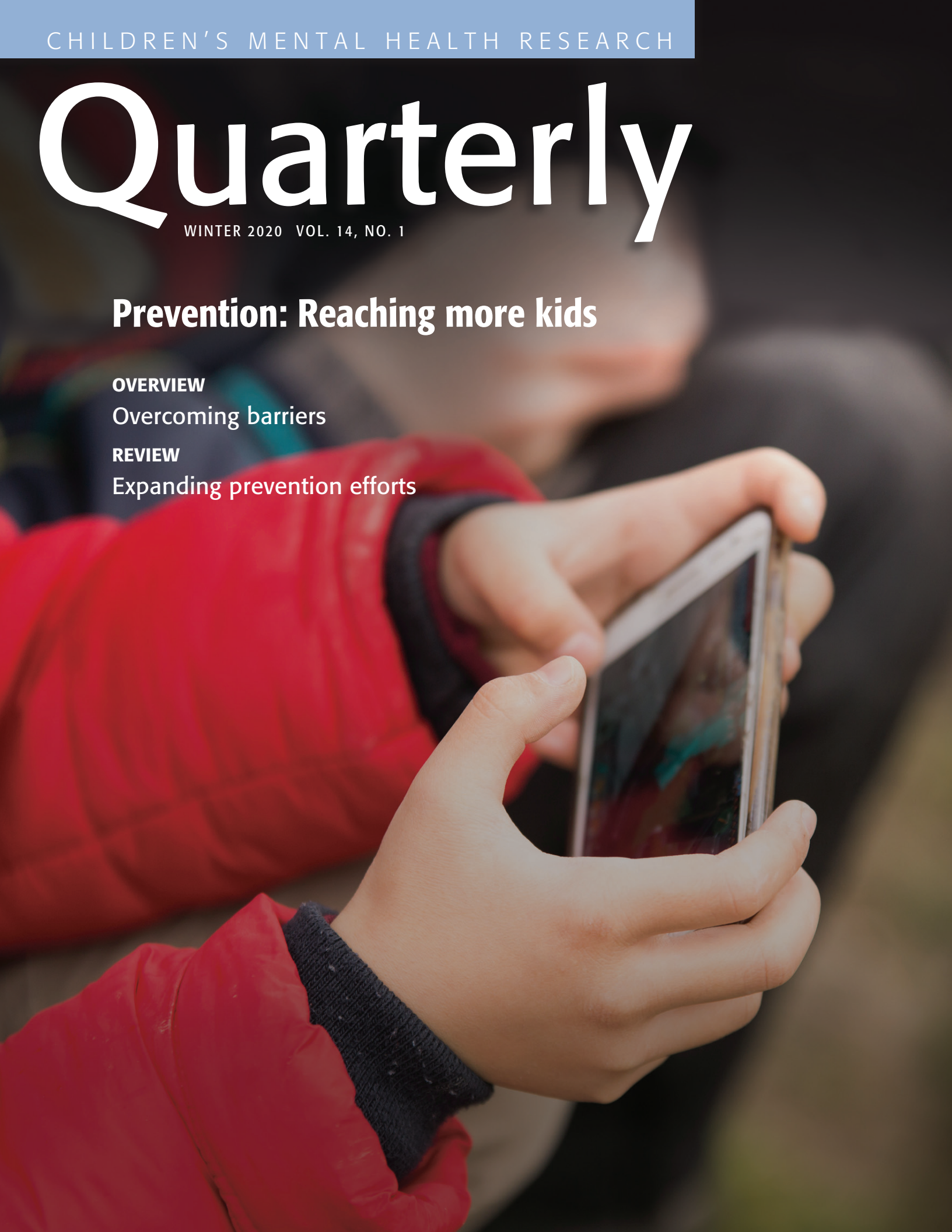# Quarterly

Prevention: Reaching more kids

OVERVIEW
Overcoming barriers

REVIEW
Expanding prevention efforts

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.

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This Issue

Overcoming barriers

Many children cannot access effective programs for preventing mental disorders. We identify common barriers and suggest ways to overcome them.

