

# Quarterly

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## Mental health treatment: Reaching more kids

### INTRODUCTION

Supporting kids in the time  
of COVID-19

### OVERVIEW

Building treatment capacity

### REVIEW

Bringing effective treatments  
to more children



# Quarterly

VOL. 14, NO. 2 2020



**Children's  
Health Policy  
Centre**

## About the *Quarterly*

We summarize the best available research evidence on a variety of children's mental health topics, using systematic review and synthesis methods adapted from the *Cochrane Collaboration* and *Evidence-Based Mental Health*. We aim to connect research and policy to improve children's mental health. The BC Ministry of Children and Family Development funds the *Quarterly*.

## About the Children's Health Policy Centre

We are an interdisciplinary research group in the Faculty of Health Sciences at Simon Fraser University. We focus on improving social and emotional well-being for all children, and on the public policies needed to reach these goals.

To learn more about our work, please see [childhealthpolicy.ca](http://childhealthpolicy.ca).

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### Psychosis: Is prevention possible?

Beyond treating psychosis, researchers and practitioners are increasingly seeking effective prevention options. We examine findings from recent prevention trials.

## 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:

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# Supporting kids in the time of COVID-19

The COVID-19 public health emergency is putting a lot of pressure on parents, caregivers and others who work with children. They must explain challenging concepts, help children manage their fears and keep routines as stable as possible. To assist with these challenges, we offer the following suggestions:

- Build an environment that allows children to comfortably ask questions at their own pace. Answer questions honestly, using concepts children can easily understand. For example, explain that the new coronavirus is one of many different types of viruses, like the ones that cause colds. And be prepared to repeat your answers, for children may ask the same questions more than once to gain reassurance.<sup>1</sup>
  - Help children manage their fears by modelling calmness and by providing accurate information. This can include explaining the steps you are taking to keep them healthy and safe, as outlined in the sidebar. It may also involve highlighting the many actions community members are taking to protect everyone. But avoid exposing children to media sources that could unnecessarily heighten their anxiety.
  - Try to maintain children's regular routines as much as possible. Fun activities, like playing outdoors and bike riding, are still possible even with physical distancing. Similarly, technology can help in maintaining other important activities, such as having virtual play dates and connecting with grandparents.
  - Encourage children to think about ways they can help others. This could include, for example, helping neighbours who may need things delivered to their doors, sending positive messages to loved ones who may not be nearby, or communicating with other children remotely while doing schoolwork together.
- During the COVID-19 outbreak, some children who need mental health treatment may no longer have in-person access to their practitioner. To address this, many practitioners are doing their best to provide services by telephone or video conferencing. To help support more children who may be in need of treatment during times of social distancing, we feature five successful interventions in the [Review](#) article, including treatments for anxiety, attention-deficit/hyperactivity disorder and depression — all of which can be self-delivered. 



Parents can help children manage their fears by modelling calmness.

Try to maintain children's regular routines as much as possible.

## Resources for parents and families

New resources for children are being developed rapidly. These include an [online comic](#) explaining the virus and how to keep safe, a [silent video](#) showing good handwashing techniques, a new book on [handwashing](#) aimed at kids, and a [webpage](#) highlighting [relaxation exercises](#). For families with a child on the autism spectrum, a web resource from the University of North Carolina offers [seven support strategies](#) designed to meet the unique needs of children with autism.

# Building treatment capacity

**S**tark shortfalls persist in specialized mental health treatment services for Canadian children and youth, with as many as 70% of young people with mental disorders not accessing these services.<sup>2</sup> And these deficits have been chronicled for decades.<sup>3-5</sup> In fact, at any given time more than 60,000 children and youth in BC — and just over half a million in Canada — meet criteria for a mental disorder without receiving specialized mental health services.<sup>2,6</sup>

Alongside these deficits, calls for improving children's mental health service delivery are also long-standing. For example, nearly two decades ago, the United States' surgeon general concluded that barriers to effective children's mental health treatments constituted a public health crisis.<sup>7</sup> Similar calls were made in Canada starting more than 30 years ago.<sup>3</sup>

