

Vol. 3, No. 4 2009

## Preventing Suicide in Children and Youth

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**Obesity is a serious public health problem with both environmental and biological causes. In recent years the incidence of childhood obesity has increased dramatically.**

**We investigate this trend and the implications for children's mental health in our Winter 2010 issue.**



### About the Children's Health Policy Centre

As an interdisciplinary research group in the Faculty of Health Sciences at Simon Fraser University, we aim to connect research and policy to improve children's social and emotional well-being, or *children's mental health*. We advocate the following public health strategy for children's mental health: addressing the determinants of health; preventing disorders in children at risk; promoting effective treatments for children with disorders; and monitoring outcomes for all children. To learn more about our work, please see [www.childhealthpolicy.sfu.ca](http://www.childhealthpolicy.sfu.ca)



**Children's  
Health Policy  
Centre**

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### About the Quarterly

The *Quarterly* is a resource for policy-makers, practitioners, families and community members. Its goal is to communicate new research to inform policy and practice in children's mental health. The publication is funded by the British Columbia Ministry of Children and Family Development, and topics are chosen in consultation with policy-makers in the Ministry's Child and Youth Mental Health Branch.

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SIMON FRASER UNIVERSITY  
THINKING OF THE WORLD

# Quarterly

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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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## Overview

### Even one is one too many

*“It’s like being churned underneath a giant wave spinning, turning, flipping with no idea which way the surface is and struggling to breathe all the while.”<sup>1</sup>*

These words were written by a youth who committed suicide. The isolation and hopelessness expressed above echo many of the experiences and feelings of the 81 children and youth who committed suicide in British Columbia between 2003 and 2007.<sup>1</sup> Suicide is second only to motor vehicle accidents as a leading cause of death for young people aged 12 to 18 in BC.<sup>1</sup>

Similar losses occur countrywide. In Canada, two in every 100,000 children aged 10 to 14 commit suicide annually.<sup>2</sup> For youth aged 15 to 19, this rate is even higher, at 10 in every 100,000.<sup>2</sup> These statistics translate into 256 young lives lost to suicide every year in Canada.<sup>2</sup> As well, for every young person who commits suicide, many more attempt it or contemplate it.<sup>3</sup>

Rates are a quantitative way of describing the impact of suicide at the population level. At the individual level, however, the impact is tragic in a way that numbers cannot express — for young people and for their families and communities. Even one child’s life lost to suicide is one too many. Fortunately, there are effective ways to prevent suicide in populations of young people, as well as effective ways to respond to individuals at risk. Such interventions are featured in our [Review](#) article.

### Who is at risk?

One of the most important risk factors for suicide is the presence of an untreated mental disorder. This applies to as many as 90% of adolescent suicide victims at the time of their death.<sup>4</sup> Depression is particularly common, occurring in 60% of youth suicide victims and in 40–80% of youth who experience suicidal thoughts or attempts.<sup>5</sup> Substance abuse and conduct disorder are also frequent in youth who commit suicide, especially boys.<sup>4</sup> Clearly, to reduce suicide in young people, it is vital to prevent and treat these mental disorders.

Previous suicide attempts are also an important risk factor for future attempts.<sup>1</sup> The risk is highest within the first six months after an initial attempt, when 15% of youth go on to make another attempt.<sup>6</sup> Consequently, it is always necessary to thoroughly investigate and address the issues that lead to any suicide attempt in a young person.



**■ Suicide is second only to motor vehicle accidents as a leading cause of death for young people aged 12 to 18 in BC.**

For young people, suicide attempts often follow difficult life events. For example, a review in BC found that 68% of children and youth who committed suicide had recently experienced adverse events causing significant emotional distress.<sup>1</sup> These events can range from serious conflict with parents or romantic partners to legal crises to more chronic familial dysfunction, such as abuse and neglect.<sup>1,7</sup> However, such events are rarely the sole cause of an attempt. More typically, stressful life events *precipitate* suicide attempts in young people who are already at risk because of untreated mental disorders,<sup>4</sup> including depression, substance abuse and conduct disorder.<sup>8-11</sup>

It is always crucial to identify and address serious and preventable adverse events — such as abuse, neglect, discrimination and residential instability.<sup>1,3,7</sup> Notably, many of these adverse events are also risk factors for developing mental disorders that are linked to suicide. Therefore, when young people are protected from such experiences, their risk for developing a mental disorder declines. This, in turn, reduces their suicide risk.

