

# Quarterly

WINTER 2024 VOL. 18, NO. 1

## Treating childhood eating disorders

### OVERVIEW

Eating disorders:  
The impact on young people

### REVIEW

Providing effective care





### 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*. 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).

### Quarterly Team

Scientific Writer

Christine Schwartz, PhD, RPsych

Scientific Editor

Charlotte Waddell, MSc, MD, CCFP, FRCPC

Senior Research Manager

Jen Barican, BA, MPH

Research Assistants

Jessica Tang, BA

Oliver White, BA

Production Editor

Daphne Gray-Grant, BA (Hon)

Copy Editor

Naomi Pauls, MPub

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How many young people are affected by eating disorders and when do they typically emerge? To help practitioners and policy-makers effectively plan supports and services, we summarize findings from well-designed population surveys.



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Young people with eating disorders often face serious mental and physical health consequences, so it is crucial for them to have rapid access to effective treatments. To inform efforts to meet their needs, we conducted a systematic review of childhood eating disorder treatments.



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## NEXT ISSUE

### Preventing youth opioid misuse

The BC government declared a public health emergency in response to toxic drug-related overdoses almost eight years ago. But young people in this province continue to experience significant harms related to the use of opioids. We discuss the harms these substances cause and we review primary prevention options to reduce youths' exposure to them.



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### How to Cite the Quarterly

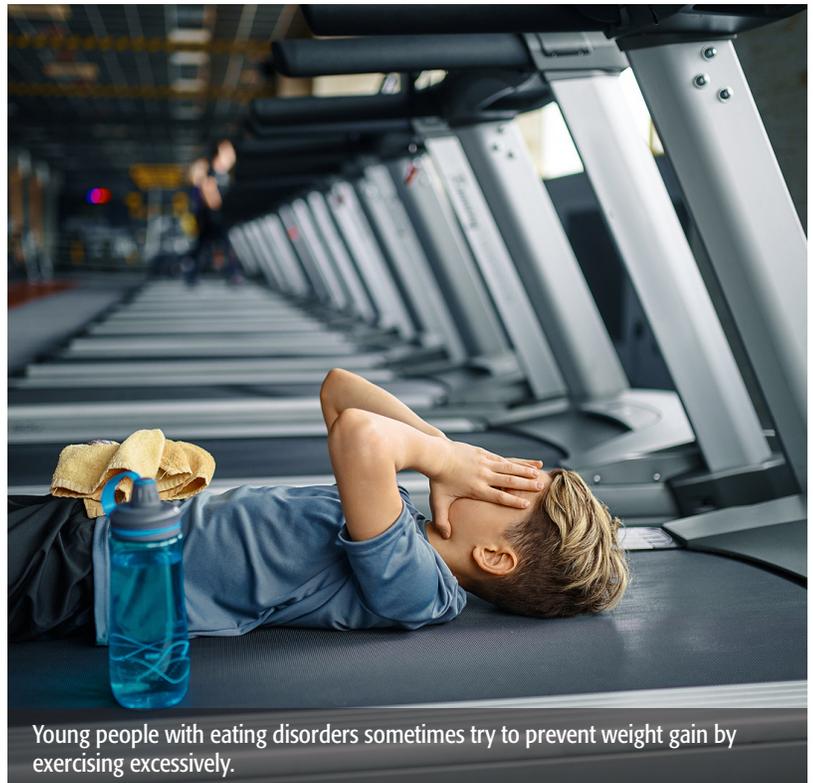
We encourage you to share the *Quarterly* with others and we welcome its use as a reference (for example, in preparing educational materials for parents or community groups). Please cite this issue as follows:

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We celebrate the Indigenous Peoples whose traditional lands  
Quarterly team members live and work on.

# Eating disorders: The impact on young people

Eating disorders involve persistent problematic food intake patterns that result in impaired physical and/or mental well-being.<sup>1</sup> They include anorexia nervosa, which is characterized by food restrictions that lead to very low body weights, coupled with intense fears of gaining weight or becoming overweight.<sup>1</sup> Bulimia nervosa involves binge-eating episodes where large quantities of food are consumed and eating is experienced as being out of control. The episodes are followed by attempts to prevent weight gain by engaging in behaviours such as self-induced vomiting, fasting or excessive exercise.<sup>1</sup> Binge-eating disorder similarly includes out-of-control overeating episodes, but without problematic efforts to prevent weight gain.<sup>1</sup> Avoidant/restrictive food intake disorder involves extremely narrowed eating patterns (e.g., refusing some foods based on their sensory characteristics), resulting in unmet nutritional needs.<sup>1</sup> As well, these disorders can be deadly as both anorexia and bulimia are associated with mortality rates exceeding what is expected for the population.<sup>2-3</sup>



Young people with eating disorders sometimes try to prevent weight gain by exercising excessively.

