# Participant flow

Figure 1: Study CONSORT Flow Diagram

\*Identified by case note review (n= 267), study poster (n= 4) or clinician (n =80)

## Screening

Assessed for eligibility (n= 351)\*

Excluded (n= 287)

  Not meeting inclusion criteria (n= 286)

  Declined to participate (n= 1)

Provisionally eligible (n= 64)

## Assessment

Lost to follow-up (n= 5)

 Lost to follow-up (did not respond) (n= 5)

Lost to follow-up (n= 6)

 Excluded (n= 1)

 Withdrawn (n= 1)

 Lost to follow-up (did not respond) (n= 4)

## 6-month follow-up

Lost to follow-up (n= 3)

 Lost to follow-up (did not respond) (n= 3)

## 3-month follow-up

Lost to follow-up (n= 4)

 Excluded (as above: n= 1)

 Withdrawn (n= 1)

 Lost to follow-up (did not respond) (n= 2)

Allocated to TAU (n= 11)

 Received allocated intervention (n= 9)

 Did not receive allocated intervention (n= 2): both discharged from service by clinicians (one returned to service later)

Allocated to BA intervention (n= 11)

 Received allocated intervention (n= 9)

 Did not receive allocated intervention (n=2): one discharged from service and one removed due to risk by clinicians

Randomized (n= 22)

## Allocation

Excluded (n= 4)

  Not meeting inclusion criteria (n= 1)

  Other reasons (n= 3)

Eligibility Assessed (n= 26)

Excluded (n= 38)

  Excluded by clinician (n = 9)

Discharged/transferred (n =18)

Declined to participate (n= 10)

No longer meets eligibility criteria (n = 1)

# Baseline characteristics

Table 1: Baseline participant characteristics as randomised

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristics |  | BA (n= 11) | TAU (n= 11) |
| Sex, No. (%)  | Female | 9 (81.8) | 9 (81.8) |
|  | Male | 2 (18.2) | 2 (18.2) |
| Age at consent, y:m | Mean (SD) | 15:8 (1:5) | 15:5 (1:0) |
|  | Median (range) | 15:10 (13:11, 17:7) | 15:7 (13:8, 16:10) |
| *K-SADS-PL*, No. (%) | No. (%) with data | 11 (100) | 11 (100) |
| Diagnosis\* | *MDD* | 11 (100) | 11 (100) |
|  | Melancholic | 4 (36.4) | 4 (36.4) |
|  | Atypical | 2 (18.2) | 2 (18.2) |
| Severity | Mild | 4 (36.4) | 6 (54.5) |
|  | Moderate | 3 (27.3) | 2 (18.2) |
|  | Severe | 4 (36.4) | 3 (27.3) |
| Comorbidities\* | No. (%)  | 11 (100) | 11 (100) |
|  | Mean (SD) | 4.55 (1.21) | 3.64 (1.75) |
|  | Median (range) | 5 (2-6) | 4 (1-6) |
|  | Mania | 1 (9.1) | 1 (9.1) |
|  | Panic Disorder | 4 (36.4) | 4 (36.4) |
|  | Separation Anxiety Disorder | 6 (54.5) | 3 (27.3) |
|  | Avoidant Disorder/Social Phobia | 6 (54.5) | 5 (4.5) |
|  | Agoraphobia & Specific Phobias | 3 (27.3) | 2 (18.2) |
|  | Overanxious/Generalized Anxiety Disorder | 11 (100) | 11 (100) |
|  | Anorexia Nervosa | 1 (9.1) | 1 (9.1) |
|  | Bulimia Nervosa | 1 (9.1) | 0 (0) |
|  | Attention Deficit Hyperactivity Disorder | 4 (36.4) | 1 (9.1) |
|  | Oppositional Defiant Disorder | 4 (36.4) | 1 (9.1) |
|  | Conduct Disorder | 4 (36.4) | 4 (36.4) |
|  | Tic Disorders | 1 (9.1) | 1 (9.1) |
|  | Post-Traumatic Stress Disorder | 4 (36.4) | 6 (54.5) |
| *MFQ-C* scorea | No. (%) with data | 11 (100) | 11 (100) |
|  | Mean (SD) | 33.91 (11.8) | 35.55 (11.09) |
|  | Median (range) | 34 (17-58) | 35 (18-50) |
| *MFQ-P* scoreb | No. (%) with data | 6 (100\*\*) | 7 (100\*\*) |
|  | Mean (SD) | 29.83 (7.36) | 29 (8.58) |
|  | Median (range) | 28 (23, 42) | 32 (16, 38) |
| *RSE* scorec | No. (%) with data | 11 (100) | 11 (100) |
|  | Mean (SD) | 11.09 (4.37) | 12.45 (4.84) |
|  | Median (range) | 11 (5, 20) | 13 (6, 21) |
| *CGAS* scored | No. (%) with data | 11 (100) | 11 (100) |
|  | Mean (SD) | 54.55 (9.47) | 59.64 (6.8) |
|  | Median (range) | 58 (30, 65) | 59 (50, 68) |
| *BADS*e | No. (%) with data | 11 (100) | 11 (100) |

\*Diagnostic categories/comorbidities are not mutually exclusive (i.e. one participant may meet the criteria for multiple depression-types/comorbidities) \*\*100% of those asked; only those young people aged 15 and under required parental consent to participate so only those parents/carers were asked to complete the *MFQ-P*.

a *Mood and Feelings Questionnaire*: Long Version Child Self-Report (*MFQ-C*) score range, 0-66; higher scores indicate worse mood.

b *Mood and Feelings Questionnaire*: Long Version Parent Self-Report (*MFQ-P*) score range, 0-68; higher scores indicate worse mood.

c *Rosenberg Self-Esteem Measure* (*RSE*) score range, 0-30; scores between 15 and 25 are in the normal range, scores below 15 suggest low self-esteem.

d *Children’s Global Assessment Scale* (*CGAS*) score range, 1-100; scores between 1-10 extremely impaired, 11-20 very severely impaired, 21-30 severe problems, 31-40 serious problems, 41-50 obvious problems, 51-60 some noticeable problems, 61-70 some problems, 71-80 doing alright, 81-90 doing well and 91-100 doing very well.

e *Behavioral Activation for Depression Scale*: Short Form (*BADS*) no score range as not validated in this population. Used only for descriptive purposes.

# Outcome Measures

Table 2: Outcome measures (mean) at three months and six-months post-baseline for behavioural activation (BA) and treatment as usual (TAU) groups.

|  |  |  |  |
| --- | --- | --- | --- |
| Outcome measure | Treatment arm | 3-month follow-up | 6-month follow-up |
| K-SADS-PL diagnosis\* | BA | 3 participants still meeting MDD criteria (3/7) | n/a |
|  | TAU | 7 participants still meeting MDD criteria (7/8) | n/a |
| MFQ-C | BA | 23.43 | 15.8 |
|  | TAU | 30.5 | 26.67 |
| MFQ-P | BA | 29.33 | 11 |
|  | TAU | 26.6 | 27 |
| RSE\*\* | BA | 14.57 | 15.8 |
|  | TAU | 13.5 | 14.5 |
| CGAS\* | BA | 65.29 | n/a |
|  | TAU | 56.14 | n/a |

\*Measures not completed at 6-month follow-up

\*\*Measure scored in reverse

# Adverse events

There were no adverse events associated with this trial.