

Preventing Mental Disorders in Children

A Public Health Priority

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ABSTRACT

Background: Mental disorders affect 14% of children, cause significant long-term disability and are arguably the leading health problems that Canadian children face after infancy. Treatment services alone cannot meet children's mental health needs. In addition to treatment, prevention programs hold potential to reduce the number of children with disorders in the population. Effective programs exist for preventing conduct, anxiety and depressive disorders, three of the most prevalent disorders in children. Therefore, we investigated the state of Canadian programs in comparison with prevention programs described in the literature for these three disorders.

Methods: We identified children's mental health and early child development (ECD) programs across Canada with national or provincial/territorial scope and significance and with potential relevance to mental health. We then interviewed policy-makers to determine which programs included goals related to mental health, and incorporated key features from programs known to be effective for preventing the three disorders of interest.

Results: No prevention programs specific to children's mental health were identified. However, 17 ECD programs incorporated generic goals related to mental health and incorporated key features seen in effective prevention programs. Only Ontario's *Better Beginnings, Better Futures* (BBBF) explicitly included mental health within its major program goals, incorporated multiple features seen in effective (conduct disorder) prevention programs and demonstrated positive child mental health outcomes.

Discussion: The lack of Canadian prevention programs specific to children's mental health is concerning. ECD programs have the potential to improve child mental health outcomes within their wider mandates. BBBF is an exemplar for such programs. However, new investments in implementing (and evaluating) programs that specifically aim to prevent mental disorders are required to improve the mental health of children in the population. Preventing children's mental disorders must be a Canadian public health priority.

MeSH terms: Primary prevention; mental disorders; public health; health policy; infant; child

La traduction du résumé se trouve à la fin de l'article.

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The burden of illness attributable to mental disorders accounts for 15% of the total disability-adjusted life years associated with all illnesses, second only to cardiovascular illness.¹ Direct and indirect costs stemming from mental disorders in Canada are estimated to exceed \$14-15 billion annually.² The immense lifelong impact of mental disorders on all aspects of health, happiness and productivity necessitates a broader public health approach emphasizing "upstream" investments.³ Accordingly, the World Health Organization has suggested that prevention is the only sustainable approach for reducing the burden of illness associated with mental disorders.⁴

There is significant unmet need in children's mental health in particular. Mental disorders are arguably the leading health problems that Canadian children face after infancy, given the estimated 14% prevalence rate in children and given the significant associated long-term distress and disability.⁵ It is increasingly evident that treatment services alone cannot reduce the burden of illness.^{4,6} As well, the understanding that many mental disorders arise during childhood has encouraged a shift toward considering prevention.^{7,8} Preventing mental disorders requires placing children at the centre of a public mental health strategy.

Given the potential importance of prevention for public mental health, we were curious about the state of Canadian prevention programming relevant to children's mental health. Conduct disorder (CD), anxiety and depression are among the most prevalent mental disorders in children and among the most likely to persist.^{5,8} These disorders represent a spectrum of behavioural and emotional problems for children. There is also recent randomized controlled trial (RCT) evidence that these disorders are preventable.⁹ Consequently, our review focused on these three disorders. We undertook an environmental scan of Canadian programs pertinent to the prevention of the three disorders, using recent RCT findings as a basis for comparison. We were particularly interested in programs with potential impact on children's mental health outcomes in the general population. Therefore, we focused on programs that were national or provincial/territorial in scope and significance and that thereby

also represented a strategic policy emphasis intended to reach many children.

METHODS

To identify potentially relevant programs, we initially consulted with policy-makers and accessed government websites to ascertain those responsible for children's mental health nationally and in each province/territory. Identified individuals were then contacted to inquire about prevention programs that included goals that were relevant (at least generically) to children's mental health. We did not consider local programs but instead sought programs that represented strategic policy directions of national or provincial/territorial scope and significance, thereby potentially reaching many children. News releases issued by federal, provincial or territorial (FPT) governments over the past five years were also accessed through an internet search to identify additional programs. We used similar procedures to identify pertinent early child development (ECD) programs, given that these programs may also have potential to prevent mental disorders.^{10,11} Through this process, more than 40 potentially relevant programs were identified. Telephone interviews were then conducted with responsible personnel to inquire about program goals, population focus, key program features, child mental health outcomes, evaluation measures and funding. Associated program documents were also solicited. We obtained ethical approval from the University of British Columbia for procedures to conduct these interviews in 2003.

