CBT)

1 open trial of children (N = 34; mean age = 11.33) and their relatives showed significant reductions in the severity of symptoms as well as increased functionality. Higher levels of treatment compliance and satisfaction were also achieved. An extension of this study carried out over 3 years found that the original results were maintained.

1 open trial of children (N = 26; mean age = 9.45) and their parents found improvements in manic, but not depressive symptoms, and in psychosocial functioning.

1 case report found improvements in psychopathology and psychosocial development.

Educational therapies

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1 RCT (N = 165) of children with a major psychiatric disorder (bipolar disorder = 115) who were assigned to MF-PEP or a one year waitlist condition found MF-PEP improved affective symptoms over 18 months of follow-up. There were no significant pre- to post-treatment differences between groups for the mean number of current medications.

1 RCT (N = 35) of children with mood disorders (bipolar disorder = 16) and their parents received either multifamily psychoeducational psychotherapy (MF-PEP) or a 6-month waitlist control condition, and found increased parental knowledge about childhood mood symptoms, enhanced positive family interactions, improved perceptions of parental support, and increased utilisation of appropriate services by families.

Dialectical Behavioural Therapy (DBT)

1 case series of adolescents (N = 10, mean age ~16) showed significant reductions in depressive but not manic symptoms. Reductions in suicidal ideation, non-suicidal self-injurious behaviour, and emotional dysregulation were also noted.

1 RCT of adolescents (N = 14) compared DBT with psychosocial treatment and showed the DBT group demonstrated significantly less severe depressive symptoms and were nearly three times more likely to demonstrate a reduction in suicidal ideation.

Interpersonal and social rhythm therapy for adolescents (IPSRT-A)

1 case series of adolescents (N = 12, mean age ~16 years) reported significantly reduced depressive and manic symptoms.

Consistency in results[†]	No measure of consistency is reported.
Precision in results[§]	No measure of precision is reported.
Directness of results	Direct

Vallarino M, Henry C, Etain B, Gehue LJ, Macneil C, Scott EM, Barbato A, Conus P, Hlastala SA, Fristad M, Miklowitz DJ, Scott J

An evidence map of psychosocial interventions for the earliest stages of bipolar disorder

Lancet Psychiatry 2015; 2: 548-63

[View review abstract online](#)

Comparison	Interventions for youth with bipolar disorder.
Summary of evidence	Moderate to low quality evidence (mostly small samples, appears consistent, unable to assess precision, direct) suggests CBT and family therapies may improve mood symptoms in youth with bipolar disorder. More research is needed to assess Interpersonal Social Rhythms Therapy (IPSRT) and Dialectical Behavioural Therapy.

All outcomes

Family Focused Therapies (FFT)

1 RCT of adolescents with bipolar disorder (N = 58, mean age ~15 years) found those allocated to FFT recovered from depression significantly earlier than treatment as usual (difference ~7 weeks; hazard ratio = 1.85), with no differences in relapse rates, time to recovery from symptoms of mania, or time spent in manic episodes.

1 RCT of adolescents with bipolar disorder (N = 145) found those allocated to FFT showed less severe manic symptoms during the second year of intervention compared to enhanced care, with no differences on the time to recovery or episode recurrence, or on the percentage of time healthy.

1 case series of adolescents with bipolar disorder (N = 20, mean age ~15 years) found significant reductions in total mood symptoms (ES = 1.05), depressive symptoms (ES = 0.87), and problem behaviours. Particularly strong reductions in depressive symptoms were reported in the 14 participants from families with high levels of expressed emotion.

1 case series of adolescents with bipolar disorder and comorbid alcohol or cannabis misuse (N = 10, mean age ~17 years) found significant improvements in mood symptoms, particularly in depression, but only slight reductions in substance use.

Cognitive Behavioural Therapies (CBT)

1 RCT (N = 27 with bipolar disorder) assessed Social Recovery CBT vs. treatment as usual and found that Social Recovery CBT was associated with significant reductions in anxiety and modification of beliefs about the self.

1 RCT of adolescents (N = 8 with bipolar disorder) reported that patients allocated to CBT or family therapy vs. treatment as usual showed significantly greater improvements in symptoms (ES = 0.6) and functioning (ES = 0.2).

Interpersonal Social Rhythms Therapy (IPSRT)

1 case series of adolescents (N = 12, mean age ~16 years) reported significantly reduced depressive (ES = 0.77) and manic (ES = 0.97) symptoms.