“When young people are raised in healthy and supportive family environments and attend well-run schools within safe communities, their suicide risk is greatly reduced.”

### What protects young people?

In general, it appears that the same conditions that contribute to healthy child development can also *protect* children and youth from suicide. When young people are raised in healthy and supportive family environments and attend well-run schools within safe communities, their suicide risk is greatly reduced.<sup>3,12,13</sup> As well, one study of Native American youth demonstrated that increasing protective factors was more effective than decreasing risk factors in reducing suicide.<sup>7</sup> Table 1 outlines specific protective factors that have been correlated with reducing suicide in children and youth.

**Table 1: Factors that protect children and youth from suicide**

Individual Factors	
High “emotional intelligence” <sup>14</sup>	Good problem-solving & coping skills <sup>15</sup>
High self-esteem <sup>15</sup>	High academic achievement <sup>12,16</sup>
High personal control <sup>15</sup>	Positive mood & emotional health <sup>7,17</sup>
Family Factors	
Positive family relationships <sup>18</sup>	Good parental supervision <sup>12,19</sup>
High levels of family cohesion & support <sup>7,12,13,15,16,19</sup>	High parental expectations for academics & behaviour <sup>12</sup>
Frequent engagement in shared activities <sup>12,13</sup>	Strong parental disapproval of antisocial behaviours <sup>17</sup>
Community Factors	
Positive connections to school <sup>3,12,16</sup>	Good presence of supportive peers <sup>7,13,15,19</sup>
Good school attendance <sup>19</sup>	Frequent extracurricular activities <sup>3</sup>
Available teachers perceived as fair <sup>13</sup>	Strong involvement in a faith community <sup>7,18</sup>
Available counsellors or nurses in the school <sup>7</sup>	Safe neighbourhoods <sup>13</sup>

## How can we best intervene?

By understanding risk and protective factors, we are better able to prevent suicide. For example, prevention programs that take these factors into consideration are much more likely to be effective.<sup>20</sup>

School-based prevention programs are among the most common. Some of these programs have been universal, delivered to all the young people in a given population, while others have been targeted to those most at risk. The outcome research on these prevention programs has been mixed.<sup>21</sup> Our [Review](#) article features an in-depth look at outcomes from the most recent school-based prevention studies.

There are also community-based suicide prevention programs that appear promising. One of these is a program that teaches journalists to report the news in a manner that reduces the likelihood of imitative suicides. In Austria, for example, overall suicide rates declined nearly 20% over a four-year follow-up period after preventive media guidelines were introduced.<sup>18</sup> (Unfortunately, the evaluations of this program did not meet our selection criteria so it is not featured in our Review.) More recently, the Canadian Psychiatric Association published [media guidelines](#) for reporting suicide, although their impact has yet to be evaluated.<sup>22</sup>

## Identifying individuals at risk

Although prevention programs can reach large populations of children, accurately identifying individuals who are at risk is also key.<sup>23</sup> To meet this objective, school-based screening programs are commonly used to reach large numbers of young people. Such screening programs can have added benefits beyond identifying at-risk students. For example, a large randomized controlled study of American high-school students found that a suicide screening program actually reduced distress in depressed youth.<sup>23</sup>

Other attempts to identify at-risk young people involve “gatekeeper” training programs. Adults in these interventions — usually teachers, counsellors, coaches or police — are taught to recognize risk factors, identify high-risk individuals and refer these youth to appropriate services. A recent review found that Canadian and American versions of these programs had a positive impact on gatekeepers’ skills, knowledge and attitudes.<sup>24</sup> The effectiveness of these programs in decreasing actual rates of suicidal ideation or attempts has yet to be determined.<sup>24</sup> Given the potential benefits, however, the BC Coroners Service recently recommended a province-wide evaluation of gatekeeper training programs.<sup>25</sup>

For practitioners interested in additional resources on preventing youth suicide, the British Columbia Ministry of Children and Family Development’s Child and Youth Mental Health Branch has compiled helpful [web-based tools](#).