Expanding prevention efforts

Prevention programs can avert or reduce the impact of common childhood mental disorders. But more children need to be reached. We examine seven effective interventions that can achieve this goal.

NEXT ISSUE

Treatment: Reaching more kids

The number of children needing mental health treatment exceeds available capacity in most jurisdictions. We identify interventions that can help reach more children in need.

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:

Overcoming barriers

An estimated 13% of children and youth have mental disorders at any given time,[1] and most do not receive mental health care.[2–3] Therefore many more young people need to be reached. Taking a comprehensive public health approach is the best strategy for meeting these needs. Such a strategy includes addressing social determinants of mental health, including avoidable adverse childhood experiences; promoting healthy development for all children; preventing mental disorders in children at risk; providing treatment for all children with mental disorders; and monitoring outcomes.[3]

Effective prevention programs are particularly crucial to reduce the number of children in need of mental health treatment services. Yet despite growing research evidence on effective programs, prevention efforts remain modest in many jurisdictions.[4–6] This is not necessarily due to a lack of resources. Overall, between the government, insurance and individual citizens, Canadians spend an estimated $254 billion on health annually, or about $6,800 per person.[4] But less than 6% of this spending goes toward public health, including prevention — with even less going toward the prevention of childhood mental disorders.[3–4]

The use of self-directed programs can increase the accessibility of successful prevention interventions.

Beyond underfunding for children's mental health services, additional barriers impede prevention efforts from reaching all those in need. Many rural communities lack individuals with experience delivering prevention programs.[7] Access to effective prevention programs can also be particularly difficult in Indigenous communities, which often face staff shortages, high staff turnover, additional resource shortages, and interventions that fail to incorporate Indigenous perspectives and approaches.[8]

In communities where prevention services *are* available, they are often delivered in inconvenient settings or at inconvenient times. For example, having to travel to unfamiliar locations far from home is a barrier for many families, as are program schedules that conflict with work or school.[9] Beyond these practical barriers, some young people may avoid mental health programs, fearing stigmatization.[10] Some parents may also not seek help, fearing they will be blamed for their children's challenges.[11]

> Effective prevention programs are particularly crucial to reduce the number of children in need of mental health treatment services.

When children and families do enrol in programs, other barriers can prevent them from fully benefiting. In particular, studies have found that up to 80% of children and families do not complete mental health interventions.[12] The risk of not completing such interventions can be especially high for those who are struggling with adversities. For example, children from families in low-income neighbourhoods are not only less likely to receive services, but are also more likely to stop attending than those from middle- or high-income neighbourhoods.[7]

Given the high levels of unmet needs, reaching more children, youth and families — and reaching them more cost-effectively — is a priority.[13] One approach is to identify prevention options that are more self-directed and less reliant on direct provision by practitioners, such as online programming and self-help tools.[14] These formats can appeal to young people and their families by offering more flexibility and convenience.[14] As well, participants can access and navigate content at their own pace — and often with lower costs.[15] In the Review that follows we explore seven self-directed prevention interventions, including online programs, a video game and a self-help book. ✋

Expanding prevention efforts

One of the most effective ways to help children and youth is to reach them with prevention efforts *before* mental disorders develop. Yet to build prevention capacity and to reach more young people, approaches are needed that do not rely solely on direct provision by practitioners. We therefore aimed to identify effective self-directed prevention programs.

We identified these interventions in two ways. First, we reviewed all previous *Quarterly* issues. We accepted interventions that showed evidence of success in preventing or reducing early symptoms and/or diagnoses from randomized controlled trials (RCTs)— and that did not require face-to-face practitioner contact. Second, to update previous *Quarterly* findings, we conducted new searches for successful preventive interventions delivered

Parents can play an integral role in self-directed prevention efforts.

in similar ways, seeking RCT evaluations published between 2014 and 2019. (Please see the Methods section for more information.)