1 RCT of adolescents (N = 17) showed significant improvements in depressive (1.8 for IPSRT vs. 1.3 for treatment as usual) and manic symptoms (1.2 vs. 0.5), with improved social and interpersonal functioning.

Dialectical Behavioural Therapy

1 case series of adolescents (N = 10, mean age ~16 years) showed significant reductions in depressive (ES = 0.7), but not manic symptoms. Reductions in suicidal ideation, non-suicidal self-injurious behaviour, and emotional dysregulation were also noted.

Consistency in results	Appears consistent.
Precision in results	No measure of precision is reported.
Directness of results	Direct

Explanation of technical terms

† Different effect measures are reported by different reviews.

Weighted mean difference scores refer to mean differences between treatment and comparison groups after treatment (or occasionally pre to post treatment) and in a randomised trial there is an assumption that both groups are comparable on this measure prior to treatment. Standardised mean differences are divided by the pooled standard deviation (or the standard deviation of one group when groups are homogenous) which allows results from different scales to be combined and compared. Each study's mean difference is then given a weighting depending on the size of the sample and the variability in the data. 0.2 represents a small effect, 0.5 a moderate effect, and 0.8 and over represents a large effect⁵.

Odds ratio (OR) or relative risk (RR) refers to the probability of a reduction (< 1) or an increase (> 1) in a particular outcome in a treatment group, or a group exposed to a risk factor, relative to the comparison group. For example, a RR of 0.75 translates to a reduction in risk of an outcome of 25% relative to those not receiving the treatment or not exposed to the risk factor. Conversely, a RR of 1.25 translates to an increased risk of 25% relative to those not receiving treatment or not having been exposed to a risk factor. A RR or OR of 1.00 means there is no difference between groups. A medium effect is considered if $RR > 2$ or < 0.5 and a large effect if $RR > 5$ or < 0.2 ⁶. InOR stands for logarithmic OR where a lnOR of 0 shows no difference between groups. Hazard ratios measure the effect of an explanatory variable on the hazard or risk of an event.

Correlation coefficients (eg, r) indicate the strength of association or relationship between variables. They are an indication of prediction, but do not confirm causality due to possible and often unforeseen confounding variables. An r of 0.10 represents a weak

association, 0.25 a medium association and 0.40 and over represents a strong association. Unstandardised (b) regression coefficients indicate the average change in the dependent variable associated with a 1 unit change in the independent variable, statistically controlling for the other independent variables. Standardised regression coefficients represent the change being in units of standard deviations to allow comparison across different scales.

‡ Inconsistency refers to differing estimates of effect across studies (i.e. heterogeneity or variability in results) that is not explained by subgroup analyses and therefore reduces confidence in the effect estimate. I^2 is the percentage of the variability in effect estimates that is due to heterogeneity rather than sampling error (chance) - 0% to 40%: heterogeneity might not be important, 30% to 60%: may represent moderate heterogeneity, 50% to 90%: may represent considerable heterogeneity and over this is considerable heterogeneity. I^2 can be calculated from Q (chi-square) for the test of heterogeneity with the following formula⁵;

$$I^2 = \left(\frac{Q - df}{Q} \right) \times 100\%$$

§ Imprecision refers to wide confidence intervals indicating a lack of confidence in the effect estimate. Based on GRADE recommendations, a result for continuous data (standardised mean differences, not weighted mean differences) is considered imprecise if the upper or lower confidence limit crosses an effect size of 0.5 in either direction, and for binary and correlation data, an effect size of 0.25. GRADE also recommends downgrading the evidence when sample size is smaller than 300 (for binary data) and 400 (for continuous data), although

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for some topics, these criteria should be relaxed⁷.

|| Indirectness of comparison occurs when a comparison of intervention A versus B is not available but A was compared with C and B was compared with C that allows indirect comparisons of the magnitude of effect of A versus B. Indirectness of population, comparator and/or outcome can also occur when the available evidence regarding a particular population, intervention, comparator, or outcome is not available and is therefore inferred from available evidence. These inferred treatment effect sizes are of lower quality than those gained from head-to-head comparisons of A and B.

References

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4. Frias A, Palma C, Farriols N (2015): Psychosocial interventions in the treatment of youth diagnosed or at high-risk for pediatric bipolar disorder: A review of the literature. *Revista de Psiquiatria y Salud Mental* 8: 146-56.
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6. Rosenthal JA (1996): Qualitative Descriptors of Strength of Association and Effect Size. *Journal of Social Service Research* 21: 37-59.
7. GRADEpro (2008): [Computer program]. Jan Brozek, Andrew Oxman, Holger Schünemann. *Version 3.2 for Windows*.