## From identification to evaluation

Once a young person has been identified as being at risk, it is essential that they receive an individual clinical evaluation. The evaluation should assess risk level, including the circumstances motivating the thoughts of suicide, the methods being considered, the degree of planning and the access to potential means.<sup>4</sup> A thorough assessment will also evaluate mental status and diagnose any underlying mental disorders. As well, by examining the young person's social circumstances, protective factors such as healthy family functioning and supportive peer relationships can be identified and enhanced. It is this kind of careful evaluation that leads to the most effective individual intervention plans.

## Managing safety concerns

All suicidal young people require a plan to minimize risks and ensure adequate adult support and supervision. Obviously, it is critical to restrict access to potential means of suicide, such as medications and firearms. As well, the availability of alcohol and other disinhibiting substances should be restricted.<sup>21</sup> Other community-wide efforts can be made to restrict access to the means of self-harm. For example, the BC Coroners Service recommended that the five bridges in BC involved in 50% of suicide deaths by jumping be outfitted with barriers to prevent suicide.<sup>25</sup>

At-risk young people are often encouraged to sign “contracts” promising to not engage in suicidal behaviour. However, there are no empirical studies on the effectiveness of this strategy.<sup>21</sup> Similarly, there is no research evidence on the usefulness of telephone crisis hotlines.<sup>18</sup>

If safety cannot be assured, an adult should immediately accompany the young person to the nearest emergency room. If short-term hospitalization is necessary, careful discharge planning is essential to ensure that risk factors have been addressed and that there is follow-up with a qualified mental health practitioner.<sup>21</sup>

## Reducing risk longer term

Once acute risks are addressed and immediate safety is ensured, longer-term interventions can be considered. A number of treatments have been developed to specifically reduce suicidal thinking and behaviours among youth who have made previous suicide attempts.

Longer term, it is also imperative to accurately diagnose and effectively treat any underlying mental disorders. For example, treating depressed

“Programs for preventing mental disorders can save lives and have a lasting impact on suicide rates.”

youth with cognitive-behavioural therapy (CBT) and the antidepressant medication fluoxetine (brand name *Prozac*) has been found to significantly reduce suicidal ideation.<sup>26</sup> Similarly, youth who received CBT and relapse prevention aftercare for alcohol abuse had significantly lower rates of suicidal ideation, even though the intervention did not specifically address suicide.<sup>27</sup> For more information on effective treatments for specific mental disorders in children and youth, please see previous issues of the *Quarterly* and our [research reports](#).

## An ounce of prevention is priceless

Notably, there is also evidence that preventing certain mental disorders reduces suicide risk. For example, in youth at risk for depression, those who received group CBT showed significantly less suicidality after two years than youth who received only “usual” care (which included accessing any available health care services).<sup>41</sup> As well, first graders who received a universal classroom intervention designed to decrease aggression — *The Good Behavior Game* — showed half the rates of suicidal ideation and attempts by the time they reached adulthood, compared to children who did not receive the intervention.<sup>42</sup> These data strongly suggest that programs for preventing mental disorders can save lives and have a lasting impact on suicide rates. Such prevention programs should therefore be an essential component of any public health strategy for addressing suicide. This is also the repeated message of the BC Coroners Service — that most child and youth suicides *are* preventable.<sup>1</sup> 🖐️

## Message on the bottle: The unintended outcomes

In June 2004, Health Canada issued warnings that certain antidepressant medications had the potential to increase suicidal thoughts and behaviours in children and youth. These medications included selective serotonin reuptake inhibitors, or SSRIs, as well as selective norepinephrine reuptake inhibitors.<sup>28–35</sup> Warnings were given for nine medications available under the following trade names: *Celexa*, *Effexor*, *Luvox*, *Paxil*, *Prozac*, *Remeron*, *Wellbutrin*, *Zoloft* and *Zyban*. Regulatory bodies in other countries issued similar warnings.