BIGSTOCK / NOMAD SOUL

## How many are affected?

A recent systematic review provides data on the proportion of young people aged 12 to 18 years who met diagnostic criteria for eating disorders — meaning that they had both symptoms and impairment.<sup>4</sup> Prevalence was derived by combining findings from five rigorous original studies that assessed eating disorders in the population. All five included anorexia and bulimia while one included binge-eating disorder; however, none included avoidant/restrictive food intake disorder.<sup>5-9</sup> The overall prevalence for eating disorders was 0.2%.<sup>4</sup> This means that at any given time, approximately 700 youth in BC will meet diagnostic criteria for an eating disorder and therefore need treatment.<sup>10</sup>

Still, this figure may underestimate the needs, given that it is derived from studies conducted before the COVID-19 pandemic. And evidence is emerging that eating disorder cases increased during the pandemic. For instance, a study of six Canadian pediatric hospitals found a sharp rise in cases among nine- to 18-year-olds early in the pandemic.<sup>11</sup> Specifically, new diagnoses rose significantly, from 24.5 per month during the previous five years to 40.6 per month during the first wave of the COVID-19 pandemic (March through November 2020).<sup>11</sup>

The incidence of eating disorders for girls was more than six times the incidence for boys.

## When do eating disorders typically emerge?

A study that included all 1.3 million children born in Denmark from 1995 to 2016 provides unique data on when eating disorders typically emerge.<sup>12</sup> The authors found that the peak age of onset for anorexia and bulimia was 15 years. They also found that the incidence of eating disorders for girls was more than six times the incidence for boys.<sup>12</sup> Another survey, including more than 10,000 teens in a representative American sample, found slightly different results.<sup>13</sup> These data showed younger ages of onset, namely, 12.3 years for anorexia, 12.4 for bulimia and 12.6 for binge-eating disorder.<sup>13</sup> Despite these differing findings, both studies highlight the need for practitioners and policy-makers to ensure the availability of treatments for eating disorders among teens, including younger ones. (Avoidant/restrictive food intake disorder was not assessed in either study.)

Many young people with eating disorders experience lengthy waits for treatment.

## The need for treatment services

A systematic review of 14 studies from seven countries, including Canada, provides evidence that many young people with eating disorders experience lengthy waits for treatment.<sup>14</sup> Among children aged 12 and younger, the average time from diagnosis to treatment was 9.8 months. For teens and adults combined, the comparable figure was 34.7 months.<sup>14</sup> Both figures are far too high, particularly for young people.

Increased treatment needs during the pandemic have added to the challenges. The Canadian pediatric hospitals study noted previously found that treatment admissions for eating disorder rose sharply during the pandemic.<sup>11</sup> Hospitalizations for new patients increased from 7.5 cases per month in the previous five years to 20.0 cases per month during the first pandemic wave.<sup>11</sup> Similarly, a study measuring hospital use for eating disorders for all children and adolescents in Ontario found an increase immediately after the pandemic started, with levels remaining well above typical during the ensuing 10 months — including a 66% increased risk in emergency room visits for eating disorders and a 37% increased risk in being hospitalized for these conditions.<sup>15</sup>

## Helping young people in need

In considering how to best address childhood eating disorders, responses need to go beyond specialized eating disorder clinics — because many young people with these conditions will seek services from

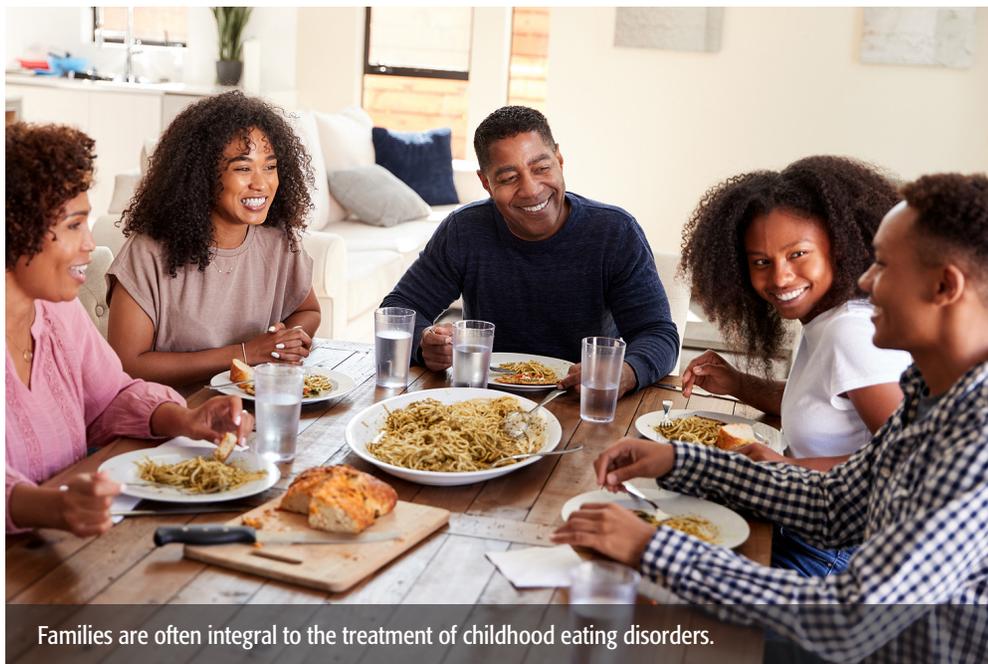
generalist mental health practitioners working in clinics and schools.<sup>13</sup> Most child and youth mental health practitioners therefore need to be prepared to conduct assessments and provide treatments for young people with eating disorders. (The adjacent sidebar provides information on avoiding a common misconception when conducting such assessments.) Practitioners and policy-makers also need information on which treatments are most effective. The [Review article](#) that follows provides systematic review findings on treatments for eating disorders in young people. 🙌