The following criteria were applied to select programs for detailed review: programs focused on goals or outcomes related (at least generically) to mental health; and programs incorporated key features from programs known to be effective for preventing CD, anxiety or depression in children. Interpretations about key features were based on recent RCT evidence on effective programs for preventing the three disorders of interest. Four types of prevention programs have been described as meriting particular consideration for implementation: for preventing CD in the early years (1) targeted parent training (PT) and (2) targeted child social skills training (SST) (e.g., programs such as *Nurse*

Visitation, *Perry Preschool*, *Fast Track*, *Johns Hopkins*); and for preventing anxiety and depression in the school-age years (3) universal cognitive-behavioural training (CBT) and (4) targeted CBT (e.g., *Friends*, *Coping with Stress*).⁹ We used these programs as our basis of comparison.

Once interview and document data were collected, three authors independently reviewed each program, applied the criteria, then reached consensus on which programs should be included in the final review. A fourth author reviewed the final selection of programs. Program summaries were prepared and reviewed with interview participants to verify accuracy and interpretations. Participants' comments were incorporated into final summaries. For included programs, three authors then abstracted data on goals, target populations, key features, child mental health outcome measures and main evaluation findings. All authors contributed to the interpretation.

RESULTS

We were unable to identify any prevention programs specific to children's mental health at the national or provincial/territorial levels in Canada as of 2003. Policy-makers also informed us that there had been little national coordinating activity in children's mental health in recent years, and that the one existing children's mental health FPT committee had not met for several years. In some jurisdictions, it was difficult to even identify policy-makers with a prevention perspective on children's mental health.

Instead, all 40 programs initially identified as having potential relevance were ECD programs. Of these, only 2 national and 15 provincial/territorial ECD programs met criteria for relevance to mental health. These programs are described in Table I. Policy-makers indicated that ECD was the major child-health emphasis in most jurisdictions, stemming from the 2000 *FPT Agreement* through which the federal government transferred \$2.2 billion over five years to the provinces and territories to enhance ECD programs.¹²

All 17 qualifying ECD programs included goals with generic relevance for mental health, such as improving health including social and emotional well-being. However,

only Ontario's *Better Beginnings, Better Futures (BBBF)* explicitly identified children's mental health within its major goals.¹² All 17 ECD programs incorporated at least some key features found in efficacious programs for preventing CD, such as targeting at-risk populations on the basis of factors such as low income, or employing elements of PT or child SST.⁹ *BBBF* in particular incorporated key features of two programs shown to prevent CD (*Nurse Visitation* and *Perry Preschool*).⁹ *BBBF* focused on disadvantaged parents and children, started with home visiting in the prenatal period and continued with parent and child training in children's preschool years. However, no programs fully emulated the effective prevention programs regarding specificity, intensity or duration of interventions. As well, no programs were identified addressing the prevention of anxiety or depression, unsurprisingly given that programs for these disorders have generally targeted older children.

Only two of the 17 ECD programs reported evaluation of child mental health outcomes: *BBBF*, and the national *Community Action Program for Children (CAPC)*. For *BBBF*, improved child mental health outcomes were demonstrated as a result of the program.¹³ For *CAPC*, this was not the case.¹⁴ For both *BBBF* and *CAPC*, evaluation data were derived from the *National Longitudinal Survey of Children and Youth (NLSCY)*,^{15,16} comparing outcomes with children who had not received the program. For the remaining programs, outcome evaluations were either planned (but did not necessarily include mental health outcomes) or were limited to tracking program activities. Policy-makers indicated that most of the 17 programs were predominantly funded through the federal ECD funds from 2000. In some cases, provinces and territories supplemented federal funds. However, in many cases, program managers could not specify details regarding budgets or budget sharing.

DISCUSSION

We were unable to identify any national or provincial/territorial prevention programs specific to children's mental health in Canada. Instead, ECD programs were emphasized in most jurisdictions. Of 17