After these warnings were issued, antidepressant prescriptions for children and youth declined markedly in the Netherlands,<sup>36</sup> the United Kingdom,<sup>37</sup> the United States<sup>36</sup> and parts of Canada.<sup>38</sup> Researchers were then concerned about the potential for increased suicides due to untreated (or undertreated) depression. In the UK, decreased antidepressant prescription rates have not been linked to increased suicidal behaviour in young people.<sup>37</sup> In contrast, data from Canada, the Netherlands and the US suggest a significant correlation between decreased antidepressant prescription rates and increased suicide rates.<sup>36,38</sup> For example, antidepressant prescription rates for children and youth in Manitoba decreased by 14% while suicide rates rose by 25% in the two years following these warnings.<sup>38</sup>

On balance, most research continues to support the use of SSRIs in treating adolescent depression.<sup>39</sup> Of these medications, fluoxetine (brand name *Prozac*) has a particularly strong efficacy and safety profile.<sup>40</sup> As with any psychotropic medications being used by young people, careful individual monitoring is essential. As well, there is a need for long-term public health monitoring of medication safety and efficacy in young people.

## Reducing youth suicide: What works?

To date, interventions to reduce youth suicide have included large-scale (primary) prevention programs as well as targeted treatments (or secondary prevention) for young people who have attempted suicide. Here we identify and summarize the research conducted over the past five years on these two types of interventions. (For a review covering the research prior to this, please see [our 2005 report](#) on preventing suicide in youth.)

### Finding the best studies

Of the 36 articles we retrieved for assessment, five articles describing four randomized controlled trial (RCT) evaluations met our inclusion criteria. (See [Appendix](#) for a full description of our methods.)

Two articles described an evaluation of a universal *prevention* program called *Signs of Suicide (SOS)*.<sup>43, 44</sup> This program was aimed at American high-school students. Additional information on interventions and participants is provided in Table 2.



**SOS participants were 37% less likely to report a suicide attempt in the past three months than youth in the control group.**

**Table 2: Prevention and treatment interventions for reducing suicide**

Interventions	Control/Comparisons	Children
Description (Number of participants)	Description (Number of participants)	Age range Gender
<b>Prevention</b>		
<b>Signs of Suicide (SOS):</b> <sup>44</sup> 2-day high-school-based program led by school staff using video & classroom discussions to increase knowledge of suicide, depression & helpful responses to risk, along with screening for depression & suicide (2,039)	No-intervention control (2,094)	Not reported 52% female
<b>Treatment</b>		
<b>Multisystemic Therapy (MST):</b> <sup>45, 47</sup> 4-month home-based family-centred therapy including safety planning, helping parents provide monitoring & structure, & encouraging youth to disengage from troubled peers (79)	Hospitalization including a behavioural milieu program & aftercare plan (81)	10 – 17 35% female
<b>Skills-Based Treatment (SBT):</b> <sup>6</sup> 6-month therapy including 9 individual sessions & 1 family session on problem-solving & mood management skills, including cognitive restructuring & relaxation practice in session & as homework (15)	<i>Supportive Relationship Treatment</i> including unstructured sessions encouraging affect & its connection to events (16)	12 – 17 82% female
<b>Youth-Nominated Support Team (YST):</b> <sup>46</sup> 6-month weekly contact with up to 4 youth-nominated support persons* who received information on youth's psychiatric disorder, treatment plan & suicide risk factors along with communication training (151)	Hospitalization including psychotherapy & medication (138)	12 – 17 68% female

\* Support people included parents, relatives, family friends, school staff and peers.