After reviewing previous *Quarterly* issues and assessing 63 new RCTs, we accepted eight RCTs evaluating seven prevention interventions. These interventions addressed concerns including behaviour issues — such as symptoms of attention-deficit/hyperactivity disorder (ADHD) and conduct disorder — as well as anxiety, low mood and substance use. Young people participating in these studies ranged from preschoolers to teens. The seven interventions were as follows:

- Triple P Online — parenting program for behaviour challenges (two RCTs)[13, 16]
- Strongest Families Smart Website — online parenting program for behaviour challenges[17–18]
- MindLight — video game for anxiety[10]
- MoodGYM — online program for anxiety and depression[19]
- Feeling Good — self-help book for depression[20]
- Substance Use Prevention for Girls — computer program for substance use[15]
- MobileCoach Alcohol — internet- and text-based program for problematic drinking[21]

Preventing behaviour problems in young children

Three programs aimed to help prevent problems in young children, primarily by helping parents, namely two versions of Triple P and one version of Strongest Families. Triple P Online with Telephone Support consisted of eight self-directed, behaviourally based modules.[13] The intervention aimed to help parents encourage positive child outcomes, manage difficult behaviour and develop more positive parent-child relationships.[13] Psychology students and community workers provided weekly telephone support based on families' specific needs.[13] Participants were Australian parents of two- to eight-year-olds with symptoms of ADHD, conduct

disorder or oppositional defiant disorder.[13] Families also had at least one other risk factor for child behavioural problems, such as socio-economic disadvantage, single parenthood or high levels of conflict about parenting.[13] To participate, parents needed a computer and high-speed internet access. Qualifying parents were randomly assigned to Triple P Online (with or without telephone support) or to a control group.

The second version of the program, Triple P Online Brief, consisted of five self-directed modules.[16] It covered the same core materials as the version described above, including encouraging positive child behaviours and managing difficult ones, but in a briefer format.[16] Participants were Australian parents of two-to nine-year-olds with concerns about their child's behaviour or self-esteem.[16] To participate, parents needed a computer and high-speed internet access.[16] Qualifying parents were randomly assigned to Triple P Online Brief or to a control group. Of note, intervention parents were also encouraged to complete the modules that they found most relevant, rather than completing the full program.

Strongest Families Smart Website similarly set out to help parents of young children with behaviour challenges.[17] Adapted from Strongest Families, a telephone-based intervention, the online version consisted of 11 self-directed modules and 13 telephone coaching sessions from a licensed health care professional who reviewed skills, responded to questions and gave encouragement.[17] (The final two coaching sessions occurred approximately seven and 10 months after parents completed the 11 online modules.) This behaviourally based program helped parents encourage positive child outcomes, manage difficult conduct and develop more positive relationships with their children.[17] Participants were parents of Finnish four-year-olds with conduct problems. To participate, families needed to have a telephone and internet connection. (Computers were provided to families if needed.) Qualifying parents were randomly assigned to the program or to a control group (which gave parents access to a website providing positive parenting strategies and one telephone call from a coach).

> Some programs may require adaptations to ensure cultural fit and relevance, especially those that target parenting practices.

Reducing anxiety in school-age children

MindLight focused on school-age children with anxiety. This six-session video game exposed children to an anxiety-provoking situation — rescuing a character from a frightening house.[10] Then, to cope with the anxiety it created, MindLight taught children relaxation techniques including deep breathing and positive self-talk. The game also incorporated neurofeedback, teaching children to monitor their relaxation levels by giving them feedback via electroencephalogram (EEG) readings.[22] (The more relaxed the child, the stronger the light glowing from the character's head — which enabled the child to see in the dark haunted house.) Participants were seven- to 12-year-old Dutch children with elevated anxiety.[10] Qualifying children were randomly assigned to MindLight or to an eight-session cognitive-behavioural therapy (CBT) group.[10] Intervention children had access to an Xbox 360 controller and an EEG headset during the trial.[10]

Helping teens

Four interventions aimed to help teens with either anxiety, low mood or substance use: MoodGYM, Feeling Good, Substance Use Prevention for Girls, and MobileCoach Alcohol. MoodGYM was a five-module online CBT program designed to prevent or reduce anxiety and depression.[19] The program taught youth to challenge their unrealistic, negative thoughts and beliefs and to improve their self-esteem and interpersonal relationships using problem-solving and relaxation techniques. Participants were Australian youth who were attending high school and had access to computers and the internet. Randomization to MoodGYM or a control group occurred at the school level.