TABLE 1
Early Child Development Programs with Potential Mental Health Relevance

Program [Location]	Goals*	Population Focus	Features [Type]	Child Mental Health Outcomes†	Evaluation Findings‡
Community Action Program for Children [Canada]	To improve child & parent health & social development	Children & parents at-risk, e.g., low income, child maltreatment	Parent & child training [Targeted]	Behavioural & emotional problems & well-being	Child outcomes did not improve
Nobody's Perfect [Canada]	To improve parents' abilities to maintain & promote healthy child development	Parents at-risk, e.g., single, low income, isolated	Parent training [Targeted]	NR	NA
Aboriginal ECD [British Columbia]	To enhance parent & community capacity to promote healthy child development	Aboriginal children & parents at-risk	Parent & child training [Targeted]	NR	NA
Building Blocks [British Columbia]	To enhance parents' capacity to support healthy child development	Parents at-risk	Parent & child training [Targeted]	NR	NA
Young Family Wellness [Alberta]	To build on existing prevention & health promotion services for parents & children	All parents; priority given to at-risk parents, e.g., single, low income, mental health problems	Parent training [Combined]	NR	NA
Kids First [Saskatchewan]	To support & nurture vulnerable children	Children & parents at-risk, e.g., low income, isolated, parental mental health problems	Parent & child training [Targeted]	NR	NA
Baby First & Early Start [Manitoba]	To enhance parents' abilities to foster healthy social & emotional development	Children & parents at-risk	Parent training [Targeted]	NR	NA
Healthy Baby Program [Manitoba]	To promote the development of healthy babies	Children & parents at-risk, e.g., low income, isolation	Parent training [Targeted]	NR	NA
Better Beginnings, Better Futures [Ontario]	To prevent behavioural & emotional problems & promote child development	Children & parents at-risk, e.g., low income	Parent & child training [Targeted]	Behavioural & emotional problems & well-being	Child outcomes improved
Early Years Centres [Ontario]	To promote children's development & readiness to learn	All children & parents, priority given to those at-risk, e.g., child developmental disabilities	Parent training Child training [Combined]	NR	NA
Healthy Babies, Healthy Children [Ontario]	To promote healthy child development	Parents at-risk, e.g., low income, mental health problems	Parent training [Targeted]	NR	NA
Integrated Perinatal & Young Infant Service [Quebec]	To maximize the health & well-being of vulnerable children	Parents at-risk, e.g., single, low income	Parent training [Targeted]	NR	NA
Communities Raising Children [New Brunswick]	To promote healthy child development	All children & parents	Parent & child training [Universal]	NR	NA
Healthy Beginnings [Nova Scotia]	To promote optimal child development	Children & parents at-risk, e.g., child disability, parental mental health problems	Parent training [Targeted]	NR	NA
[Prince Edward Island]	NA	NA	NA	NR	NA
Healthy Baby/Family Resource Programs [Newfoundland]	To promote healthy infant development	Parents at-risk, e.g., isolation, low income	Parent training [Targeted]	NR	NA
Healthy Families [Yukon]	To enhance parenting	Parents at-risk, e.g., single, low income, mental health problems	Parent training [Targeted]	NR	NA
Healthy Children Initiative [Nunavut]	To support the development of children & families	All children & parents, priority given to those at-risk	Parent & child training [Combined]	NR	NA

* All included at least generic goals or objectives pertaining to mental health
 † Based on National Longitudinal Survey of Children and Youth (NLSCY) measures
 ‡ Evaluated using NLSCY measures in comparison with children not receiving program
 NR Not reported
 NA Not applicable

ECD programs identified as having relevance for mental health, only *BBBF* included explicit mental health goals, although all 17 at least included some features found in programs shown to prevent CD (only). Child mental health outcomes were measured in only two programs,

BBBF and *CAPC*, and demonstrated as improved in only one program, *BBBF*. Detailed funding information was unavailable for many programs.

While ECD program goals for healthy child development are laudable, our findings suggest that these programs seldom

address explicit mental health goals. Given their generic child-health focus, however, it is important to estimate the impact, if any, that ECD programs may have on child mental health outcomes. As part of the 2000 *FPT Agreement*, governments are required to report on their annual ECD

investments using a shared framework for indicators of child health (including social and emotional well-being) derived from the *NLSCY*.^{15,16} Monitoring these indicators is potentially useful but as currently enacted, changes in indicators cannot be attributed to ECD or other programming. Tracking of specific *NLSCY* mental health indicators for recipients of ECD programs could yield more specific mental health outcome information, similar to the approaches used in evaluating *BBBF* and *CAPC*.^{13,14} Such efforts would require research-policy collaboration, but could greatly assist in planning and implementing ECD and other programs with more rigorous evaluation and with greater potential mental health benefits.

