

PB-PG-0211-24152 – NIHR Research for Patient Benefit Programme – Final report

Project title: Prevention of major depression in at-risk adolescents: a pilot randomised trial of a screen-and-intervene program

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Plain language summary

Children of depressed parents are about three times more likely to develop depression than any other children. American research shows that depression in children of parents with a history of depression can be prevented by group Cognitive Behavioural Therapy (CBT). This sort of CBT programme has not been tried previously in the UK, and this study aimed to find out if it would effectively work here too, and be acceptable to both children and their parents.

We first contacted parents with a history of depression, through NHS services, and with parental permission asked their children aged 10-17 years-old to complete a questionnaire about symptoms of depression. We also interviewed some parents who didn't take part in the study, and some parents and children who did, about whether it is acceptable to ask children to complete questionnaires in this way, and how they would like children's depression services to be improved. Children who showed elevated symptoms of depression, but did not meet the criteria for current depression, were invited to take part in a CBT group called 'Coping with Stress'. More detailed assessments were carried out before the groups, after 8-weekly sessions, and after 6-monthly follow-up sessions.

We found that 18% of parents, and 64% of children, agreed to take part in the study. The low take-up by parents implies that this is not an efficient approach to identifying at-risk children. It would not be feasible to roll out this approach widely. Analysis of interviews with children and parents will provide information on reasons for low participation. We also found that after questionnaire completion, fewer children than expected obtained a symptom severity score that made them eligible for the CBT groups (19% compared to an expected 30%). Future studies should consider a less burdensome and more feasible way of identifying young people who may benefit from the groups.

CBT groups are yet to be completed, and therefore firm conclusions cannot be drawn. However, self-reported depression symptoms have to date reduced, from the start to the end of the group, suggesting a potential group benefit in reducing early symptoms of depression. Following full data analysis, group effects will become clearer, and tentative conclusions may be drawn as to the benefits of this CBT program. This information will be helpful in developing future NHS programs for this vulnerable group of children.

Keywords

Depression. Stress. Parents. Children. High-risk. Prevention. CBT.

Summary of research findings

Background

Depression is common among adolescents, and associated with academic and social impairment, family burden and high rates of attempted and completed suicide. Many cases of adolescent-onset depression continue into adulthood, and each episode of depression raises the risk of a subsequent episode, with repeated episodes being increasingly hard to treat. In this context, recent efforts have been made to prevent the onset of depression in adolescence; however, no study of targeted depression prevention programmes had been completed in the UK.

Aims and objectives

The objective of the study was to address two main questions: is it feasible and acceptable to identify youth who are at-risk of developing depression; and is it possible to reduce incidence of depression in this at-risk group?

The study therefore had two main aims:

- 1) To investigate the feasibility and acceptability of a screening programme to identify youth at risk of developing depression.
- 2) To determine the acceptability, feasibility, and preliminary clinical-effectiveness of a group CBT programme to prevent onset of depression in youth identified as high-risk of developing the disorder.

Methods

Stage 1:

Patients meeting inclusion criteria were identified initially from local IAPT services electronic patient record system, and also later through GP practices. After an initial approach by the relevant care team, Stage 1 of the study was explained to parents via written information, followed by verbal explanation where possible, via telephone.

Parents who consented to take part in Stage 1 provided consent for the research team to contact their children aged 10-17 years old. Children were then contacted by the research team and the study explained as above.

Young people who consented to take part were invited to complete two initial measures, the Mood and Feelings Questionnaire (MFQ; a brief standardised self-report measure of depression in adolescents), and an acceptability rating scale (a 3-item Likert scale to quantify views on the screening process). They were then invited to complete the MFQ again two weeks later. Based on initial MFQ score, young people were divided into three groups: Low-risk, High-risk, and In-episode. From these groups, a sample of young people and parents were interviewed individually to ascertain: acceptability of screening methods, value of screen and intervene approach for young people, and possible configuration of services for young people. In addition, we interviewed some parents who declined to take part, to understand their reasons for doing so.