Feeling Good was a book that detailed CBT strategies for reducing depressive symptoms.[23] Written at a high-school reading level, the book aimed to educate young people about the links between thoughts and

feelings, as well as teach techniques such as challenging unrealistic negative thinking and increasing their positive and productive activities. Youth assigned to Feeling Good were given their own copy of the book, were told that it could help with sadness and depression, and were encouraged to read it. Participants were American high-school students with elevated depressive symptoms.[20] Teens were randomized to either Feeling Good, a six-session CBT group, a six-session non-directive support group or a control group.[20]

> Many young people and their families can use self-directed interventions without extra supports.

Substance Use Prevention for Girls was a nine-module computer program designed to prevent problematic substance use. The program was completed by girls and their mothers (or other female caregivers, including aunts, grandmothers, stepmothers and legal guardians).[15] Mothers learned communication and parenting skills, such as creating rules and consequences for substance use and supervising their daughters' activities. Girls learned skills to combat peer pressure and to manage stress, conflicts and challenging moods. Participants were American girls and mothers who had access to a computer. Mother-daughter pairs were randomized to intervention or control groups.

Finally, MobileCoach Alcohol used the internet and text messages to prevent or reduce problematic drinking.[21] After completing a baseline assessment, youth received immediate internet-based feedback on their alcohol consumption, including on the frequency of binge drinking relative to other youth of the same age and gender.[21] Youth then received between 16 and 27 individually tailored texts (from a series of 119 possible texts), with the number depending on whether they were deemed low, moderate or high risk. Text messages focused on increasing motivation for low-risk drinking and providing strategies to resist

Successful prevention efforts, especially those that start early in a child's development, can reduce the need for treatment later on.

drinking.[21] Participants were Swiss youth who owned a cellphone and attended a school enrolled in the study. Classrooms were randomized to MobileCoach Alcohol or a control group. Table 1 gives more details on all the interventions.

Table 1: Self-Directed Prevention Intervention Studies		
Program	**Focus**	**Ages** (years) **Country** **Sample size**
For young children		
Triple P Online with Telephone Support: 8 internet-based modules + 8 telephone consultations teaching parents to encourage positive child behaviours, manage difficult conduct + develop positive parent-child relationship over 4 months [13]	ADHD, conduct or oppositional defiant disorder symptoms	2 − 8 Australia 183
Triple P Online Brief: as above except only 5 internet-based modules over 2 months [16]	Behaviour + emotional problems	2 − 9 Australia 200
Strongest Families Smart Website: 11 internet-based modules + 13 telephone consultations teaching parents to encourage positive child behaviours, manage difficult conduct + develop positive parent-child relationship over 10 months [17–18]	Behaviour problems	4 Finland 464
For school-age children		
MindLight: 6-session video game using neurofeedback with children to promote relaxation, positive self-talk + coping with exposure to fear-provoking situation over 1½ months [10]	Anxiety	7−12 Netherlands 174
For teens		
MoodGYM: 5 internet-based modules teaching youth techniques to change unhelpful thoughts + beliefs, problem-solving + relaxation to improve self-esteem + relationships over 1¼ months [19]	Anxiety + depression	12−17 Australia 1,477
Feeling Good: Book providing youth education about link between thoughts + feelings + teaching skills including challenging cognitive distortions, scheduling pleasant + productive activities over 1½ months [20]	Depression	14−19 United States 341
Substance Use Prevention for Girls: 9 computer-based modules designed to improve mother-daughter communication, establish parental rules for substance use + develop peer-pressure refusal skills over 2¼ months [15]	Substance use	11−13 United States 591
MobileCoach Alcohol: 1 internet-based session + 16−27 texts providing youth with information about drinking norms + costs, giving strategies to resist drinking + encouraging drinking within low-risk limits over 3 months [21]	Alcohol use	16−19 Switzerland 1,041

