This research was funded under contract by the Ministries of Health and Long-Term Care, Education and Training, and Community and Social Services, Ontario. The report reflects the views of the authors and not necessarily those of the Ministries.

Developing Capacity and Competence in the Better Beginnings, Better Futures Communities: Short-Term Findings Report

CHAPTER 1: REPORT SUMMARY

NOVEMBER 2000

citation

Peters, R. DeV., Arnold, R., Petrunka, K., Angus, D. E., Brophy, K., Burke, S. O., Cameron, G., Evers, S., Herry, Y., Levesque, D., Pancer, S. M., Roberts-Fiati, G., Towson, S., & Warren, W. K. (2000). *Developing Capacity and Competence in the Better Beginnings, Better Futures Communities: Short-Term Findings Report.* Kingston, Ontario: Better Beginnings, Better Futures Research Coordination Unit Technical Report.

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ACKNOWLEDGEMENTS

The Better Beginnings, Better Futures research benefited from the contributions of many individuals from 1990 to 2000 for data collection, data analysis, report writing, and administration.

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The RCU would like to acknowledge the invaluable contributions from community members who served on research committees in each of the Better Beginnings sites.

We also extend our gratitude to the families and children who welcomed us into their lives.

Finally, we gratefully acknowledge the participation of teachers and administrators in all of the Better Beginnings schools.

TABLE OF CONTENTS

Chapter 1

REPORT SUMMARY

The Ontario Better Beginnings, Better Futures Project is a prevention project for young children and their families living in eight disadvantaged neighbourhoods throughout the province. The report begins by briefly reviewing the current state of knowledge concerning prevention programs for young children, and then describes how the Project was developed and implemented in each of the eight demonstration sites from 1991 to 1998. Short-term outcome results from this period are then presented, and the implications of these findings discussed.

SETTING THE CONTEXT: WHAT WE KNOW AND DON'T KNOW ABOUT PREVENTION/ EARLY INTERVENTION PROGRAMS FOR YOUNG CHILDREN

Within the last 15 years, there has been increased interest in the influence of the early years of life on children's social-emotional well-being, health, development, and readiness to learn. This interest in early child development has prompted many recent reviews of the effects of prevention and early intervention programs designed to facilitate the healthy development of young children and their families, with special attention to those who are socio-economically disadvantaged.

The results of these reviews have concluded that:

- few studies of the effects of these programs have been adequately designed, implemented, and evaluated, particularly for children younger than seven or eight years of age, and
- even fewer studies have followed the children or parents after the program ended to determine long-term effects.

Successful Programs

There are, however, a small number of studies identified in these reviews that incorporated adequate research designs and long-term follow-up. It is the results of these studies that form the current state of knowledge concerning the long-term effects of early-intervention and prevention programs with high-risk young children and their families. The following is a brief description of these successful programs and their findings.

Home visiting starting before or at birth and continuing for two to five years after birth. The best researched home-visiting program is the Elmira (NY) Nurse Home Visitation Program, operated by Olds and colleagues from 1978 to 1982 (Olds, 1997; Olds *et al.*, 1997). A total of 116 first-time mothers received an average of nine prenatal home visits and 23 visits for the first two years of their child's life. Home visits were carried out by well-trained public health nurses, and each visit lasted approximately 90 minutes. Thus total home visits averaged approximately 48 hours over the 2-plus years.

The children and mothers have been followed up for 15 years. Nurse home visited mothers have shown lower rates of child abuse than a control group of mothers, over the follow-up period. All other outcome effects for mothers have been restricted to a subgroup of 38 single, low socio-economic status (SES) mothers. No consistent effects on the children's cognitive, health and social-emotional behaviour were found until the children were 15 years of age. At that point, arrests, convictions, cigarette smoking, alcohol consumption and behavioural problems related to use of drugs were reduced for the children of the 38 single, low-SES mothers.

Comprehensive centre-based educational daycare programs. The most effective model program of this type is the Carolina Abecedarian Project which was carried out at the University of North Carolina Child Development Center from 1972 to 1977 (Campbell & Ramey, 1995). A group of 57 very high-risk, African-American newborns were enrolled in a full-day, full-year centre- based daycare program by three months of age. The program ran for five years, until the children entered public school. Full-day programs were provided by well-trained early childhood educators on a ratio of three children to one teacher for the first three years and then on a ratio of 6 children to one teacher for years four and five. A home-school resource teacher visited the mothers every two weeks over the five-year period, and the children received medical services at the daycare centre. This resulted in nearly 7,000 hours of centre-based daycare for each child and 135 hours of home visitation for their mothers over the five-year program. Children in the program showed substantial improvement in standardized IQ test performance until age 12 and improvements in school achievement through age 15, the last period for which data have been reported. There was no effect on a measure of home environment quality, but mothers showed small increases in years of education and employment status over the five years the children spent in the full-day program. No other effects on children or parents were reported for this extremely intensive, and likely very expensive, intervention.