Although we reviewed ECD programs regarding potential mental health benefits, we are mindful that most of these programs were not originally designed solely for this purpose. We also characterized the 17 programs along discrete dimensions that depicted these programs as narrow in scope when in fact most were broadly based, addressing multiple risk factors and offering varied interventions to promote healthy child development. Consequently, our findings do not constitute commentary on the success of ECD programs in promoting healthy child development. We also acknowledge that some important community programs may have been excluded due to our criterion requiring national or provincial/territorial scope and significance. As well, new programs have been implemented since we completed this study. For example, British Columbia recently launched a universal anxiety-prevention program,¹⁷ based on the Australian *Friends* program which employs CBT in classrooms and also holds promise for preventing depression.¹⁸ This new program would qualify as a provincial prevention initiative in children's mental health.

Our findings nevertheless suggest that children's mental health has not been a public health priority, despite growing international concern about the social and economic impact of mental disorders.⁴ This situation may reflect the prevailing Canadian health policy emphasis. Only 5.5% of provincial health expenditures go towards public health including prevention, with the preponderance going towards health *care* and primarily towards

health care for older Canadians.¹⁹ Even recent national mental health initiatives have decidedly focused "downstream" on the needs of adults with mental illness.²⁰ It is encouraging that ECD has been a recent policy emphasis. Furthermore, ECD programs that focus on health promotion and mental health programs that focus on disorder prevention could be designed and delivered in a complementary manner to better meet children's mental health goals. For example, *BBBF* incorporated mental health goals, emulated key features of effective prevention programs and evaluated children's mental health outcomes within its wider ECD mandate. *BBBF* is an exemplar for ECD programs that can improve children's mental health. Other ECD programs could emulate this exemplar. However, new investments are also required in programs that specifically aim to prevent mental disorders if we are to improve the mental health of children in the population. *Nurse Visitation, Perry Preschool, Fast Track, Johns Hopkins, Friends* and *Coping with Stress* are all examples of programs that merit new investments.⁹ Policy-makers will require researchers' collaboration to ensure fidelity

to original program protocols and to ensure rigorous evaluation of outcomes.⁶ New investments in children's mental health are strongly warranted given that these may be among the most important investments that any society can make. Preventing children's mental disorders must be a Canadian public health priority.

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RÉSUMÉ

Contexte : Les troubles mentaux touchent 14 % des enfants, ils sont la cause d'importantes limitations fonctionnelles de longue durée, et l'on peut soutenir qu'ils sont les principaux problèmes de santé auxquels les enfants canadiens sont confrontés après la première enfance. Les services de traitement à eux seuls ne peuvent répondre aux besoins de santé mentale des enfants. Il faut y ajouter des programmes de prévention, qui offrent la possibilité de réduire le nombre d'enfants présentant des troubles dans la population. Il existe des programmes efficaces pour prévenir le trouble des conduites, l'anxiété et la dépression, trois des troubles les plus courants chez les enfants. C'est pourquoi nous avons examiné la situation des programmes canadiens, que nous avons comparés aux programmes de prévention décrits dans les articles de recherche sur ces trois troubles.

Méthode : Nous avons répertorié les programmes de santé mentale et de développement du jeune enfant (DJE) disponibles au Canada; ces programmes devaient être d'envergure et d'importance nationale ou provinciale-territoriale, et susceptibles d'exercer une influence sur la santé mentale. Nous avons ensuite interviewé des décideurs afin de déterminer lesquels de ces programmes comportaient des objectifs liés à la santé mentale et lesquels intégraient des éléments clés des programmes prouvés comme étant efficaces pour prévenir les trois troubles qui nous intéressent.

Résultats : Nous n'avons trouvé aucun programme de prévention portant spécifiquement sur la santé mentale des enfants. Toutefois, 17 programmes de DJE comportaient des objectifs généraux liés à la santé mentale et intégraient des éléments clés présents dans les programmes de prévention efficaces. Seul le programme ontarien « Partir d'un bon pas pour un avenir meilleur » incluait explicitement la santé mentale dans ses grands objectifs, intégrait de nombreux éléments que l'on retrouve dans les programmes de prévention efficaces (contre le trouble des conduites) et avait manifestement donné des résultats positifs sur le plan de la santé mentale des enfants.

Discussion : L'absence de programmes de prévention canadiens portant spécifiquement sur la santé mentale des enfants est préoccupante. Les programmes de DJE, dont le mandat est plus vaste, pourraient améliorer la santé mentale des enfants. Le programme « Bon pas » en est un exemple. Cependant, si l'on veut améliorer la santé mentale des enfants dans la population, il faut investir de l'argent frais dans la mise en oeuvre (et l'évaluation) de programmes visant spécifiquement à prévenir les troubles mentaux. La prévention des troubles mentaux chez les enfants doit être considérée comme un besoin prioritaire en santé publique au Canada.

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