### Eating disorders affect people from a wide range of backgrounds

Do eating disorders primarily affect individuals from more advantaged socio-economic groups? Researchers set out to test this common belief.<sup>16</sup> They conducted a systematic review based on 62 studies, albeit with most not being limited to children and youth. The authors did not find a consistent relationship between socio-economic status and eating disorders. Rather, individuals with eating disorders came from a wide range of backgrounds.<sup>16</sup> These authors therefore challenged the stereotype that eating disorders disproportionately affect those who are advantaged. This insight can help practitioners and policy-makers in ensuring that identification, assessment and treatment are inclusive of all young people.

# Providing effective care

Young people with eating disorders face numerous challenges in coping with the mental and physical health consequences of these conditions, which include higher mortality rates.<sup>2-3</sup> Providing access to effective treatments is therefore a crucial public health goal. We conducted a systematic review of eating disorder treatment studies to inform and support practitioners and policy-makers in meeting this goal.



Families are often integral to the treatment of childhood eating disorders.

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## Including the best available research evidence

We designed our inclusion criteria to incorporate studies using the most rigorous evaluation methods, namely, randomized controlled trials (RCTs). But we did not require a no-treatment control group, given that our searches identified no studies applying this standard. We also required treatments to be delivered in outpatient settings, given that this is where most young people receive care. (As a result, we excluded two RCTs evaluating anorexia treatments that compared inpatient refeeding programs and hospital discharge standards.<sup>17-18</sup>) We also limited our searches to the past nine years, to coincide with our last systematic review of eating disorder treatments.

After applying our inclusion criteria (detailed in the Methods), we accepted six RCTs. Four of these trials evaluated psychosocial interventions for anorexia and two evaluated psychosocial interventions for bulimia. No medication studies met our inclusion criteria, nor did any treatment studies for binge-eating disorder or avoidant/restrictive food intake disorder. (Our Summer 2015 issue detailed the effectiveness of cognitive-behavioural therapy for binge-eating disorder.)

## Anorexia treatment studies

All four RCTs evaluating anorexia treatments assessed at least one type of family therapy. As well, most participants in these RCTs were girls, typically about 90%. The first RCT compared treatment-as-usual (TAU) alone with TAU augmented by Systemic Family Therapy. Participants included 13- to 21-year-old females living in France.<sup>19</sup> Following hospitalization, all participants received treatment-as-usual, which included psychiatric consultations. The psychiatrist also coordinated services that could include psychotherapy, medication and/or nutrition counselling. Half of the participants also received Systemic Family Therapy, which focused on altering family dynamics without addressing eating behaviours directly. Instead, topics included managing conflict, recognizing strengths and resources, and encouraging the young person's autonomy.<sup>19</sup> Families participated in an average of 12 sessions over 18 months.<sup>20</sup>

The second RCT compared Family-Based Therapy with Systemic Family Therapy.<sup>21</sup> The 12- to 18-year-old participants lived in the United States and Canada. With Family-Based Therapy, therapists encouraged families to identify the best approach for restoring the teens’ normal eating patterns.<sup>21</sup> Once the teens gained weight, families then supported them to begin independent age-appropriate eating. In this study, Systemic Family Therapy started by engaging family members and setting goals.<sup>22</sup> Therapists then focused on identifying patterns of beliefs and behaviours that could reinforce anorexia, and on helping families change these beliefs and behaviours.<sup>22-23</sup> Both therapies included an average of 16 sessions over nine months.<sup>21-22</sup>

The third RCT compared Family-Based Treatment with Parent-Focused Treatment.<sup>24</sup> The 12- to 18-year-old participants lived in Australia. Family-Based Treatment used the same techniques as Family-Based Therapy, as previously described for the second RCT.<sup>24</sup> With Parent-Focused Treatment, therapists met with parents and delivered content without the affected youth or their siblings.<sup>24</sup> Before the parent sessions, nurses weighed the youth, assessed their medical stability and provided brief supportive counselling during separate 15-minute sessions.<sup>24</sup> Both therapies included an average of 15 sessions over six months.<sup>25</sup>

The fourth RCT evaluating anorexia treatments compared Family Therapy with Multifamily Therapy.<sup>26</sup> The 13- to 20-year-old participants lived in England. With Family Therapy, therapists stressed parents’ roles as a resource for their children and encouraged parents to temporarily manage the youth’s eating. Therapists also provided education about anorexia and assisted the family to view this condition as being separate from the youth. Families randomized to Multifamily Therapy received the same Family Therapy intervention, in addition to full-day multifamily sessions for five to seven families. Multifamily sessions involved the same techniques as with single-family sessions, while encouraging participants to enlist support from each other. The average number of Family Therapy sessions was 19, while the average number of Multifamily Therapy sessions was seven. Both interventions were delivered over 12 months.<sup>26</sup> Table 1 summarizes these treatments.