Three other articles described evaluations of three *treatments* — *Multisystemic Therapy (MST)*,<sup>45</sup> *Skills-Based Treatment (SBT)*<sup>6</sup> and *Youth-Nominated Support Team (YST)*.<sup>46</sup> These treatments were all aimed at high-risk (hospitalized) American youth. All *SBT* youth had made a suicide attempt, and all *YST* youth had either made an attempt or expressed significant ideation. In contrast, 49% of the *MST* youth were hospitalized for reasons other than suicidality, including psychosis and threatening to harm others.<sup>45</sup> *MST* also differed from the other treatments in that it was originally developed to treat antisocial behaviour and then was modified to address psychiatric crises, including suicide risk.<sup>45</sup>

## Preventing suicide

The sole prevention trial — *SOS* — effectively averted suicide attempts in large groups of American high-school students who were ethnically, geographically and economically diverse. *SOS* participants were 37% less likely to report a suicide attempt in the past three months than youth in the control group.<sup>44</sup> *SOS* participants also had greater knowledge and more helpful attitudes about suicide and depression.<sup>44</sup> The program was not effective, however, at reducing suicidal thoughts or at increasing help-seeking behaviours such as talking to an adult or obtaining treatment for suicide or depression (as shown in Table 3).

**Table 3: Suicide-related outcomes**

Intervention	Significant Outcomes*	Non-significant Outcomes
<b>Prevention</b>		
<b>Signs of Suicide (SOS)</b> <sup>44</sup> compared to no-intervention control at 3-month follow-up	<i>SOS</i> youth had fewer suicide attempts (3% vs. 5%) <i>SOS</i> youth had more knowledge/adaptive attitudes about suicide & depression	Suicidal ideation Help-seeking behaviours
<b>Treatment</b>		
<b>Multisystemic Therapy (MST)</b> <sup>45,48</sup> compared to treatment-as-usual hospitalization at 12-month follow-up	<i>MST</i> youth had fewer suicide attempts (pretreatment to follow-up declines of 31% to 4% vs. 19% to 4%)	Parent-reported suicide attempts** (9% vs. 17%) Suicidal ideation
<b>Skills-Based Treatment (SBT)</b> <sup>6</sup> compared to <i>Supportive Relationship Treatment</i> at 6-month follow-up	None	Suicide attempts <sup>†</sup> (27% vs. 13%) Suicidal ideation
<b>Youth-Nominated Support Team (YST)</b> <sup>46</sup> compared to treatment-as-usual hospitalization at the end of treatment	<i>YST girls who completed treatment</i> <sup>‡</sup> had lower suicidal ideation <i>YST girls</i> improved significantly more on parent-rated mood/self-harm	Suicide attempts for entire sample (17% vs. 12%) Parent-rated mood/self-harm for entire sample

All rates are based on youth self-reports unless otherwise specified. Suicide attempt percentage data list intervention groups followed by comparison/control groups.

\* Significant at  $p \leq .05$ .

\*\* For both entire sample and subsample of youth who engaged in self-harming behaviour prior to treatment.

† Measured at end of treatment not 6-month follow-up.

‡ Treatment completion defined as having at least 2 support persons for at least 3 months.

## Treating the most vulnerable

The success of the treatment programs varied. *MST* youth had statistically significant reductions in suicide attempts one year after treatment compared to youth who were hospitalized but received no *MST* (based on youth self-report but not by parents' reports).<sup>45</sup> However, given that 4% of *MST* youth and 4% of comparison (hospitalized-only) youth had a suicide attempt within the one-year follow-up period, the statistically significant benefit for *MST* youth was likely due to their much higher pre-intervention base rates of attempting suicide (31% for *MST* youth compared to 19% for hospitalized-only youth).<sup>45</sup>

The results of *YST* varied significantly by gender. *YST* failed to produce any improvements in suicide-related outcomes for boys. However, based on parent ratings of mood and self-harm, *YST* girls improved significantly more than comparison (hospitalized-only) girls. As well, *YST* girls who had contact with two or more support people for three months or more had less suicidal ideation than comparison girls.<sup>46</sup> Gender differences regarding the importance of social support likely underlie these differing outcomes for boys and girls. For example, the authors cited previous research highlighting the particular value of emotional support for girls and their tendency to be more satisfied with such support than boys.