Yet numerous impediments remain. These include the lack of trained practitioners, especially in remote communities,<sup>8-9</sup> as well as long waiting lists.<sup>10</sup> Many families also face hurdles such as having to travel to receive services, which interferes with school for children and employment for parents.<sup>11</sup> As well, stigma may prevent some families from reaching out for help, for example, if parents fear they may be blamed for their child's mental health problems.<sup>12-13</sup>

## Innovative approaches

Increasing the number of mental health professionals who can provide effective one-on-one treatments in clinic settings is one way to reach more children. Yet given the population affected, this approach is highly unlikely to reach all those in need.<sup>9</sup> Instead, more comprehensive approaches that include novel delivery methods are also needed. To this end, effective treatments that involve self-delivery, namely those that do not require face-to-face practitioner contact, may be an innovative way to improve capacity.

Self-delivered treatments accessed online, by text or telephone, or by book have several advantages. They can be provided on a larger scale and at lower costs than in-person therapies.<sup>9</sup> They are accessible in convenient locations, such as people's homes, and at the times of people's choosing. These treatments can also reach more families in remote areas. As well, they may be more palatable to families who would not ordinarily pursue or receive treatment for their children.<sup>9</sup>

But how effective are these self-delivered forms of treatment, and are they suitable for common childhood mental disorders? In the [Review](#) that follows, we highlight recent studies on five such treatments that have considerable potential to reach more children in need. 

**Effective treatments that involve self-delivery may be an innovative way to improve capacity.**



Barriers to children receiving specialized mental health services can be reduced.

# Bringing effective treatments to more children

**A**s noted in the *Overview*, the number of children needing treatment for mental disorders greatly exceeds treatment capacity.<sup>2, 4–5</sup> Identifying successful interventions that can be self-delivered is one potential route for reaching more children in need. We therefore aimed to identify such treatments.

We found the interventions by reviewing previous *Quarterly* issues and by searching for new evaluations published between 2014 and 2019. We accepted studies that showed randomized controlled trial (RCT) evidence of success in reducing child symptoms or diagnoses — and that did not require face-to-face practitioner contact. Treatments also had to be accessible (i.e., available to the general public in Canada without requiring any specialized training). (Please see the Methods for more information on our search strategy and inclusion criteria. The sidebar also identifies a local self-delivered program that did not meet criteria for our review.)

After reviewing previous *Quarterly* issues and assessing 42 studies, we accepted five RCTs evaluating five treatments, as follows:

- Three RCTs for anxiety — evaluating Turnaround, Chase Worries Away, and Helping Your Anxious Child<sup>11, 14–15</sup>
- One RCT for attention-deficit/hyperactivity disorder (ADHD) — evaluating Parenting the Active Child<sup>11</sup>
- One RCT for depression — evaluating Leap<sup>16</sup>

## Going up against anxiety

The three RCTs of anxiety treatments were similar in several ways. Children had to meet diagnostic criteria for a primary anxiety disorder according to *Diagnostic and Statistical Manual of Mental Disorders IV* standards.<sup>21</sup> All three treatments used cognitive-behavioural therapy (CBT), including providing education about anxiety, challenging unhelpful thinking, and practising facing feared situations.<sup>11, 14–15</sup> As well, all three included components for both children and parents.



Effective self-delivered treatment options exist for many of the most common childhood mental disorders.

## What about Confident Parents: Thriving Kids?

The Canadian Mental Health Association has launched two versions of Confident Parents: Thriving Kids to help parents in British Columbia support their children in managing anxiety and/or behaviour challenges.<sup>17</sup> Both versions were modelled after interventions with solid evidence of success, including cognitive-behavioural therapy for anxiety and Parent Management Training – Oregon Model for behaviour.<sup>18–19</sup> Both are available for free. As well, the behaviour version has been evaluated using a robust child mental health measure (albeit with no controls). Specifically, 70% of parents reported that children's behaviour problems had resolved by program completion.<sup>20</sup>

Turnaround focused on children aged five to 11. Children and parents received 10 CBT audio lessons and were encouraged to listen to each lesson at least twice.<sup>14</sup> Parents supported their child to use CBT and were also given two CDs with additional guidance on using praise and problem-solving to further reduce their child's anxiety.<sup>14</sup> To reinforce their learning, children completed daily journal exercises.<sup>14</sup> Children were also given a CD to assist with their mastery of breathing and progressive muscle relaxation exercises.<sup>14</sup> Families completed the program within five weeks.