<b>Intervention</b>	<b>Approach*</b>	<b>Sample size</b>	<b>Youth ages (country)</b>
Treatment-as-usual (TAU) vs.	Teen girls received psychiatric consultations plus other services as needed (e.g., psychotherapy, medication + nutrition counselling)	60	13 – 21 years (France)
TAU + Systemic Family Therapy <sup>19</sup>	As above + families were taught strategies to manage conflicts, recognize strengths + encourage youth’s autonomy during 12 sessions over 18 months		
Family-Based Therapy vs.	Families encouraged to identify best method for restoring normal eating followed by teens beginning independent eating during 16 sessions over 9 months	164	12 – 18 years (United States + Canada)
Systemic Family Therapy <sup>21-23</sup>	Families set goals + learned to change beliefs + behaviours that could reinforce anorexia during 16 sessions over 9 months		
Family-Based Treatment vs.	Same as Family-Based Therapy (above) except during 15 sessions over 6 months	107	12 – 18 years (Australia)
Parent-Focused Treatment <sup>24-25</sup>	Same content as Family-Based Treatment (above) but with parents only; youth provided with separate, brief supportive counselling during 15 sessions over 6 months		
Family Therapy vs.	Families encouraged to see parents as resource + parents encouraged to temporarily manage their teen’s eating during 19 family sessions over 12 months	169	13 – 20 years (England)
Multifamily Therapy <sup>26</sup>	As above + 7 full-day multifamily sessions delivered over 12 months		

\* Number of sessions/meetings reported is the average attended for all studies.

## Anorexia treatment outcomes

We report on outcomes specific to eating disorders as well as overall well-being at final follow-up, acknowledging that some programs measured additional outcomes. We use statistically significant differences to identify one treatment as being superior to another. We also report on effect sizes where applicable.

For the first RCT, when treatment-as-usual was augmented with Systemic Family Therapy, significantly more participants had good or intermediate overall outcomes at three-year follow-up on average.<sup>19</sup> (A good outcome was defined as body mass index [BMI] at or above the 10th percentile *and* regular menstruation, while an intermediate outcome was defined as BMI above the 10th percentile but with amenorrhea.) Specifically, good or intermediate outcomes were found for 60.0% of those who received Systemic Family Therapy plus treatment-as-usual, compared with only 31.0% of those who received treatment-as-usual alone. The effect size for this outcome was substantial. Adding Systemic Family Therapy led to 3.8 times greater odds of a good or intermediate outcome compared with treatment-as-usual only. As well, adding Systemic Family Therapy resulted in 4.2 times greater odds of resuming menstruation. Other relevant outcomes did not differ between the two treatments, including overall anorexia symptoms (assessed using two different measures), BMI and rehospitalizations for anorexia. Still, participants showed significant improvements in overall anorexia symptoms and BMI by three-year follow-up.<sup>19</sup>

Relevant outcomes for Family-Based Therapy compared with Systemic Family Therapy did not significantly differ at one-year follow-up.<sup>21</sup> Specifically, remission from anorexia, defined as body weight within 95% of one's ideal, occurred for 40.7% in Family-Based Therapy and 39.0% in Systemic Family Therapy. Body weights were also similar across the two treatments, as were eating disorder symptoms and quality of life.<sup>21</sup>

For anorexia, Multifamily Therapy and Family Therapy led to 78% and 57% of participants, respectively, sustaining positive outcomes by six-month follow-up.



In many types of family therapy, parents are a key resource for supporting their child.

BIGSTOCK / SANJAY GOSWAMI

Similarly, outcomes for Family-Based Treatment compared with Parent-Focused Treatment did not significantly differ at one-year follow-up.<sup>24</sup> Both produced comparable anorexia remission rates, defined as being at or greater than 95% of expected BMI and within the average range for overall scores on an eating disorder measure. By this definition, 29.1% of youth in Family-Based Treatment experienced remission, compared with 37.3% in Parent-Focused Treatment. Eating disorder symptoms and BMI were also assessed independently. Researchers found no differences between treatments on four eating disorder symptom

subscales or on the percentage reaching the population median (50th percentile) BMI levels for their age, sex and height.<sup>24</sup>

The most successful treatments involved parents.

In contrast, one outcome distinguished Family Therapy compared with Multifamily Therapy at six-month follow-up.<sup>26</sup> Multifamily Therapy led to significantly more youth having improved BMI — with a medium effect size (Cohen's *d* = 0.68). However,

no difference was found between the treatments regarding the percentage of young people with good or intermediate outcomes. (A good outcome was defined as having BMI above 85% of the population median, menstruating and having no bulimic symptoms; an intermediate outcome included the same BMI standard but with amenorrhea or with bulimic symptoms less than once a week.) A good or intermediate outcome was achieved by 78% for Multifamily Therapy compared with 57% for Family Therapy, but the difference was not significant. As well, concerns with body shape, weight or eating or with restricting food intake did not differ.<sup>26</sup>

Table 2 summarizes the outcomes for all four RCTs.