Of the three treatments, only *SBT* failed to produce any significant improvements over the comparison intervention — supportive unstructured therapy — for any suicide-related outcome. Youth in both groups had similar reductions in suicidal ideation, with approximately 76% of all study participants falling within the “non-clinical range” at the end of treatment (without a statistically significant difference between *SBT* and control youth).<sup>6</sup>

## Are there other treatment benefits?

The three treatment evaluations also assessed potential benefits beyond suicidal thoughts and attempts. *MST* produced significant behavioural changes, including parents reporting more control over their children's behaviour<sup>45</sup> and youth reporting more rules to follow.<sup>47</sup> However, none of the study treatments produced any added benefits regarding depressive symptoms,<sup>6, 45, 46</sup> hopelessness,<sup>45</sup> emotional distress,<sup>47</sup> internalizing<sup>46, 47</sup> and externalizing symptoms,<sup>47</sup> self-esteem,<sup>47</sup> problem-solving skills,<sup>6</sup> anger,<sup>6</sup> family functioning,<sup>47</sup> school attendance<sup>47</sup> or out-of-home placements.<sup>47</sup>

“ There is solid evidence that suicide rates can be significantly reduced by prevention programs. ”



## Prevention prevails

There is solid evidence that suicide rates can be significantly reduced by *prevention* programs. In particular, the universal program SOS has been shown to prevent suicide in large and diverse groups of high-school students. It is especially encouraging that this program had such a large effect size — SOS youth were 37% less likely to attempt suicide than comparison youth — given that SOS was delivered in only two days by school staff. As well, because SOS teaches youth how to respond to suicidal peers, the program may even prevent deaths beyond the direct participants, given that youth who commit suicide are more likely to discuss their plans with a friend than with an adult.<sup>1</sup>

The results of the three *treatment* studies were less compelling. However, their less dramatic results may have been affected by methodological limitations in their evaluations. Because of small sample sizes and because of the rarity of suicide attempts, the likelihood of finding statistically significant differences between treatment and comparison groups was extremely limited. As well, because these treatments were compared to other treatments (rather than to no interventions, as was done in the SOS prevention study), it was likely far more difficult to find statistically significant differences in outcomes.

“Investments in effective suicide prevention programs could have life-saving outcomes for high-school students.”

## Life-saving policy and practice

There is evidence that some suicidal young people benefit from the targeted treatments *Multisystemic Therapy (MST)*, *Skills-Based Treatment (SBT)* and *Youth-Nominated Support Team (YST)*. A thorough individual assessment helps determine which specific interventions are most likely to help. It also facilitates the creation of an individualized plan to address additional risk factors, such as mental disorders or abuse and neglect.

The results of this review strongly suggest that investments in effective suicide prevention programs could have life-saving outcomes for high-school students. The prevention program *Signs of Suicide (SOS)* is effective. It is also a brief program that can be delivered in high-school classrooms by school staff. As well, it has been tested in both suburban and inner city communities. Therefore *SOS*'s dissemination and maintenance potential is very strong. To date, however, *SOS* has only been evaluated in American settings. Canadian evaluations are strongly warranted to determine whether the positive results can be replicated here.

Beyond evaluating *SOS* in Canadian high-school students, our review uncovered a need for new prevention studies, particularly in younger populations. Such studies could examine interventions aimed at positively influencing modifiable risk and protective factors much earlier in children's development. 🖐️

## Learning how to ACT

The *Signs of Suicide (SOS)* program, which is delivered by school staff, teaches youth to recognize signs of suicide, to treat them as an emergency and to respond to them effectively. This is achieved by using the video *Friends for Life*, which dramatizes signs of suicidality and depression and includes interviews with people whose lives have been affected by suicide. The video also teaches the ACT acronym: ACKNOWLEDGE the signs of suicide and take them seriously; let the person know you CARE and want to help; then, TELL a responsible adult. As well, youth anonymously complete a depression and suicide screening measure. High-scoring youth are encouraged to seek help immediately.<sup>44</sup> Staff are trained to deliver *SOS* by receiving practice guidelines and a training video for \$300 US for 300 students per year. An additional electronic kit (for \$75 US) provides the right to reproduce materials for an unlimited number of students.