**Some children can greatly benefit from self-delivered interventions, even becoming disorder free.**

Chase Worries Away aimed to help children aged six to 12. This CBT program included handbooks for parents and children, an anxiety diary and videos teaching skills, including relaxation.<sup>11</sup> Families also had weekly telephone sessions with a coach to help with building skills and solving problems.<sup>11</sup> Families completed the program within six-and-a-half months.

The RCT evaluating the book *Helping Your Anxious Child* focused on assisting parents to support their six- to 12-year-old children. In addition to detailing core CBT strategies, the book reviewed ways in which parents could help children build their social skills.<sup>15</sup> Although parents were advised to read the book at their own pace, a three-month time frame for completion was suggested.<sup>15</sup> Children also received a workbook containing CBT exercises that paralleled the content provided to parents.<sup>15</sup> In addition to being compared to a waitlist control group, *Helping Your Anxious Child* was also evaluated against Cool Kids, a CBT group for children. Table 1 describes the three anxiety treatments as well as the ADHD and depression treatments.

**Table 1: Self-Delivered Treatment Studies**

Intervention	Ages (years)
Country	
Sample size	
<b>Anxiety</b>	
Turnaround: 10 cognitive-behavioural therapy (CBT) audio sessions for families, supplemented with journaling for children + CDs with support strategies, completed over 5 weeks <sup>14</sup>	5–11
	Australia
	24
Chase Worries Away: CBT handbooks, videos, anxiety diary + 13 telephone coaching sessions for families, completed over 6½ months <sup>11</sup>	6–12
	Canada
	91
Helping Your Anxious Child: CBT book for parents + workbook for children completed over 3 months <sup>15</sup>	6–12
	Australia
	267
<b>Attention-deficit/hyperactivity disorder</b>	
Parenting the Active Child: * Parent training handbook, video, behaviour chart + 14 telephone coaching sessions for parents, completed over 6¾ months <sup>11</sup>	8–12
	Canada
	72
<b>Depression</b>	
Leap: ** 8 internet-based mindfulness modules, completed over 2 months <sup>16</sup>	13–18
	Canada
	31

\* This program has since been renamed to Parents Empowering Kids.  
\*\* This program has since been renamed to BreathingRoom.

## Using positive attention to help with ADHD

Parenting the Active Child, now called Parents Empowering Kids, focused on children aged eight to 12 with ADHD.<sup>11</sup> This program aimed to help parents notice and reward good behaviour; ignore challenging behaviours (such as whining and complaining); use time outs effectively; prepare children for transitions; and collaborate with schools.<sup>11</sup> Parents were given a handbook, a video and a behaviour chart, which were supplemented with weekly telephone sessions with a coach.<sup>11</sup> Parents completed the program in slightly less than seven months. (Both Parenting the Active Child and Chase Worries Away were designed and evaluated by the same Canadian research team. Together the programs are also known as Strongest Families.)

