Preventing childhood depression

OVERVIEW
Promoting positive mental health

REVIEW
Developing skills to prevent depression
Overview

Promoting positive mental health
Practitioners, policy-makers and researchers are increasingly recognizing that positive mental health—or social and emotional well-being—is crucial for healthy child development. We look at factors associated with positive mental health as well as specific ways parents and caregivers can enhance children's well-being.

Review

Developing skills to prevent depression
What can be done to prevent childhood depression? We examine five cognitive-behavioural prevention programs that can hold depression at bay.

Implications for practice and policy

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Helping children with depression
At any given time, more than 10,000 children and youth in BC experience depression. We examine the best treatments to help these young people.

How to Cite the Quarterly

We encourage you to share the Quarterly with others and we welcome its use as a reference (for example, in preparing educational materials for parents or community groups). Please cite this issue as follows:

Promoting positive mental health

Happiness. Joy. Exuberance. These are just some of the words describing positive emotions that all children can and should experience. To this end, there is growing recognition among practitioners and policy-makers that beyond preventing and treating mental disorders, it is also important to promote children’s positive mental health — or social and emotional well-being. In fact, the World Health Organization (WHO) has written an action plan for meeting this goal.1 The plan speaks to ensuring that children have the skills they need to manage their thoughts and emotions and to build positive social relationships — enabling their full and active participation in society by the time they reach adulthood.1

The pursuit of happiness

More research is also emerging on child well-being and happiness — particularly on factors that may contribute to positive mental health.2 Four large surveys using representative community samples have produced similar or overlapping evidence. A survey completed by more than 87,000 Finnish adolescents found that talking frequently with parents and having at least one close friend were strongly associated with happiness for these young people.3

Similar results were found in a survey of more than 4,600 British teens. Having positive family relationships and having supportive friends were the strongest correlates of well-being. As well, having positive relationships with neighbourhood adults also contributed to such feelings.4

A survey of more than 9,000 New Zealand adolescents further corroborated these results. Strong relationships with family and strong relationships with friends were both correlated with young people’s happiness. This survey also found that a robust school connection and regular exercise were important factors.2

A survey conducted among 737 Finnish children similarly found positive family relationships to be strongly correlated with high levels of happiness — once again confirming the importance of family connections.5 Other social connections were highly correlated as well, albeit with gender differences. For girls, having positive relationships with friends and with other adults such as teachers and coaches was strongly linked with happiness.5 For boys, in comparison, having two or more close friends was strongly linked with happiness.5

Protecting children from depression

Yet sad feelings are also a part of life. That said, it is important to understand what may protect young people from having these difficult feelings on a prolonged basis, and what may prevent them from developing clinical depression. By following representative samples of children over time, researchers have been able to address these questions in two large long-term surveys — identifying robust information on protective factors.

A survey of nearly 12,000 American adolescents assessed over five years found three factors that consistently distinguished those who did not have depressed moods from those who did. Children residing with two parents, parents having higher levels of education and children having higher self-esteem were all protective factors. Having a stronger connection with parents, friends or schools was also protective.

The other survey followed nearly 1,000 school-aged children from New Zealand through until adulthood. It found that adolescents who had a positive relationship with their parents at age 15 — including feeling accepted and respected by them — were less likely to develop depression later on, from ages 16 through 30. In fact, depression rates were more than halved for those who had the strongest relationships with their parents, compared with those who had the weakest relationships, suggesting that this factor had a strong impact.

Social relationships matter

Across these six surveys involving young people at different stages of development and from four different countries or regions, the evidence appears to be converging. One factor — positive relationships — has consistently promoted child happiness and well-being and protected against depression. Positive relationships with parents were found to be a significant factor across all six surveys, while positive relationships with peers were found to be significant in five. Positive relationships with other adults — including coaches, teachers and neighbours — meanwhile, were related to youth well-being in two surveys.