To learn more about *SOS*, including how to obtain program materials, go to [www.mentalhealthscreening.org/schools/index.aspx](http://www.mentalhealthscreening.org/schools/index.aspx)

## Native youth suicide: Behind the statistics

In BC, the adolescent suicide rate is 5 to 20 times higher in aboriginal youth compared with non-aboriginal youth.<sup>49</sup> However, these figures are misleading because they obscure the dramatically different suicide rates across the 197 formally identified First Nations “bands” within the province.<sup>50</sup> For example, while some aboriginal communities have suicide rates as much as 800 times the national average, more than half had no youth suicides at all between 1987 and 2000.<sup>49</sup>

To help understand these striking differences in suicide rates, researchers Chandler and Lalonde<sup>50</sup> examined youth suicides in BC aboriginal communities over 14 years, beginning in 1987. Rather than focusing on individual factors in the lives of the youth who committed suicide, these researchers attempted to assess *cultural continuity* — community-level efforts “to preserve their cultural pasts and to secure future control of their civic lives.”<sup>50</sup>

### How culture makes a difference

Eight cultural-continuity variables are detailed in Table 4. Each variable was measured using federal and provincial public data sources along with information provided by local community agencies.<sup>50</sup> Every variable was deemed “present” or “absent” (or measured dichotomously), except for children in foster care, which was measured as a proportion (or as a continuous variable).

**Table 4: Community cultural-continuity variables**<sup>50,51</sup>

The community is part of a band that has institutions of self-government which provide substantial economic & political independence.
Women form the majority of local government members.*
The community is part of a band that has a long history of land claims actions.
The community has one (or more) building(s) that are specifically designated or reserved for cultural activities.
The community controls child custody & protection services & there is a lower proportion of children removed from parental care.
The majority of students in the community attend a band-administered school.
The community has a high level of control over the administration of health services.
The community owns or controls police & fire services.

\* Women’s participation in local government was assessed given the historically matrilineal structure of Canadian West Coast First Nations.



**Cultural continuity is one of the strongest factors reducing the risk of suicide in aboriginal youth.**

Each of the eight variables was associated with lower rates of youth suicide. The reduction in relative suicide risk was calculated for six variables (as shown in Table 5). Self-government emerged as the strongest protective factor.<sup>51</sup> It was also strongly related to the presence of other cultural-continuity factors within each community.<sup>50</sup> Collectively, the more variables that were present in a community, the lower the suicide rate.

**Table 5: Relative suicide risk reduction for six community variables** <sup>51</sup>

Community Variable	Relative Risk Reduction
Successful efforts to attain self-government	85%
Local control of education	52%
History of pursuing land claims	41%
Local control of health services	29%
Presence of cultural facilities	23%
Local control of police & fire services	20%

Strikingly, communities with all eight factors had no youth suicides, while communities with no factors had rates more than 10 times the national average.<sup>50</sup> These data show that some aboriginal communities in fact have lower suicide rates than many non-aboriginal communities. Importantly, the percentage of children in foster care was also significantly higher in communities that experienced suicides than in communities that did not.<sup>50</sup> In contrast to commonly held assumptions, however, socio-economic status, geographic remoteness and population density were unrelated to suicide among First Nations youth.<sup>50, 51</sup> Overall, these data strongly suggest that cultural continuity is one of the strongest factors reducing the risk of suicide in aboriginal youth.

### Connecting to the past to strengthen the future

These studies clearly demonstrate the importance of preserving and promoting First Nations’ cultural heritage as a means of protecting aboriginal young people from suicide.<sup>52</sup> These studies also show that some of the factors protecting or jeopardizing aboriginal young people — such as self-government or foster care — are modifiable and therefore can be addressed. 🖐️

“ These studies clearly demonstrate the importance of preserving and promoting First Nations’ cultural heritage as a means of protecting aboriginal young people from suicide. ”

### Expressing needs, supporting families

To the Editors:

Your recent issue mentioned important information regarding what is known about the causes of schizophrenia, including solid evidence that parenting practices are not responsible for the disorder. However, your article did not mention the research on the influence of family functioning on the *course* of schizophrenia. In particular, high levels of *expressed emotion* within families have been associated with poorer outcomes. Can you comment on *expressed emotion* and clinical outcomes for children and youth with schizophrenia?