Stage 2:

Young people identified as High-risk (MFQ 20-29), and their parents, were invited to take part in Stage 2. Where consent was given, the parent and young person were invited to attend clinical assessment. Diagnostic status was determined using the K-SADS clinical interview, depression symptoms by the Clinician Diagnostic Rating Scale (CDRS), and participants were asked to complete five further self-report measures. Parents were additionally asked to complete a measure of expressed emotion, and one questionnaire about their own current symptoms (PHQ-9).

Participants were then invited to take part in a CBT group intervention. This consisted of eight weekly sessions in the acute phase, including: psycho-education, mood monitoring, identifying and changing negative automatic thoughts and underlying beliefs, and problem solving. Following this, six monthly sessions in the continuation phase included: behavioural activation, mindfulness, and self-care. Parents were also offered a separate group, providing: psychoeducation about depression and the familial link, information about topics covered in the young person's group, and a safe space to reflect on any related issues that arose.

After the 8 acute sessions, and again after the 6 continuation sessions, participants were interviewed using the K-LIFE by an independent assessor, to determine symptoms and diagnoses since the previous assessment. Young people and parents also completed the questionnaires again, and participants' views on the intervention were also sought after the acute phase via a semi-structured interview.

Key findings

Stage 1:

It soon became clear that recruitment of parents through local IAPT services was lower than originally calculated. In contrast to an estimated 60% participation rate, 28% of parents (N=314) approached through IAPT services verbally consented to take part over the course of recruitment, with only 18% of parents (N=200) returning their written consent. Recruitment rate was very low through GP practices, at 2% participation rate of the 745 parents approached.

Recruitment rate for young people reached 64%, with N=156 providing written consent. Interviews with parents and young people will be crucial in understanding reasons for low take-up, and the acceptability of using this screening method. Over two dozen young people have been interviewed, as have 18 parents who opted to participate, and 13 parents who declined to participate. We also expect to learn more from the young people's point of view, through analysis of responses to the acceptability rating scale measure once all data has been received.

At the time of writing, 125 young people have completed the initial screening. Of these: 55% (N=69) scored in the Low-risk group, 18% (N=23) scored in the High-risk group, and 27% (N=33) scored in the In-episode group. These figures, although closely matching the original expectation of 30% of young people scoring In-episode, were found to differ for the other two

groups, having expected to find 40% scoring in the Low-risk and 30% scoring in the High-risk groups. Although we are awaiting completion of 29 screening questionnaires, these figures have remained stable over time, and we would not expect these to vary greatly.

Stage 2:

Of the young people who scored in the High-risk group at screening, and have to date been invited to take part in a Stage 2 CBT group, we found that a higher proportion of 10 – 13 year-old participants (80%; N=4) attended assessment for a group, compared to 14 – 17 year-old participants (55%; N=6). Subsequent attendance of the offered group was also found to differ between age-ranges, with 100% of Cohort 1 (10-13 year old) participants starting and completing the group, and 50% of Cohort 2 (14-17 year old) participants starting the group, although one person dropped out after the first session. Reasons given for withdrawing after assessment for Cohort 2 related to the timing and location of the group.

Once participating in a group, we have so far found attendance to be good, with a final average attendance rate of 89% for Cohort 1, and a current average attendance of 94% for Cohort 2 after 9 of their 14 sessions. In contrast, we have found a very low up-take for participating parents attending the parent group meetings offered. In Cohort 1, one parent attended all sessions offered, but was joined by a second parent for only three meetings, and no parents chose to attend in Cohort 2.

In terms of clinical effectiveness of the groups, analysis of the full data-set is yet to be conducted, and so no firm conclusions can be made at this time. However, we have found that to date, the average scores on the short-form MFQ, a measure conducted at the start of every group session, show a small reduction in self-reported depression symptoms; in Cohort 1 from an average of 7 in the first group session to an average of 5 in the final session, and in Cohort 2 from an average of 12 in the first group session to an average of 9 in the most recent session (Week 9).

Overall findings relating to the acceptability and feasibility and clinical effectiveness of the groups will be analysed and reported once one final cohort of young people (Cohort 3), has been completed. This group is planned to start in January 2016.