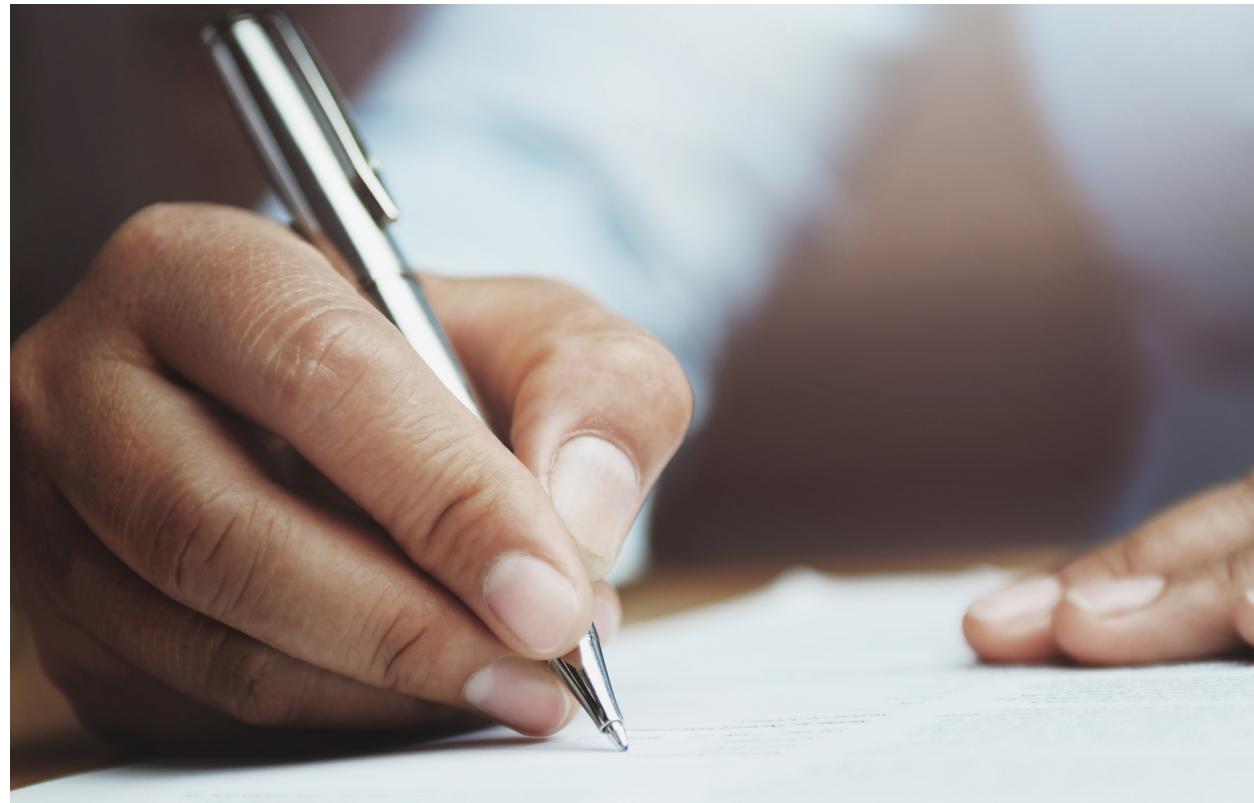
## Building better moods

Leap, now called BreathingRoom, focused on teens aged 13 to 18 with depression.<sup>16</sup> The program used mindfulness techniques, including increasing forgiveness, gratitude and compassion while also reducing negative thinking, loneliness and boredom.<sup>16</sup> Teens completed the eight internet-based modules within two months.

**Policy-makers**  
may want invest  
in additional self-  
delivered programs  
to give Canadian  
children and families  
more options.

## Ensuring children's safety

For these self-delivered interventions, study authors took extra steps to ensure that children could safely participate. Specifically, children at high risk for suicide were excluded from all studies except Turnaround. As well, youth who had engaged in severe self-harm were excluded from the Leap study, and families who were involved with child protection services were excluded from the Chase Worries Away and Parenting the Active Child studies.<sup>11, 16</sup>



Effective self-delivered treatments can reduce waiting lists for practitioner-delivered treatments.