<b>Intervention</b>	<b>Significant improvement over comparison treatment</b>	<b>No significant difference between treatments</b>	<b>Follow-up</b>
Treatment-as-usual (TAU)	None	Eating disorder symptoms (2 of 2) Body mass index (BMI) <sup>†</sup> Rehospitalizations for anorexia <sup>‡</sup>	3 years
TAU + Systemic Family Therapy <sup>19</sup>	Achieved "good or intermediate outcome" <sup>**</sup> Regular menstruation		
Family-Based Therapy	None	Anorexia remission <sup>§</sup> Percentage of ideal body weight Eating disorder symptoms (2 of 2) Quality of life	1 year
Systemic Family Therapy <sup>21</sup>	None		
Family-Based Treatment	None	Anorexia remission <sup>**</sup> Eating disorder symptoms Percentage of median BMI achieved	1 year
Parent-Focused Treatment <sup>24</sup>	None		
Family Therapy	None	Achieved "good or intermediate outcome" <sup>††</sup> Eating disorder symptoms (4 of 4) <sup>‡‡</sup>	6 months
Multifamily Therapy <sup>26</sup>	Percentage of median BMI achieved		

\* Good outcome defined as body mass index (BMI) ≥ 10th percentile + regular menstruation; intermediate outcome defined as BMI >10th percentile + amenorrhea.  
† Non-significant difference for both average BMI + percentage achieving BMI ≥ 10th percentile.  
‡ Prior to beginning outpatient treatment, all participants had been hospitalized for anorexia.  
§ Defined as body weight being within 95% of ideal.  
\*\* Defined as ≥ 95% of expected BMI + within average range for overall score on eating disorder measure.  
†† Good outcome defined as BMI > 85% of population median, menstruating + no bulimic symptoms; intermediate outcome defined as BMI > 85% of population median, with amenorrhea or with bulimic symptoms less than once a week.  
‡‡ Included body shape concerns, body weight concerns, eating concerns + food intake restrictions.

## Anorexia treatment outcomes over time

Beyond reporting at final follow-up, all four RCTs reported outcomes at multiple time points, enabling comparisons between treatments over time. Adding Systemic Family Therapy to treatment-as-usual resulted in more girls and young women obtaining a good or intermediate outcome at three-year follow-up but not at end of treatment.<sup>19</sup> In contrast, Family-Based Therapy, with its early focus on refeeding, did not produce more rapid gains than Systemic Family Therapy, as hypothesized.<sup>21</sup> Rather, remission status was similar between the therapies, both at the end of treatment and at one-year follow-up.<sup>21</sup> A different pattern emerged for Parent-Focused Treatment, which resulted in more young people achieving remission at the end of treatment than Family-Based Treatment, as hypothesized.<sup>24</sup> However, remission status was not significantly different between the treatments at either six-month or one-year follow-up.<sup>24</sup> Finally, as predicted, Multifamily Therapy was more effective than Family Therapy in achieving a good or intermediate outcome at end of treatment.<sup>26</sup> However, at six-month follow-up, no difference between treatments existed for this outcome.<sup>26</sup> Table 3 summarizes these outcomes over time for the four RCTs.

Many of the interventions we reviewed led to positive outcomes months, or years, after treatment ended.

Intervention	Positive outcome criteria	Percentage achieving positive outcome at:			
		End of treatment	6-month follow-up	1-year follow-up	3-year follow-up
Treatment-as-usual (TAU)	Body mass index (BMI) $\geq$ 10th percentile + regular menstruation or BMI > 10th percentile but with amenorrhea	17.2	—	—	31.0
TAU + Systemic Family Therapy <sup>19</sup>		40.0	—	—	<b>60.0*</b>
Family-Based Therapy	Remission (i.e., within 95% of ideal body weight)	33.1	—	40.7	—
Systemic Family Therapy <sup>21</sup>		25.3	—	39.0	—
Family-Based Treatment	Remission (i.e., $\geq$ 95% of expected BMI + eating disorder symptom score within average range)	21.8	21.8	29.1	—
Parent-Focused Treatment <sup>24</sup>		<b>43.1*</b>	39.2	37.3	—
Family Therapy	BMI > 85%, regular menstruation + no bulimic symptoms or BMI > 85% + amenorrhea or bulimic symptoms less than once a week	58	57	—	—
Multifamily Therapy <sup>26</sup>		<b>76*</b>	78	—	—

\* Significantly more young people achieved outcome compared with other treatment.

## Bulimia treatment studies

Both RCTs evaluating bulimia treatments compared cognitive-behavioural therapy (CBT) with another treatment. The first evaluated CBT relative to Family-Based Treatment.<sup>27</sup> The 12- to 18-year-old participants, of whom more than 90% were girls, lived in the United States. CBT first focused on normalizing eating patterns by having the youth monitor their eating and compensatory behaviours, such as purging. Therapists then taught youth to identify and alter distorted thoughts and beliefs about eating and their bodies. The final stage of treatment focused on preventing relapse by anticipating potential problems and developing solutions for them.<sup>28</sup> In Family-Based Treatment, therapists assisted teens and parents to collaboratively disrupt dieting,

binge eating and purging.<sup>29</sup> After successful disruption, therapists encouraged teens to take control of their eating and weight-related behaviours with parental support. Treatment concluded by helping the family to establish healthier relationships and increase the teen's autonomy.<sup>29</sup> Both treatments were delivered over six months, with youth attending an average of 15 CBT sessions and families attending an average of 14 Family-Based Treatment sessions.<sup>27</sup>