Expected impact and conclusions

Given the findings above relating to the low recruitment rates for the study, it is clear that approaching parents through IAPT services and GP practices in this way is not a feasible method of identifying eligible parents and young people for a depression prevention study such as this. Any further studies undertaken in this area would need careful consideration of how to optimally identify and approach eligible parents and young people. Parents' views on this from our qualitative interviews will provide an understanding of what may and may not be acceptable in this regard, and will help to plan any future studies. Also, considering the smaller proportion of young people scoring in the High-risk group than expected, it may be useful for future studies to consider the effectiveness of the MFQ as a screening measure of depression in young people, and whether such a measure is needed given all young people could be considered High-risk by virtue of having a parent with a history of depression.

It is too early to draw firm conclusions regarding the acceptability and clinical effectiveness of the group CBT programme provided. However, given the low participation rate so far in the CBT groups for 14-17 year-olds, a different approach may be needed to engage this group of young people. It will therefore be important to re-examine this in light of the qualitative interviews conducted with young people about their group experience. Additionally, the reduction in average self-reported depression symptoms over the course of the CBT group indicates that there may be a small clinical benefit of the group for young people. Although this would need to be considered in light of a full data analysis, once all groups are completed, before drawing conclusions as to whether the CBT group provides benefit to young people at high-risk of developing depression in the UK as it did in the USA.

Patient and public involvement

Patients and the public have been actively involved in this research from the outset. When planning the project, we sought input from service user representatives from our local Southwark IAPT service, and from young patients and parents in our specialist mood disorder clinic. Their input was critical in shaping and finalising the project, and in securing funding.

Patient and public involvement (PPI) continued to be integral to this project in the following ways:

First, service user representatives are key members of our steering committee. One adult service user member regularly attends the steering committee. Two young people, one a former patient and the other a current patient in our specialist mood disorder clinic, were also members of this steering committee at the start. Neither were able to attend in person, but both of them had input valuable views and information to the meeting by liaising with the project coordinator beforehand. We had planned from the outset that this was a reasonable and service-user-friendly way for young people to contribute to the steering committee.

Second, service users have been critical in finalising our assessment measures. For example, young service users commented on the presentation of the questionnaire booklets for young people. They were both integral in shaping the qualitative interview schedule which has been carried out with young people. Likewise, the adult service user has been integral to the shaping of the qualitative interview schedule which has been carried out with parents. They will be part of the research team which validates the emerging themes from these qualitative interviews.

Third, service users have been influential in shaping our recruitment strategy. For example, our adult service user representative on the steering committee provided valuable insights about the experience of being approached to take part in research. This input was crucial in our amendment applications to the REC, seeking approval for a change in our recruitment strategy.

Seeking the views of parents and young people, about the process of being approached to take part in a screening and prevention study, was central to this project. We carried out more than two dozen qualitative interviews with young people, and with 31 parents (18 who consented to participate, and 13 who declined to participate). We have also carried out

interviews with young people who have taken part in our CBT groups, to seek their views on the delivery of the intervention itself. This qualitative information, from multiple informants and at each stage of the project, is central to evaluating the feasibility of this sort of project.

PPI will also be central to dissemination plans for the study. Service user groups in each of our local participating IAPT teams (Southwark, Lambeth, Lewisham and Croydon) will be informed of the outcome of the study in writing, via a newsletter. The Principal Investigator will also provide verbal feedback; visiting each group to give a talk.

Data sharing statement

See link

[\[https://www.nihr.ac.uk/documents/nihr-position-on-the-sharing-of-research-data/12253\]](https://www.nihr.ac.uk/documents/nihr-position-on-the-sharing-of-research-data/12253) for the NIHR position of the sharing of research data. The NIHR strongly supports the sharing of data in the most appropriate way, to help deliver research that maximises benefits to patients and the wider public, the health and care system and which contributes to economic growth in the UK. All requests for data should be directed to the award holder and managed by the award holder.

Disclaimer

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This final report has not been peer-reviewed. The report was examined by the Programme Director at the time of submission to assess completeness against the stated aims.

This project was carried out between May 2013 and November 2015.