Helping kids with behaviour problems

Triple P Online with Telephone Support led to fewer child behavioural problems at five-month follow-up compared to either Triple P without this support or controls.[13] Findings were not only statistically significant, but also clinically meaningful. Specifically, with telephone support, improvements in child behaviour were moderate compared to Triple P without it (Cohen's d = 0.75) and large compared to controls (d = 1.28).[13] Parents in the telephone support group also reported reduced frequency of child disruptive behaviours — with moderate effect sizes compared to both Triple P without telephone support (d = 0.50) and controls (d = 0.70). Triple P's effectiveness with telephone support — but not without it — was likely due to enhanced program completion. Parents who received this support completed nearly double the modules — slightly more than

five of eight, on average, compared to three for other parents.[13] Parent satisfaction was also significantly higher with telephone support than without it.[13]

Triple P Online Brief also had positive outcomes. Intervention parents reported reduced frequency and intensity of child behaviour problems compared to controls at nine-month follow-up.[16] Effect size was

moderate for frequency (d = 0.41) and small for intensity (d = 0.39). However, the program did not significantly reduce the number of disruptive behaviours or children's emotional problems. Notably, however, program uptake was quite positive, with parents logging in an average of six times and spending approximately four hours in total on the program. Most parents also reported satisfaction with the program.

Strongest Families Smart Website produced positive outcomes as well. Intervention parents reported fewer child behavioural and emotional problems at 14-month follow-up, albeit with small effect sizes (d = 0.22 and d = 0.18, respectively).[18] As well, the program made a difference to the number of children needing mental health treatment services. Only 17.5% of intervention children were referred to such services at 14-month follow-up, compared to 28% of controls. However, the program did not improve parents' ratings of what researchers termed as children's "callous and unemotional behaviours," which predict future aggression.

Pushing back before worries grow

The MindLight study set out to determine how the video game worked compared to a group CBT intervention with proven effectiveness in reducing anxiety. The RCT found that MindLight was as effective as group CBT, according to child and parent ratings of children's anxiety at six-month follow-up.[10]

MoodGYM also proved effective at reducing anxiety symptoms, with a small effect size (d = 0.25) at six-month follow-up.[19] Yet the program did not make a significant impact on depressive symptoms. Notably, only a third of students completed all five MoodGYM modules, suggesting that better completion rates might have improved outcomes.

Preventing youth depression

Feeling Good effectively prevented the development of depressive episodes for youth at two-year follow-up.[24] In fact, intervention youth had eight times lower odds for developing depression compared with controls. As well, by two-year follow-up, only 3% of Feeling Good youth developed depression — compared to 23% of controls, 14% who received CBT, and 15% who received the support group. However, there were no significant differences between Feeling Good and control youth on two depressive symptom measures. (CBT outperformed the book according to both these measures, while the support group outperformed the book on one.)

Reducing substance use

Substance Use Prevention for Girls made a substantial impact, showing positive outcomes on all relevant measures. Specifically, intervention girls used less alcohol, less cannabis and fewer medications for non-medical purposes at one-year follow-up compared to controls.[15] The success of the program may be linked to the fact that nearly 100% of all mother-daughter pairs completed all nine program modules.[15]

MobileCoach Alcohol produced one positive outcome among participants overall. Intervention youth were significantly less likely to binge drink by the end of the three-month follow-up. Specifically, the odds of not engaging in risky alcohol use were 1.6 times higher compared to controls. However, the program made no difference in the overall number of binge drinking episodes, amount of alcohol consumed in a typical week,

or estimated highest blood alcohol levels by final follow-up. MobileCoach Alcohol did, however, improve additional outcomes for the highest-risk youth (those who binge drank more than twice in the month before the study started). For these youth, those assigned to MobileCoach Alcohol were less likely to binge drink (underline odds ratio = 0.29), had fewer binge drinking episodes ($d = 0.34$) and had lower estimated highest blood alcohol levels ($d = 0.38$). Although the program was especially effective with high-risk youth, its overall success may have been bolstered by good retention, with nearly all participants remaining logged in until the end of the program.[21] Table 2 summarizes outcomes for the eight RCTs.