## CBT persistently works for anxiety

All three CBT interventions significantly reduced anxiety disorder diagnoses. For Turnaround children, 58.3% no longer met diagnostic criteria for their primary anxiety disorder at the end of treatment, compared to only 16.7% of controls.<sup>14</sup> Intervention children also had fewer overall anxiety diagnoses by the end of treatment compared to controls (1.5 vs. 2.3), as well as less severe anxiety and fewer anxiety symptoms. Turnaround children also had fewer internalizing symptoms and better overall functioning. (Internalizing symptoms are those that are focused inward, such as fearfulness, social withdrawal and physical complaints.) There was only one outcome for which Turnaround did not outperform controls: the likelihood of having any anxiety disorder diagnosis.<sup>14</sup>

The Chase Worries Away study examined diagnostic outcomes. Approximately 75% of intervention children no longer met criteria for an anxiety disorder compared to approximately 55% of controls by 5½-month follow-up.<sup>11</sup> Although the study authors did not fully explain the high remission rates for controls, they did note that while all children met diagnostic criteria for an anxiety disorder at the start of the study, their levels of impairment were not severe. Consequently, there may have been high remission rates in general, including for controls. Despite this, intervention children still had more than 2.5 times the odds of *not* having an anxiety disorder by final follow-up.<sup>11</sup>

Helping Your Anxious Child similarly reduced anxiety disorder diagnoses.<sup>15</sup> For intervention children, 17.8% no longer had an anxiety disorder by the end of treatment, compared to 5.7% of controls. Intervention children also experienced less severe anxiety. However, there were no significant differences between the two groups for parent- or child-rated anxiety symptoms or parent-rated internalizing symptoms.<sup>15</sup>

Yet children whose parents took part in Helping Your Anxious Child did not fare as well as children participating in an in-person CBT group.<sup>15</sup> Specifically, by the end of treatment, 48.9% of children in the CBT group no longer met criteria for an anxiety disorder, compared to 17.8% of children whose parents took part in Helping Your Anxious Child.<sup>15</sup> All intervention outcomes are detailed in Table 2.

**Table 2: Self-Delivered Treatment Outcomes**

Program	Follow-up	Outcomes
<b>Anxiety</b>		
Turnaround <sup>14</sup>	None	<ul style="list-style-type: none"> <li>↓ Primary anxiety diagnosis</li> <li>↓ Total number of anxiety diagnoses</li> <li>↓ Anxiety severity</li> <li>↓ Anxiety symptoms (2 of 2)</li> <li>↓ Internalizing symptoms</li> <li>↑ Overall functioning</li> <li>Ns Any anxiety diagnosis</li> </ul>
Chase Worries Away <sup>11</sup>	5½ months	<ul style="list-style-type: none"> <li>↓ Anxiety diagnoses</li> </ul>
Helping Your Anxious Child <sup>15</sup>	None	<ul style="list-style-type: none"> <li>↓ Anxiety diagnoses</li> <li>↓ Anxiety severity</li> <li>Ns Anxiety symptoms (2 of 2)</li> <li>Ns Internalizing symptoms*</li> </ul>
<b>Attention-deficit/hyperactivity disorder (ADHD)</b>		
Parenting the Active Child <sup>11</sup>	5¼ months	<ul style="list-style-type: none"> <li>↓ ADHD diagnoses</li> </ul>
<b>Depression</b>		
Leap <sup>16</sup>	None	<ul style="list-style-type: none"> <li>↓ Depression severity</li> </ul>
<small>↓ or ↑ Statistically significant improvements for treatment over control participants.            Ns No statistically significant difference between treatment and control participants.            * Internalizing symptoms include concerns such as fearfulness, social withdrawal and physical complaints.</small>		

## Reducing ADHD with parent training

The Parenting the Active Child study assessed diagnostic outcomes.<sup>11</sup> Approximately 65% of intervention children were diagnosis free at 5½-month follow-up, compared to 40% of controls.<sup>11</sup> The high remission rate for controls may have been due, in part, to these children receiving mental health treatments outside of the study — such as behavioural interventions — at significantly higher rates than intervention children. Despite

this, intervention children still had more than 2.7 times the odds of not having an ADHD diagnosis by final follow-up.<sup>11</sup>

**Research evidence supports using self-delivered treatments as part of the continuum of care for childhood mental disorders.**

## Reducing depression with mindfulness

The Leap study assessed only depression severity. For intervention youth, severity of depression was significantly reduced at the end of treatment compared to controls.<sup>16</sup> Even so, the average depression severity score for Leap youth was still within the range of scores typically experienced by depressed young people.