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The term *expressed emotion*, or EE, derived from research on the family environments of adults with schizophrenia. Measures of EE typically assess criticism, hostility and emotional overinvolvement, as well as warmth and positivity displayed by family members.<sup>53</sup> Family members assessed as having “low” EE are typically tolerant and sensitive to the individual’s needs, whereas those with “high” EE are prone to using inflexible coping strategies and to being intrusive.<sup>53</sup> That said, the vast majority of high-EE relatives are highly motivated to help their family members and are very involved in their care.<sup>54</sup>

Although strong correlations between high EE and adult schizophrenia relapse rates have been long documented,<sup>53</sup> data on children and youth are extremely limited. We uncovered only one relevant study, which included 26 youth at “imminent” risk for psychosis and their caregivers. As expected, higher levels of parental positivity and warmth (i.e., low EE) were associated with fewer psychotic symptoms and enhanced social functioning.<sup>55</sup> Surprisingly, high levels of emotional overinvolvement among parents (i.e., high EE) were also correlated with fewer symptoms and enhanced social functioning among youth.<sup>55</sup> In explaining this unanticipated finding, the authors suggested that optimal levels of emotional involvement differ over the lifespan. In other words, while parental “overinvolvement” may be negative for adults with schizophrenia, it may actually serve to positively support and protect younger people.

Because caring for a child with psychosis is extraordinarily difficult, we urge practitioners to understand the significant support that parents require. Many families benefit from participating in online or in-person support groups. Parents also need practical assistance, such as respite from caregiving duties. Finally, families need information about psychosis, including typical symptoms and their causes. Such information can help correct misperceptions that have been associated with high-EE levels, such as beliefs that symptoms and challenging behaviours are under individual control rather than being due to the illness.<sup>53</sup> 🖐️

The Schizophrenia Society of Canada — [www.schizophrenia.ca](http://www.schizophrenia.ca) — provides helpful information regarding supports for families, including links to local organizations.

## Research methods

For our review, we used systematic methods adapted from the *Cochrane Collaboration*.<sup>56</sup> We limited our search to randomized controlled trials published in peer-reviewed scientific journals.

To identify high-quality studies, we first applied the following search strategy:

Sources	<ul style="list-style-type: none"> <li>• Medline, PsycINFO, CINAHL, ERIC &amp; the Suicide Information &amp; Education Centre Catalogue</li> </ul>
Search Terms	<ul style="list-style-type: none"> <li>• Suicide <i>and</i> prevention, treatment <i>or</i> intervention</li> </ul>
Limits	<ul style="list-style-type: none"> <li>• English-language articles published from 2004 through June 2009*</li> <li>• Child participants (age 0–18 years)</li> </ul>

\* We limited our search to five years given that our previous report *Preventing Suicide in Youth: Taking Action with Imperfect Knowledge*<sup>57</sup> included publications prior to 2004.

As well, we identified and hand-searched previously published systematic reviews on the prevention of suicide and the treatment of suicidal behaviours to find any additional relevant studies.

Next, we applied the following criteria to ensure we included only the highest-quality pertinent studies:

- Interventions specifically aimed at preventing or treating suicidal thoughts or attempts\*
- Clear descriptions of participant characteristics, settings and interventions
- Random assignment of participants to intervention and control/ comparison groups at study outset
- Maximum attrition rates of 20% *or* use of intention-to-treat analysis
- Outcome measures included suicidal thoughts or attempts
- Levels of statistical significance reported for suicide outcomes based on intervention assignment

\* We excluded interventions that only addressed *risk factors* for suicide, including those targeting substance abuse, depression or self-harming behaviours (such as cutting without having suicidal intentions).

Two different team members then assessed each retrieved study to ensure accuracy. 

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BC government staff can access original articles from BC's [Health and Human Services Library](#).

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