Table 2: Prevention Study Outcomes

Program	Follow-up	Outcomes
For young children		
Triple P Online with Telephone Support*[13]	5 months	↓ Number of disruptive behaviours ↓ Frequency of disruptive behaviours (1 of 2) NS Frequency of prosocial behaviours
Triple P Online Brief*[16]	9 months	↓ Frequency of disruptive behaviours ↓ Intensity of behaviour problems NS Number of disruptive behaviours (2 of 2) NS Number of emotional problems
Strongest Families Smart Website*[18]	14 months	↓ Behaviour problems ↓ Emotional problems NS Callous + unemotional behaviours
For school-age children		
MindLight[10]	6 months	✓ Anxiety symptoms (3 of 3)
For teens		
MoodGYM*[19]	6 months	↓ Anxiety symptoms NS Depressive symptoms
Feeling Good[24]	24 months	↓ Depressive episodes NS Depressive symptoms (2 of 2)
Substance Use Prevention for Girls[15]	12 months	↓ Alcohol use ↓ Cannabis use ↓ Medication use for non-medical purposes
MobileCoach Alcohol*[21]	3 months	↓ Any binge drinking episodes in past 30 days NS Number of binge drinking episodes in past 30 days NS Quantity of alcohol use in typical week NS Estimated highest blood alcohol concentration

* Effect size(s) were calculated for this study and are provided in text.
↓ Statistically significant improvements for intervention over control participants.
NS No statistically significant difference between intervention and control participants.
✓ This outcomes was as beneficial as cognitive-behavioural therapy.

Implications for practice and policy

Our review identified seven effective self-directed interventions for preventing or reducing symptoms of the five most common childhood mental concerns — anxiety, ADHD, problematic substance use, behaviour problems and depression. These interventions assisted children and youth across a range of ages, from the preschool years to the teens. The results suggest the following six implications for practice and policy.

- *Reach more children, youth and families using self-directed prevention programs.* Triple P Online, Strongest Families Smart Website, MindLight, MoodGYM, Feeling Good, Substance Use

Prevention for Girls and MobileCoach Alcohol were all effective. Encouraging these kinds of interventions will allow more children, youth and families to be reached, in turn reducing the burden of mental health problems in the population.

- *Provide extra support when needed.* Many young people and their families can use self-directed interventions without extra supports. However, some may need assistance. For example, in Triple P Online, families coping with adversities such as socio-economic disadvantage — in addition to child behaviour problems — gained more benefit when the program was supplemented by telephone support from practitioners. So extra supports can be added to self-directed programs according to need.

- *Ensure everyone can participate.* Self-directed formats can come with specific barriers to participation for some families. For example, if online access is needed, it may be an obstacle, since 13% of Canadian households do not have internet connections and 12% do not have mobile phones.[25] As well, some self-directed programs can come with costs for families. For example, Triple P Online costs $80, MoodGYM costs $35 and MindLight costs $100.[26–28] However, books such as Feeling Good can usually be obtained for free (e.g., from public libraries). Nevertheless, some families will need support to access these interventions. The Strongest Families Smart Website RCT gives a positive example of helping everyone participate — by providing computers to those who needed them.

- *Recognize the role of culture.* Some programs may require adaptations to ensure cultural fit and relevance, especially those that target parenting practices. Policy-makers can play an important role, including consulting with different cultural communities about making programs inclusive and supporting adaptation efforts.

- *Learn from programs with high completion rates.* Completion rates were particularly notable for Triple P Online, MindLight, Substance Use Prevention for Girls and MobileCoach Alcohol. These findings suggest that both young people and their families found these self-directed formats to be engaging and feasible.