These findings underscore the importance of children experiencing supportive relationships — particularly with their parents. They also suggest specific actions that parents and other caregivers can take to foster supportive relationships with their children, including:

- Talking frequently with children
- Conveying to children that their views are taken seriously
- Encouraging young people to play a role in family decision-making
- Making it easy for children to raise and discuss problems or concerns they are having
- Engaging in shared activities
- Expressing warmth and caring on a frequent basis

Beyond these strategies that any family can use, specific prevention programs can also help ensure that depression is avoided in as many children as possible. The upcoming review outlines the evidence for these programs.
Developing skills to prevent depression

What can be done to prevent depression in children? We first set out to answer this question in the Quarterly nearly a decade ago. At that time, we found three randomized controlled trials (RCTs) supporting cognitive-behavioural therapy (CBT). This included one CBT program, Coping with Stress, that reduced both diagnoses and symptoms, and two CBT programs that reduced symptoms only.8 We also found one RCT supporting interpersonal psychotherapy (IPT). Specifically, the IPT program Teen Talk reduced diagnoses.8

Since we completed that review, there has been considerable new research on preventing depression. To identify these new evaluations, we searched the literature from 2007 to 2016 for RCTs. We built quality assessment into our inclusion criteria to ensure that we reported on the best available evidence. (For more information, please see our Methods.) We retrieved and assessed 81 RCTs, seven of which met our inclusion criteria.

The seven RCTs evaluated six different CBT interventions, all delivered in groups: Aussie Optimism, Feelings Club, Family Group CBT, Coping with Depression, Coping with Stress (evaluated in two separate RCTs) and Icelandic Prevention.9–21 Both Coping with Stress RCTs also evaluated Feeling Good, a self-guided CBT book outlining techniques for preventing and reducing negative moods. As well, the second Coping with Stress RCT also evaluated Supportive-Expressive Group, an intervention aimed at helping teens identify and express emotions.

Among the interventions evaluated, only Aussie Optimism was delivered universally, to all students attending participating schools.9 The remaining interventions were all targeted, focusing on children with either symptoms of depression,17, 19–20 symptoms of depression or anxiety,11 a past depressive episode and/or current depressive symptoms and a parent with a past or current depressive disorder,14 or a parent with current or past depression.12

What’s included in CBT?

While there was some variation in the CBT programs, two components were typically included. First, children were taught cognitive restructuring so they could identify and challenge negative thoughts. For example, a girl who expressed the belief she was going to fail an upcoming science test would examine the likelihood of this outcome based on the available evidence, including the considerable time she spent studying and her past successes on science tests. Second, young people were encouraged to increase their engagement in activities that brought them pleasure or a sense of accomplishment. For example, a boy might be encouraged to rejoin his soccer team and spend time with friends after school twice a week.

Two CBT programs — Aussie Optimism and Feelings Club — took a different approach, addressing anxiety as well as depression. Each included CBT techniques for both conditions, with Feelings Club appearing to particularly focus on anxiety.5, 11
All the interventions were tested against comparison conditions: a no-intervention control group, a group or class with no therapeutic content, or written materials on depression. Table 1 provides more information on these programs and the RCTs.

**Table 1: Depression Prevention Program Evaluations**

<table>
<thead>
<tr>
<th>Program (Country)</th>
<th>Delivery format</th>
<th>Sample size</th>
<th>Child ages at start</th>
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<tbody>
<tr>
<td><strong>Universal Program</strong></td>
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<tr>
<td><strong>Aussie Optimism</strong> (Australia)</td>
<td>10 group cognitive-behavioural therapy (CBT) sessions delivered in schools by teachers</td>
<td>910</td>
<td>9–10 years</td>
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<tr>
<td><strong>Targeted Programs</strong></td>
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<tr>
<td><strong>Feelings Club</strong> (Canada)</td>
<td>12 group CBT sessions + 3 parent education sessions delivered in schools by practitioners</td>
<td>148</td>
<td>8–12 years</td>
</tr>
<tr>
<td><strong>Family Group CBT</strong> (US)</td>
<td>12 group CBT sessions delivered in clinics by practitioners</td>
<td>155</td>
<td>9–15 years</td>
</tr>
<tr>
<td><strong>Coping with Depression</strong> (US)</td>
<td>14 group CBT sessions + 2 parent education sessions delivered in clinics by practitioners</td>
<td>316</td>
<td>13–17 years</td>
</tr>
<tr>
<td><strong>Coping with Stress I</strong> (US)</td>
<td>6 group CBT sessions delivered in schools by school-based practitioners</td>
<td>378</td>
<td>13–19 years</td>
</tr>
<tr>
<td><strong>Feeling Good</strong> (US)</td>
<td>Students provided copy of this CBT book + 2 phone calls to encourage reading it</td>
<td></td>
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<tr>
<td><strong>Icelandic Prevention</strong> (Iceland)</td>
<td>14 –15 group CBT sessions delivered in schools by a variety of school staff including some practitioners</td>
<td>171</td>
<td>14–15 years</td>
</tr>
<tr>
<td><strong>Coping with Stress II</strong> (US)</td>
<td>6 group CBT sessions delivered in schools by practitioners</td>
<td>341</td>
<td>14–19 years</td>
</tr>
<tr>
<td><strong>Supportive-Expressive Group</strong></td>
<td>6 group sessions designed to identify + express emotions delivered in schools by practitioners</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Feeling Good</strong> (US)</td>
<td>Students provided copy of this CBT book (without phone calls)</td>
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* Study authors made some modifications to the original program.