The second RCT compared CBT with Psychodynamic Therapy.<sup>30</sup> The 14- to 20-year-old female participants lived in Germany. This version of CBT was similar to the one used in the prior study, including a focus on decreasing disordered eating and compensatory behaviours by reducing distorted thinking about eating and weight. Therapists also taught youth problem-solving and social skills and techniques for regulating their emotions. With Psychodynamic Therapy, according to the authors, therapists began by encouraging youth to understand their symptoms as a “displacement from psychological self to body self.” Therapists targeted bulimic symptoms based on the teen's “conflicts and ego-structural deficits” while encouraging them to develop an understanding of the emotional and social meaning of their symptoms. Both treatments were delivered over one year, with youth attending an average of 33 CBT sessions or 41 psychodynamic sessions.<sup>30</sup> Table 4 summarizes these treatments.

Eating disorders cause serious symptoms and interruptions in healthy development for young people.

<b>Intervention</b>	<b>Approach*</b>	<b>Sample size</b>	<b>Youth ages (country)</b>
Cognitive-Behavioural Therapy (CBT) vs. Family-Based Treatment <sup>27</sup>	Youths monitored eating + problematic behaviours to normalize eating patterns, challenged distorted thinking about eating + their bodies + practised problem-solving during 15 sessions delivered over 6 months	110	12–18 years (United States)
CBT vs. Psychodynamic Therapy <sup>30</sup>	Teen girls + young women challenged distorted thinking about eating + weight + applied problem-solving, social skills + affect regulation techniques during 33 sessions over 12 months	81	14–20 years (Germany)
	Teen girls + young women were taught to view symptoms as displacement from “psychological self to body self” + to understand emotional + social meaning of symptoms during 41 sessions over 12 months		

\* Number of sessions reported is the average attended for all studies.

## Bulimia treatment outcomes

The relevant outcomes for CBT compared with Family-Based Treatment did not significantly differ at one-year follow-up.<sup>27</sup> Abstinence from bingeing and purging occurred for 32.0% of young people who received CBT compared with 48.5% who received Family-Based Treatment, a non-significant difference. As well, both treatments worked equally well with respect to how close young people were to expected body weights and two eating disorder symptom measures at one-year follow-up.<sup>27</sup>

Outcomes for CBT compared with Psychodynamic Therapy were also similar at one-year follow-up.<sup>30</sup> With CBT, the proportion of young people no longer meeting diagnostic criteria for bulimia was 38.5%, compared with 31.0% with Psychodynamic Therapy, a non-significant difference. As well, treatment

outcomes did not differ for the frequency of either bingeing or purging.<sup>30</sup> Table 5 summarizes outcomes for both RCTs.

Intervention	Significant improvement over comparison treatment	No significant difference between treatments	Follow-up
Cognitive-Behavioural Therapy (CBT)	None	Abstinence from bingeing + purging Eating disorder symptoms (2 of 2) Percentage of expected body weight	1 year
Family-Based Treatment <sup>27</sup>	None		
CBT	None	Remission of bulimia Purging frequency Bingeing frequency	1 year
Psychodynamic Therapy <sup>30</sup>	None		

### Bulimia treatment outcomes over time

Beyond outcomes at final follow-up, both RCTs reported outcomes at earlier time points. With Family-Based Treatment, consistent with the researchers’ hypothesis, significantly more teens abstained from bingeing and purging than those receiving CBT, both at end of treatment and at six-month follow-up.<sup>27</sup> However, by one-year follow-up, the difference between the treatments was not significant for this outcome.<sup>27</sup> In contrast, in the RCT assessing CBT compared with Psychodynamic Therapy, remission from bulimia did not differ at any assessed time point.<sup>30</sup> Table 6 summarizes these outcomes over time for both RCTs.

Intervention	Positive outcome criteria	Percentage achieving positive outcome at:		
		End of treatment	6-month follow-up	1-year follow-up
Cognitive-Behavioural Therapy (CBT)	Abstinence from binge eating + purging in the prior four weeks	19.7	25.4	32.0
Family-Based Treatment <sup>27</sup>		<b>39.4*</b>	<b>44.0*</b>	48.5
CBT	Remission (i.e., no longer met diagnostic criteria for bulimia)	33.3	—	38.5
Psychodynamic Therapy <sup>30</sup>		30.2	—	31.0

\* Significantly more young people achieved outcome compared with other treatment.

### Implications for practice and policy

This systematic review highlights promising pathways for treating eating disorders among young people. For anorexia, Multifamily Therapy and Family Therapy led to 78% and 57% of participants, respectively, sustaining positive outcomes by six-month follow-up. (Researchers did not assess long-term follow-up.) Systemic Family Therapy coupled with treatment-as-usual (comprising individual care) also performed well — with 60% of participants sustaining positive outcomes by three-year follow-up. For bulimia, findings were somewhat more muted. Nevertheless, by one-year follow-up, Family-Based Treatment led to nearly 49% of participants sustaining positive outcomes, while CBT led to nearly 39% sustaining improvements. Canadian replication studies are needed. Yet these findings still suggest four implications for practice and policy.

Effective treatments need to be made readily available to all young people in need — as soon as they need them.