- *Use mental health practitioners wisely.* Specialized mental health practitioners are essential in effectively helping children and youth with mental disorders. Yet most jurisdictions have long waitlists for treatment services, leaving many young people without the help they need.[3, 29] But new prevention investments can help — by reducing the number of young people needing treatment, in addition to reducing avoidable symptoms, distress and impairment. New prevention investments can also free up practitioners' time, enabling them to care for more children and youth with the highest levels of need.

Strong research evidence supports the use of self-directed prevention interventions as part of the continuum of care for the most common childhood mental health concerns — namely anxiety, ADHD, problematic substance use, behaviour problems and depression. Including these types of interventions in overall service planning can enable providers to reach many more children, youth and families, in turn potentially lowering the need for treatment. Comprehensive children's mental health plans should therefore include these kinds of prevention programs. 👋

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 also meet additional quality indicators. For this review, we searched for RCTs on effective interventions for preventing mental health symptoms or diagnoses that were self-directed, not requiring face-to-face practitioner contact. Table 3 outlines our database search strategy.

Table 3: Search Strategy	
Sources	• Campbell, Cochrane, CINAHL, ERIC, Medline and PsycINFO
Search Terms	• 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
Limits	• Peer-reviewed articles published in English between 2014 and 2019 • Pertaining to children aged 18 years or younger • Systematic review, meta-analysis or RCT methods used

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 63 RCTs. Two team members then independently assessed each RCT, applying the inclusion criteria outlined in Table 4.

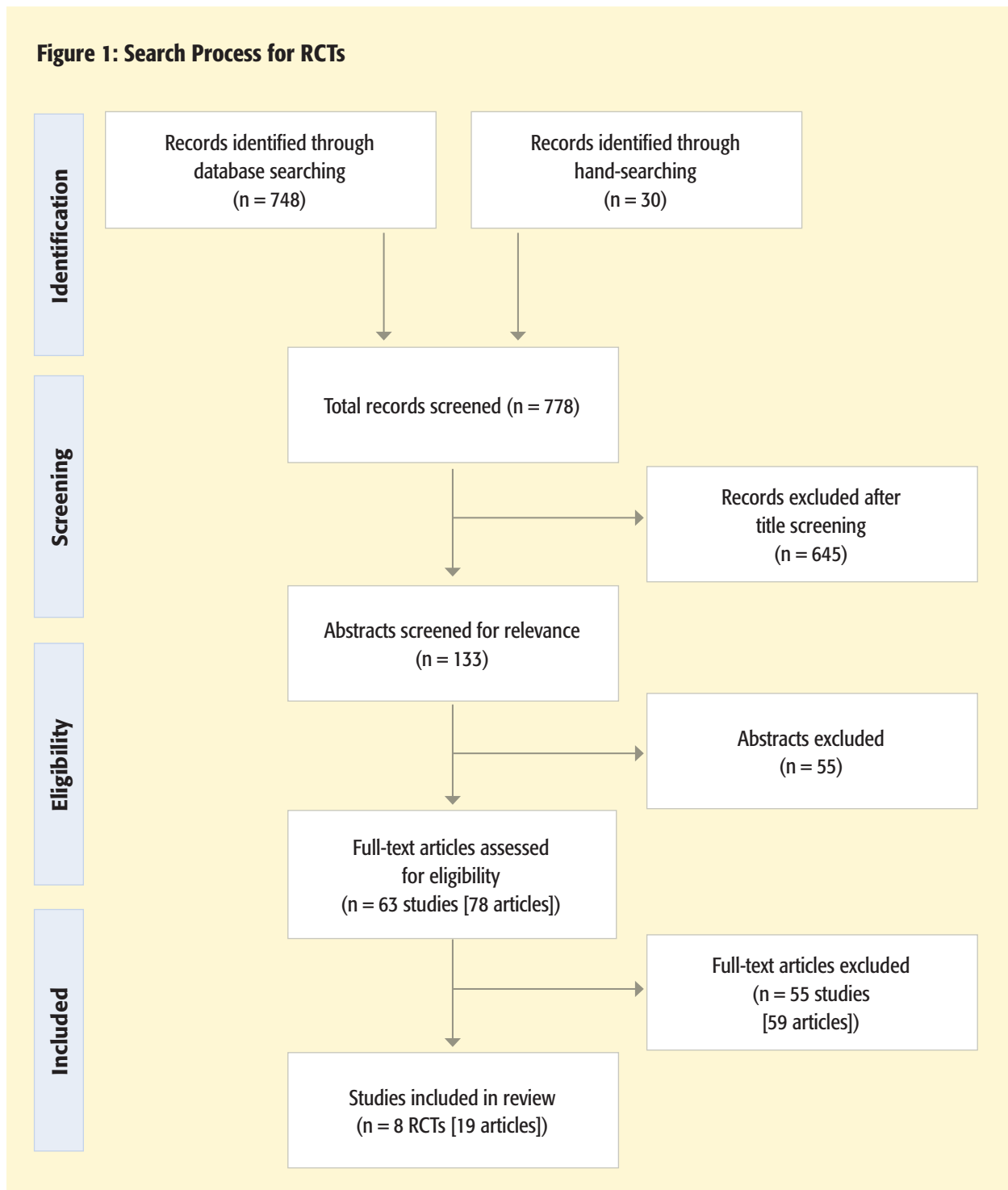| Table 4: Inclusion Criteria for RCTs |
|---|
| • Participants were randomly assigned at study outset to intervention and comparison groups (i.e., no intervention or minimal intervention) |
| • Studies provided clear descriptions of participant characteristics, settings and interventions |
| • Interventions were evaluated in settings that were applicable to Canadian policy and practice |
| • Interventions were delivered without face-to-face practitioner contact |
| • At study outset, most participants did not have a current mental disorder diagnosis |
| • Follow-up was 3 months or more (from the end of the intervention) |
| • Attrition rates were 20% or less at final assessment and/or intention-to-treat analysis was used |
| • Child outcome indicators included mental health or substance use outcomes, with significant positive findings assessed at follow-up |
| • Studies reported levels of statistical significance for primary outcome measures |