## Implications for practice and policy

We identified five effective self-delivered interventions: Turnaround, Chase Worries Away and Helping Your Anxious Child for anxiety; Parenting the Active Child for ADHD; and Leap for depression. Notably, three of the successful programs — Chase Worries Away, Parenting the Active Child, and Leap — were tested with Canadian children. These findings indicate there are effective self-delivered treatment options for some of the most common childhood mental disorders.

Still, the small number of children who participated in the Turnaround and Leap evaluations suggests that studies with more young people could be useful. (Please see the sidebar for additional information on accessing these five interventions.) These findings suggest four implications for practice and policy.

- **Expand the number of children being reached by self-delivered treatments.** Some children can greatly benefit from self-delivered interventions, even becoming disorder free. Greater use of these interventions can expand the number of children who are reached with effective treatments. As well, the benefits may extend beyond those who use these treatments. For example, the authors of the Helping Your Anxious Child study calculated that by offering this book to parents with a child on a treatment waiting list, within three months 20% of children would no longer need to see a practitioner — freeing up more treatment spaces for other children.<sup>15</sup>
- **Provide more support to those with greater needs.** Some children and families have needs that cannot be met by self-delivered interventions, such as youth who are suicidal. As well, the ability of children and families to implement interventions without the support of a practitioner will vary. For example, Helping Your Anxious Child was most effective for parents who could easily implement concepts from the book.<sup>15</sup> In addition, relatively high family income and education levels may have affected Turnaround's success.<sup>14</sup> Families who are more disadvantaged may require extra supports, such as telephone coaching, to fully benefit from self-delivered interventions.
- **Increase the availability of other effective self-delivered treatments.** Beyond the successful self-delivered interventions described above, there are others that are not yet available in Canada. For example, there is good evidence supporting the efficacy of SPARX, a computer-based CBT program for depression,

### Obtaining self-delivered treatments

All the treatments featured in this issue are available either free of charge (i.e., Chase Worries Away and Parenting the Active Child, now known as Parents Empowering Kids) or for purchase, with costs ranging from \$5 to \$224 (i.e., Turnaround, Helping Your Anxious Child, and Leap, now known as BreathingRoom). As well, the book Helping Your Anxious Child is available at many public libraries and at the BC government's Health and Human Services Library.

featured in our *Fall 2017 Quarterly*. This program is only available in New Zealand at this time. But it is currently being adapted for Inuit youth living in Canada (see the sidebar below). As well, research evidence supports a Swedish internet-based CBT program for obsessive-compulsive disorder, but the program is not yet available in English.<sup>22</sup> Consequently, policy-makers may want to consider investing in other effective self-delivered programs — with help from researchers — giving Canadian children and families more options.

- ***Build on the research to create new self-delivered treatments.*** We failed to identify effective self-delivered treatments for two of the five most common childhood mental disorders — substance use and conduct disorders. Creating new and effective treatments for these disorders too could benefit many young people and their families.

Research evidence supports using self-delivered treatments as part of the continuum of care for childhood mental disorders. Including these interventions in service planning can make it possible to reach more young people in need. 

### From fantasy game to northern reality for Inuit youth

A team from New Zealand created SPARX, an online cognitive-behavioural therapy (CBT) program designed for Maori youth with depression.<sup>23</sup> The program takes the form of a fantasy computer game, with players progressing through a series of problem-solving stages.<sup>24</sup> Given the success of SPARX in New Zealand,<sup>25</sup> researchers have set out to adapt the program for Inuit youth in Canada.