- **Include parents in the treatment when possible.** The most successful treatments involved parents. For anorexia, these treatments included Multifamily Therapy, Family Therapy and Systemic Family Therapy. For bulimia, Family-Based Treatment also involved parents. Consequently, when treating an adolescent with either anorexia or bulimia, practitioners should engage parents whenever feasible.
- **Consider CBT when family therapy is not an option.** Some parents may not be able to participate in treatment with their children. But CBT for youth with bulimia can still lead to substantial benefits. As well, CBT is an effective treatment for adolescents with binge-eating disorder. The adjacent sidebar summarizes CBT outcomes from an earlier study.
- **Teach skills that can endure after treatment ends.** Many of the interventions we reviewed led to positive outcomes months, or years, after treatment ended. Examples included Systemic Family Therapy, Multifamily Therapy and CBT, which taught skills young people could use on an ongoing basis. Skills-based interventions should therefore be a priority.
- **Evaluate BC outcomes.** Canadian replication studies are needed for programs that showed promise in other jurisdictions. So if programs are implemented in BC, they should be accompanied by outcome evaluation — to ensure that they also benefit other young Canadians.

Eating disorders cause serious symptoms and interruptions in healthy development for young people, and they cause serious distress for families. Yet as this systematic review highlights, these disorders are treatable. Effective treatments such as those we outline here therefore need to be made readily available to all young people in need — as soon as they need them. 🖐️

### An effective treatment for binge-eating disorder

The *Summer 2015 Quarterly* featured a randomized controlled trial evaluating cognitive-behavioural therapy (CBT) for binge-eating disorder. The treatment focused on helping youth develop consistent, moderate eating using self-monitoring and problem-solving, typically in eight sessions.<sup>31</sup> Three months after treatment ended, 100% of youth who received CBT stopped engaging in binge eating, compared to 50% of those receiving regular care (which included any treatment services offered through their health maintenance organization, such as eating and weight-related services). Viable treatment options are therefore available for binge-eating disorder, as well as for anorexia and bulimia.

## METHODS

We use systematic review methods adapted from the *Cochrane Collaboration*. 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 interventions aimed at treating eating disorders in young people. Table 7 outlines our database search strategy.

<b>Table 7. Search Strategy</b>	
<b>Sources</b>	<ul style="list-style-type: none"><li>• Campbell Systematic Reviews, Cochrane Database of Systematic Reviews, CINAHL, ERIC, Medline and PsycINFO</li></ul>
<b>Search Terms</b>	<ul style="list-style-type: none"><li>• Anorexia, avoidant restrictive food intake disorder, binge eating, bulimia, eating disorders or selective eating <i>and</i> intervention, prevention, therapy or treatment</li></ul>
<b>Limits</b>	<ul style="list-style-type: none"><li>• Published between 2014 and 2023 in a peer-reviewed journal</li><li>• Reported on children aged 18 years or younger</li><li>• Used systematic review, meta-analysis or RCT methods</li></ul>

To identify additional RCTs, we also hand-searched the reference lists from relevant systematic reviews and a previous issue of the *Quarterly*. Using this approach, we identified 179 articles describing 123 studies. Two team members then independently assessed each article, applying the inclusion criteria outlined in Table 8.

<b>Table 8. Inclusion Criteria for RCTs</b>
<ul style="list-style-type: none"><li>• Participants were randomly assigned to intervention and comparison groups (i.e., treatment-as-usual or another intervention)</li><li>• Participants had a mean age of under 19 years</li><li>• Study authors provided clear descriptions of participant characteristics, settings and interventions</li><li>• Interventions were evaluated in high-income countries for comparability to Canadian settings</li><li>• Interventions aimed to treat eating disorders</li><li>• Interventions were delivered in outpatient or community settings</li><li>• At study outset, most participants met diagnostic criteria for an eating disorder</li><li>• Follow-up was three months or more (from the end of the intervention)</li><li>• Attrition rates were 20% or less at final assessment and/or intention-to-treat analysis was used</li><li>• Child outcome indicators included eating disorder symptom and/or diagnostic outcomes, assessed using two or more informant sources</li><li>• At least one outcome rater was blinded to participants' group assignment</li><li>• Reliability and validity were documented for primary outcome measures</li><li>• Statistical significance was reported for primary outcome measures</li></ul>