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

Identification

Records identified through database searching (n = 748)

Records identified through hand-searching (n = 30)

Screening

Total records screened (n = 778)

Records excluded after title screening (n = 645)

Abstracts screened for relevance (n = 133)

Eligibility

Abstracts excluded (n = 55)

Full-text articles assessed for eligibility (n = 63 studies [78 articles])

Included

Full-text articles excluded (n = 55 studies [59 articles])

Studies included in review (n = 8 RCTs [19 articles])

To best help children, practitioners and policy-makers need good evidence about whether a given intervention works. While **interventions** can include both prevention and treatment, this *Quarterly* issue exclusively focused on prevention. When assessing whether any intervention is effective, **randomized controlled trials** (RCTs) are the gold standard. In RCTs, children, youth or families are randomly assigned to either intervention or comparison/control groups. 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 measure and analyze salient child outcomes. If an outcome is found to be **statistically significant,** it helps provide certainty the intervention was effective rather than just 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.

Once an intervention has been found to have statistically significant benefits, it is helpful to also quantify how much difference it made, or the **effect size.** Beyond identifying that the intervention works, effect size shows whether the intervention made a clinically meaningful difference in children's lives. The effect size measures reported include **Cohen's *d*** and **odds ratio** (OR). Values for Cohen's *d*, also known as *d,* can range from 0 to 2. Standard interpretations are 0.2 = small effect; 0.5 = moderate effect; and 0.8 = large effect. Meanwhile, an OR indicates the chances of a given outcome occurring. For example, an OR of 0.5 indicates that intervention participants had half the odds of experiencing depressive symptoms compared to controls. 🖐

Giving every participant an equal chance of being of being assigned to the intervention or control groups gives confidence that benefits are due to the intervention rather than to chance or other factors.

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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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