The first step involved adapting the program to ensure cultural sensitivity.<sup>26</sup> To this end, youth leaders and Elders educated the development team about cultural healing concepts, including *Pijitsirniqatigiingniiq* (consensus decision-making), *Pilimmaksarniq* (skills and knowledge acquisition), *Piliriqatigiingniiq* (collaborative relationships) and *Qanuqtuurunnarniq* (being resourceful to solve problems).<sup>27</sup> Adaptations also included making images and audio components appropriate to Nunavut (for example, replacing palm trees with arctic tundra and featuring local community members speaking in English and Inuktitut).<sup>28</sup>

With final revisions underway, Inuit-SPARX (or I-SPARX) for community youth is set to launch in winter 2020. A program evaluation is also planned. Culture will be embedded here too, with youth leaders developing culturally specific outcome measures to evaluate the program and its teachings.<sup>29</sup>

## METHODS

We use systematic review 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 research evidence — requiring that intervention studies use randomized controlled trial (RCT) evaluation methods and meet additional quality indicators. For this review, we searched for RCTs on effective interventions for treating mental health symptoms or diagnoses that were self-delivered, not requiring face-to-face practitioner contact. Table 3 outlines our database search strategy.

**Table 3: Search Strategy**

<b>Sources</b>	<ul style="list-style-type: none"><li>• Campbell, Cochrane, CINAHL, ERIC, Medline and PsycINFO</li></ul>
<b>Search Terms</b>	<ul style="list-style-type: none"><li>• Blogging, CD-ROM, cell phone, computer-assisted therapy, computers, eHealth, electronic mail, electronics, handheld, health services accessibility, internet, inventions, mHealth, microcomputers, mobile applications, remote consultation, rural health services, social media, telemedicine, text messaging, video games, virtual reality exposure therapy or web browser and mental health or mental disorders and prevention, intervention or treatment</li></ul>
<b>Limits</b>	<ul style="list-style-type: none"><li>• Peer-reviewed articles published in English between 2014 and 2019</li><li>• Pertaining to children aged 18 years or younger</li><li>• Systematic review, meta-analysis or RCT methods used</li></ul>

To identify additional RCTs, we also hand-searched the Web of Science database, reference lists from relevant published systematic reviews and previous issues of the *Quarterly*. Using this approach, we identified 42 studies. 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) at study outset
- Studies provided clear descriptions of participant characteristics, settings and interventions
- Interventions were evaluated in settings that were applicable to Canadian policy and practice
- Interventions were delivered without face-to-face practitioner contact
- Interventions continue to be accessible, either free or for purchase, to Canadian children and families without requiring any specialized training
- At study outset, most participants had a current mental disorder diagnosis
- Attrition rates were 20% or less at final assessment and/or intention-to-treat analysis was used
- Child outcome indicators included mental health outcomes, with significant positive findings assessed at final assessment
- Studies reported levels of statistical significance for primary outcome measures

Five RCTs met all the inclusion criteria. Figure 1 depicts our search process, adapted from Preferred Reporting Items for Systematic Reviews and Meta-Analyses. 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. 