**CBT is not “one size fits all”**

We looked at child outcomes for the six CBT programs, as well as for *Feeling Good* and *Supportive-Expressive Group*, at the longest follow-up periods available. The one universal CBT program — **Aussie Optimism** — failed to produce benefits. At 1.5-year follow-up, it made no significant difference in diagnostic rates of depression or dysthymia for the small minority of children who had a diagnosis at pre-test, and it did not prevent new cases. (A diagnosis of dysthymia was given when a depressed mood, along with two additional symptoms, such as eating and sleep problems, occurred for at least one year and caused significant distress or impairment. This disorder is currently known as persistent depressive disorder.) As well, the program made no difference in depressive symptoms at 1.5- and 2.5-year follow-ups.

Among the five targeted programs, two were ineffective. *Feelings Club* did not significantly reduce either depressive diagnoses or symptoms for children at one-year follow-up. *Coping with Depression* also failed to produce long-standing benefits. During the 5.5-year follow-up, there were no differences between intervention and control adolescents in overall rates of new cases or new episodes of depression, number of depression-free days or depressive symptoms (80.1% of teens had experienced an episode of depression before participating in the study).

But three programs did report success. *Family Group CBT* resulted in significantly fewer young people being diagnosed with depression during 1.5-year follow-up, albeit with no significant difference on a depression symptom measure, relative to comparison young people. In fact, youth who participated in
Family Group CBT had nearly three times lower odds (odds ratio [OR] = 2.9) of being diagnosed with depression than comparison youth (14.3% versus 32.7%, respectively).

Icelandic Prevention also produced benefits. Adolescents participating in this program had significantly reduced risk of being diagnosed with depression or dysthymia during one-year follow-up (hazard ratio = 0.2). Further, Icelandic Prevention decreased the likelihood of young people having an initial episode of depression or dysthymia by 81.8% (3.9% for Icelandic Prevention versus 21.0% for the comparison group).21

Both evaluations of Coping with Stress found that the program produced significant benefits on all depression-related outcomes. In Coping with Stress I, participating adolescents had less than half the risk of developing depression compared with youth who were provided with the Feeling Good book by the two-year follow-up (10.3% versus 25.0%; hazard ratio = 2.5). Surprisingly, however, there was no significant difference in the risk for developing depression between Coping with Stress I and the control condition (16.9%).18

The evaluation of Coping with Stress II then found depression diagnoses were significantly lower for adolescents in all three active interventions, including Coping with Stress II (6.8%), Supportive-Expressive Group (6.7%) and Feeling Good (2.5%), compared to control youth (13.1%) by 4.6-month follow-up. Youth participating in either Coping with Stress II or Supportive-Expressive Group had fewer than half the odds of being diagnosed with depression, while Feeling Good youth had fewer than one-quarter the odds of being diagnosed with depression, relative to control youth (ORs ranged from 2.4 to 4.5).19 Overall, the three active interventions all performed similarly regarding depression diagnoses, with no significant difference among them.

There were, however, differences among the three interventions regarding depressive symptoms. Youth participating in Coping with Stress II had fewer depressive symptoms compared to both controls and Feeling Good youth (with small effect sizes for both comparisons: d = 0.4). Youth in the Supportive-Expressive Group also had fewer depressive symptoms compared to both controls and Feeling Good youth (also with small effect sizes for both comparisons: d = 0.3).19 Table 2 details outcomes for all the RCTs.