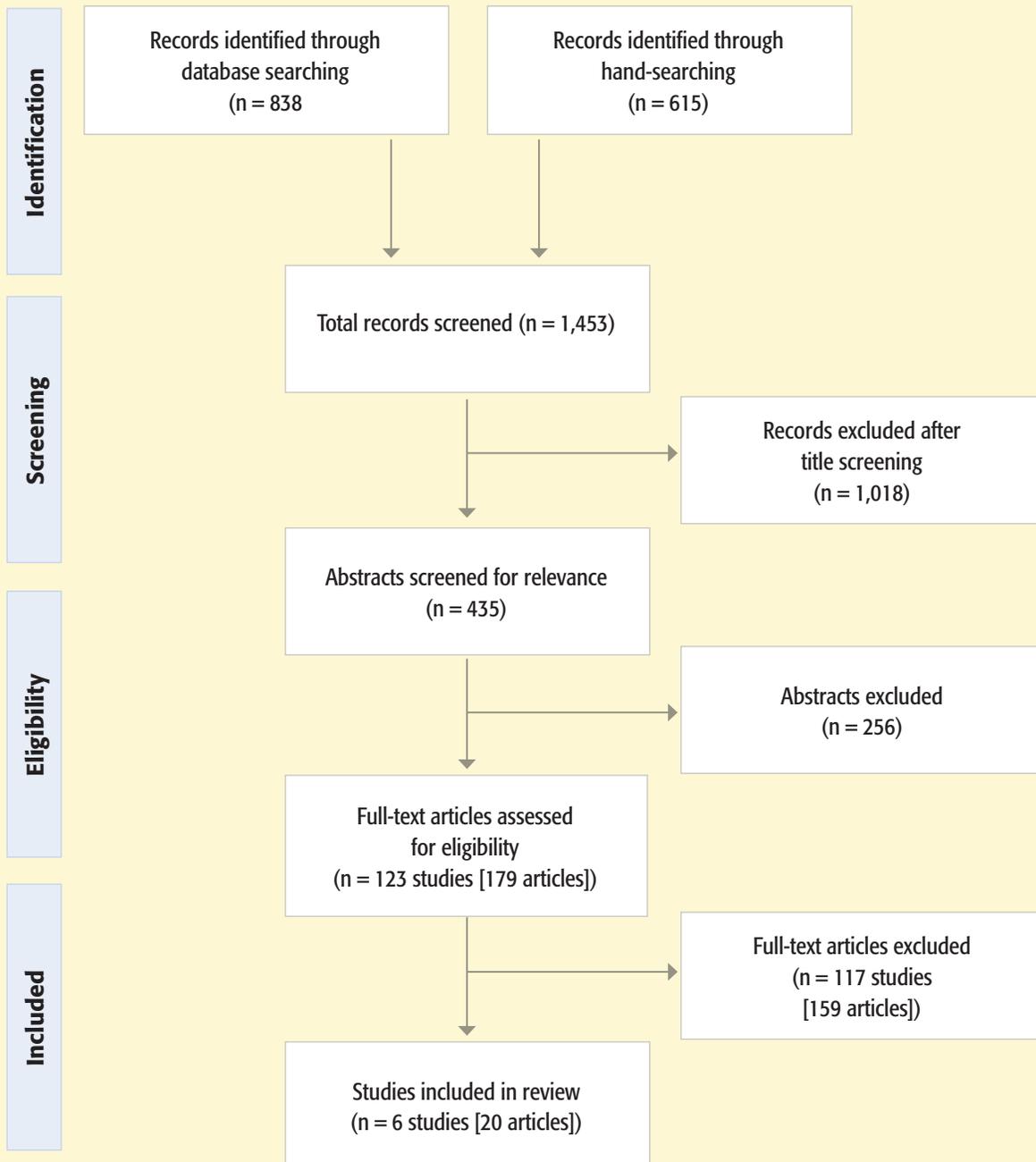
Six RCTs met all the inclusion criteria. Figure 1 depicts our search process, adapted from Preferred Reporting Items for Systematic Reviews and Meta-Analyses.<sup>32</sup> Data from these studies were then extracted, summarized and verified by two or more team members. Throughout our process, any differences among team members were resolved by consensus. 🤝

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

Jen Barican, [chpc\\_quarterly@sfu.ca](mailto:chpc_quarterly@sfu.ca)

Children's Health Policy Centre, Faculty of Health Sciences

Simon Fraser University, Room 2435, 515 West Hastings St., Vancouver, BC V6B 5K3

**Figure 1. Search Process for RCTs**

## RESEARCH TERMS EXPLAINED

Identifying the best available research evidence on how well interventions work for children is crucial in guiding public policy and practice decisions and investments. **Randomized controlled trials (RCTs)** are an important standard in the health sciences for assessing intervention effectiveness. RCTs involve randomly assigning participants to a given group (e.g., intervention or no intervention). The randomization process ensures that every young person enrolled in the study has an equal chance of being assigned to any of the groups. The goal is to create conditions that are fully comparable other than the interventions being evaluated.

To determine how well an intervention works, researchers then analyze relevant child and youth outcomes. Analyses include assessing whether group differences are **statistically significant**. This process gives more certainty that any differences favouring a given intervention were not due to chance. In the studies we reviewed, researchers used the typical convention of having at least 95% confidence that observed results reflected the intervention's real impact.

The ideal is to compare those receiving a new intervention to a control group that receives no intervention, or that receives a previously proven intervention. But as this edition of the *Quarterly* illustrates, head-to-head evaluations — comparing interventions without a typical control group — are sometimes the “best available” research evidence.

Beyond determining whether outcomes are statistically significant, it is important to evaluate how much meaningful difference the intervention made in the young person's life — the “real life” magnitude or clinical impact. Called **effect size**, this quantitative measure shows the strength of the relationship between the intervention and the outcome. Among those we report on in this issue, **Cohen's *d*** effect sizes are quantified as small (0.20), medium (0.50) or large (0.80). 🙌



When individuals rating a young person's outcomes are unaware of which treatment the youth received, it helps ensure that their beliefs about the treatment do not influence their ratings.

BIGSTOCK / KIM\_KIMBERWOOD

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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. For more information about these programs, please contact study authors.

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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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