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

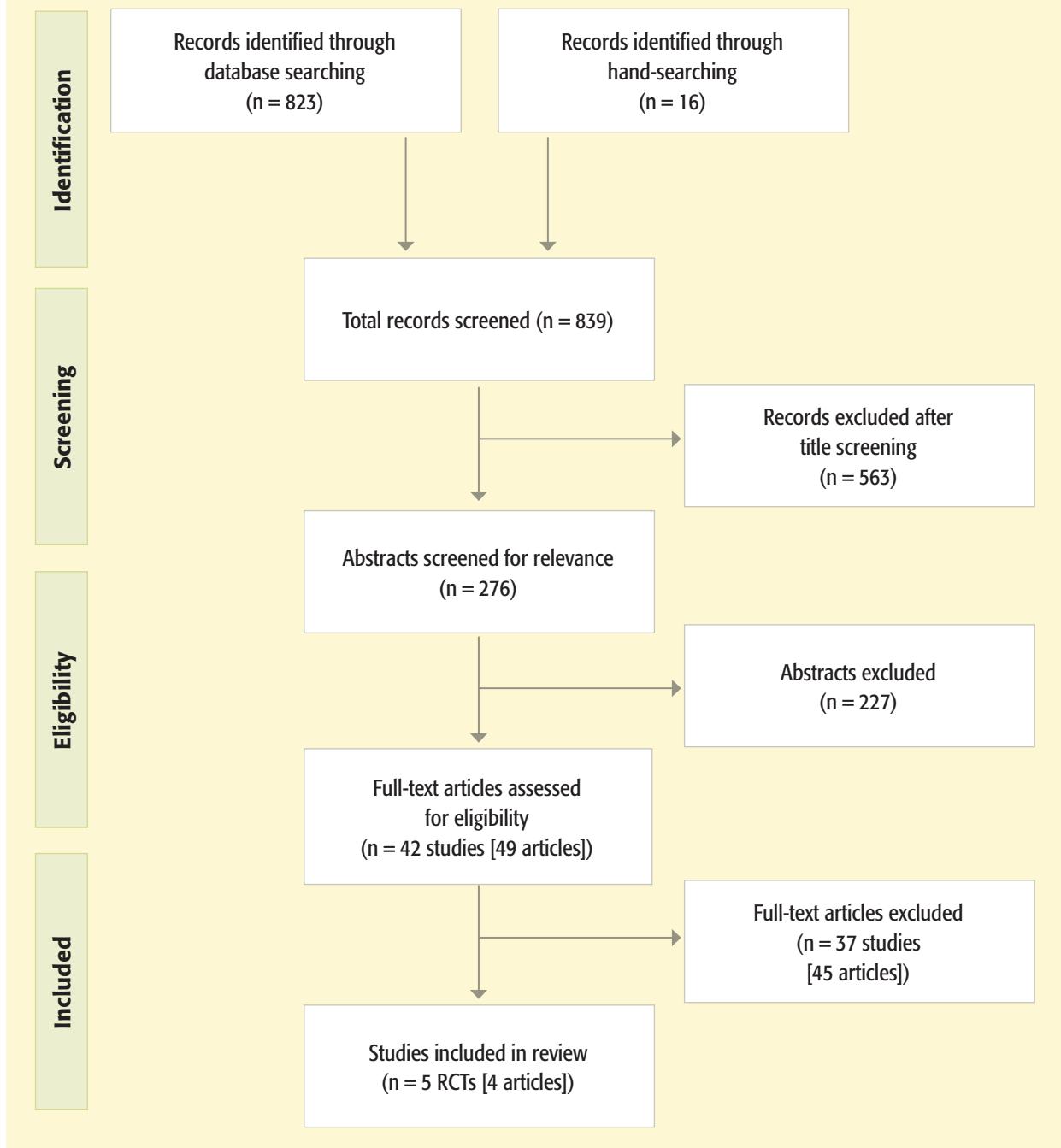
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## METHODS

**Figure 1: Search Process for RCTs**



## RESEARCH TERMS EXPLAINED

Practitioners and policy-makers need good evidence about whether a given intervention works to help children. **Randomized controlled trials** (RCTs) are the gold standard for assessing whether an intervention is effective. In RCTs, children, youth or families are randomly assigned to the intervention group or to a comparison or control group. Randomizing — that is, giving every participant an equal chance of being assigned to the intervention or comparison/control groups — gives confidence that benefits are due to the intervention rather than to chance or other factors.

Then, to determine whether the intervention actually provides benefits, researchers analyze salient child outcomes. If an outcome is found to be **statistically significant**, it helps provide certainty the intervention was effective rather than appearing that way due to random error. In the studies we reviewed, researchers set a value enabling at least 95% confidence that the observed results reflected the program's real impact. Two of the studies included in this issue also calculated **effect sizes**, which detail the degree of clinically meaningful difference the intervention made in children's lives. Both studies reported on **odds ratio**, namely the odds of the young person no longer meeting diagnostic criteria for a given disorder. 



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BC government staff can access original articles from BC's Health and Human Services Library. Articles marked with an asterisk (\*) include randomized controlled trial data that was featured in our Review article.

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## **LINKS TO PAST ISSUES**

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

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### **2018 / Volume 12**

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### **2008 / Volume 2**

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