<table>
<thead>
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<th>Table 2: Depression Prevention Program Outcomes</th>
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<tr>
<td><strong>Program</strong></td>
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<td><strong>Universal Program</strong></td>
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<td>Coping with Depression</td>
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<tr>
<td>Supportive-Expressive Group</td>
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<td></td>
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<tr>
<td>Feeling Good</td>
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</tbody>
</table>

* For both children who had either diagnosis at pre-test and those who did not.

** Depression diagnoses were significantly reduced among youth who received Coping with Stress I compared to youth who received Feeling Good but not compared to youth in the control group.
Why some programs fell short

CBT has a history of successfully preventing depression and its symptoms. So the most surprising finding from this review may be that three of the six CBT programs we featured failed to produce sustained benefits.

There are likely two reasons why Aussie Optimism and Feelings Club were unsuccessful. First, unlike the other CBT interventions, these two programs were delivered exclusively to preteens. This meant that the interventions were delivered to children at a time when depression is far less likely to occur, as the onset of depression is much greater after age 13 than before. This finding is also consistent with a previous review which found that depression prevention is more effective for children older than age 13. These data suggest that Aussie Optimism and Feelings Club may have been provided to children too early in their development to be effective. Second, Aussie Optimism and Feelings Club both attempted to prevent both anxiety and depression, with the content of the latter program being particularly focused on anxiety. It is possible that by trying to prevent both conditions, content was too voluminous to be effective.

Coping with Depression also failed to produce benefits on depression-related outcomes, but likely for different reasons. This was the only evaluation in which most participants (i.e., 80.1%) had a prior episode of depression before entering the study. Consequently, these teens were at particularly high risk for future depressive episodes, meaning they may have needed a more intensive intervention. As well, 62.3% of Coping with Depression youth and 57.3% of controls participated in other forms of outpatient treatment, which could have had therapeutic benefits. As a result, Coping with Depression would have been more challenged to produce statistically significant benefits.

Recapping the successes

Our current review nevertheless identified three effective CBT programs: Coping with Stress, Family Group CBT and Icelandic Prevention. All three reduced childhood depressive diagnoses. We also found some evidence supporting use of the CBT book Feeling Good. These findings build on our previous review, which also found success for CBT programs. This success included Coping with Stress preventing depression diagnoses and Taking Action preventing depressive symptoms. Our older review also found that the IPT program Teen Talk prevented depression diagnoses. (The one new RCT on child IPT did not meet the inclusion criteria for this current review.)

Implications for practice and policy

Our current and past reviews on preventing childhood depression offer important insights based on 15 years of RCT evaluations. In aggregate now, Coping with Stress is supported by three RCTs, and Family Group CBT, Icelandic Prevention, Taking Action and Feeling Good are each supported by one RCT. All of these group CBT programs reduced either diagnoses or symptoms or both. This strong body of evidence shows that CBT is effective in preventing depression. It should be the first choice for practitioners and policy-makers. Beyond CBT, Teen Talk, based on IPT, also proved successful in one RCT. Taken together, this body of research evidence suggests three recommendations for practitioners and policy-makers.
• **Invest in effective depression prevention programs.** Five CBT programs have rigorous evidence documenting success in preventing depression in adolescents. These include *Coping with Stress, Family Group CBT, Icelandic Prevention, Taking Action* and *Feeling Good*. One IPT program, *Teen Talk*, also proved successful. Thus practitioners and policy-makers have various programming options. Among these programs, *Coping with Stress* stands out, with three rigorous RCTs showing that the program reduces depression diagnoses. It is therefore the best place to start when planning new program implementation.

• **Focus prevention efforts for maximum benefit.** The evidence from our current and past reviews suggests that depression prevention efforts will have more success when they focus on young people at higher risk. This group includes adolescents, rather than children, who are currently experiencing symptoms of depression or who have a parent with depression. Targeted programming will also help to ensure efficiencies — by focusing on those who are most likely to benefit.

• **Reach more young people.** All the successful prevention programs covered in this review were delivered in groups, making it possible to reach many more youth than with individual interventions. As well, three of the successful interventions were delivered in schools, a setting that can be particularly effective in reaching more young people.

  We know how to prevent depression, a common childhood condition — and one that can lead to significant ongoing adult disability if left unaddressed. Childhood is the ideal time to intervene to avert the avoidable lifelong distress and disability caused by depression.

  For preventing depression in childhood, targeted CBT is now supported by evidence from multiple RCTs. BC already has considerable CBT capacity through child and youth mental health practitioner training and through the school-based *FRIENDS* anxiety-prevention program, which has been operating for more than a decade. So adding new CBT programs for preventing depression should be feasible, particularly given that successful programs like *Coping with Stress* can be delivered in schools. The RCT evidence also supports providing preventive CBT in groups, allowing practitioners to greatly extend their reach.

  In BC and beyond, the aim must be to ensure that all children in need have access to effective, culturally respectful depression prevention programs. Over time, expanded prevention efforts will also ensure that more young people are reached — before depressive disorders develop, and well before these disorders become needlessly entrenched.

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**For more information on our research methods, please contact**

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Childhood is the ideal time to intervene to avert the avoidable lifelong distress and disability caused by depression.
METHODS

We use systematic review (SR) methods adapted from the Cochrane Collaboration and Evidence-Based Mental Health. We build quality assessment into our inclusion criteria to ensure that we report on the best available evidence — requiring that intervention studies use randomized controlled trial (RCT) methods and also meet additional quality indicators. For this review, we searched for SRs and RCTs on preventing depressive disorders in children. Table 3 outlines our database search strategy.

Table 3: Search Strategy

<table>
<thead>
<tr>
<th>Sources</th>
<th>• Campbell, Cochrane, CINAHL, ERIC, Medline and PsycINFO</th>
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<tbody>
<tr>
<td>Search Terms</td>
<td>• Depression or depressive or MDD and prevention or intervention or promotion or program</td>
</tr>
<tr>
<td>Limits</td>
<td>• Peer-reviewed articles published in English between 2007 and 2016</td>
</tr>
<tr>
<td></td>
<td>• Children aged 18 years or younger</td>
</tr>
<tr>
<td></td>
<td>• Systematic review, meta-analysis, or RCT methods used</td>
</tr>
</tbody>
</table>

To identify additional RCTs, we also hand-searched reference lists from a recently published SR on cognitive-behavioural therapy and interpersonal psychotherapy, and from previous Children’s Health Policy Centre publications. Using this approach, we identified 81 RCTs. Two team members then independently assessed each RCT, applying the inclusion criteria outlined in Table 4.

Table 4: Inclusion Criteria for RCTs

• Participants were randomly assigned to intervention and comparison groups (i.e., no intervention or minimal intervention comparison groups) at study outset. Head-to-head comparisons of different interventions that did not use a minimal or no treatment comparison group were excluded.
• Clear descriptions were provided of participant characteristics, settings and interventions
• Interventions were evaluated in a high-income country (according to World Bank standards), for comparability with Canadian policy and practice settings
• Interventions aimed to prevent childhood depression
• At study outset, most participants did not have a current depression diagnosis
• Follow-up was three months or more (from the end of the intervention)
• Attrition rates were below 20% at follow-up and/or intention-to-treat analysis was used
• Child outcome indicators included depression diagnoses, assessed at follow-up using two or more informant sources
• At least one outcome rater was blinded to participants’ group assignment
• Reliability and validity of all primary outcome measures or instruments was documented
• Levels of statistical significance were reported for primary outcome measures

Seven RCTs met all the inclusion criteria. Data from these studies were then extracted, summarized and verified by two or more team members. Throughout our process, any differences between team members were resolved by consensus.
BC government staff can access original articles from BC's Health and Human Services Library.

The Children's Mental Health Research Quarterly Subject Index provides a detailed listing of specific topics covered in past issues, including links to information on specific programs.

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2016 / Volume 10
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2009 / Volume 3
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2 – Preventing and treating child maltreatment
1 – The economics of children's mental health

2008 / Volume 2
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2 – Preventing and treating childhood depression
1 – Building children’s resilience

2007 / Volume 1
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3 – Children’s emotional wellbeing
2 – Children’s behavioural wellbeing
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