High-quality, comprehensive educational preschool programs. The High/Scope Perry Preschool Program offered two years of half-day preschool to 58 poor, high-risk, African-American three- and four-year-old children in Ypsilanti, Michigan, between1962 and 1967 (Schweinhart *et al.*, 1993)). Classes ran from October to May, five half-days per week. Teachers were certified public school teachers who received extensive training and supervision. The teacher-student ratio was 1 to 6, and teachers also visited each child's mother at home for 1 ½ hours each week during the school year. This resulted in over 700 hours of highly enriched preschool for the children and 90 hours of home visiting for their mothers over the two years. Compared with a control group of 65 children, the 58 Perry preschool children showed higher IQ scores from 4 to 7 years of age, but no differences at age 8 or later. There were no differences between the groups in children's social or emotional behaviour, or on measures collected concerning the mothers. One of the most interesting aspects of this study is that the children have been followed to age 27, i.e., 23 years after completing the Perry Preschool Program, and continue to show superior performance relative to control group children on measures of educational achievement, employment, public assistance, income, and criminal arrests. Calculations of costs saved by these outcomes have indicated a return on the initial program investment of nearly $7 to $1 invested, although most of the savings were realized as program participants became adults. These long-term cost-saving outcomes have made the Perry Preschool Study the single most influential early intervention program to date in terms of public and social policy.

School-based training in social skills and problem-solving. The Montreal Prevention Experiment (Tremblay *et al.*, 1996) provided school-based training in social skills and problem-solving to 43 highly disruptive boys for two years (Grades 2 and 3). The boys attended 19 small group sessions and their parents received an average of 17 in-home training sessions over the two school years. At the end of the two-year program, the boys in the program group showed no beneficial effects on any behavioural outcome measures compared to a control group. No measures were collected from parents. However, the boys were followed into adolescence, and at ages 12 to 14 the boys who had been in the program began to show significant improvements in school achievement and fewer delinquent activities than the control group. These differences have been maintained through 17 years of age.

Parent training, education, and support programs. All four of the above programs included parent education and support. It is not clear how effective parent-only programs are on influencing children's outcomes. For example, the Elmira Nurse Home Visiting program had lasting effects on a small group of

the highest-risk mothers, but no demonstrable effects on their children until they were 15 years of age. St. Pierre and Layzer (1998) recently reviewed the available evidence for the assumption that "The best way to improve child outcomes is to focus on improving parents' ability to parent their children rather than providing an educational intervention directed at the child". They concluded that this assumption is not supported by the available research literature, and that there is "extensive research that posits effects on children are best achieved by focusing on children rather than through parenting education" (p.13). Similar conclusions were drawn in a recent review of home-visiting programs. "Several home visiting models produced some benefits in parenting or in the prevention of child abuse and neglect on at least some measures. No model produced large or consistent benefits in child development or in the rates of health-related behaviours such as acquiring immunizations or well-baby check-ups" (Gomby, Culross & Behrman, 1999).

Limitations to Current Knowledge Regarding Effective Intervention Programs

Most effective demonstrations are small-scale (involving less than 100 families). Little is known about the effects of expanding these demonstration programs to larger groups. In a recent study of this issue, the Comprehensive Child Development Project (CCDP; St. Pierre *et al.*, 1997) evaluated the effectiveness of providing lower-SES parents with a home visitor/case manager for five years, from the birth of a child until he/she entered kindergarten. CCDP was implemented in 21 sites across the U.S., each having approximately 100 program and 100 control families. After five years of program intervention, there were no significant child or parent/family program outcomes on over 100 measures analyzed.

There have been few well-researched early intervention/prevention programs for young children in Canada. Mrazek and Brown (1999) identified 32 well-designed and evaluated studies in this area. Only two were Canadian and both dealt with children at 7 or 8 years of age.

Costs of implementing programs are seldom collected or reported. This makes it difficult for policymakers to make informed decisions. A few projects have carried out good economic analyses; however, again, these projects have had small sample sizes, making it difficult to extrapolate costs to large-scale implementations. An exception is the CCDP Project described earlier, where costs were collected systematically over the five years of implementation. The issue of program costs is discussed in more detail later.

Model demonstration programs for young children have had a narrow focus. There is much rhetoric about the importance of programs being comprehensive and holistic, ecological, community-based, and integrated. However, virtually no well-researched programs for young children have successfully incorporated these characteristics into the program model.

In the U.S. studies, the focus has been on predominantly African-American children's intelligence and cognitive functioning, not on emotional and behavioural problems, social competence, or physical health. So the program focus had *not* been comprehensive or holistic in addressing a broad range of child outcomes.

Ecological models of human development emphasize the importance of incorporating child, parent/family, *and* neighbourhood interventions. Most programs have focused outcome measures mainly on children and parents (e.g., the Perry Preschool, the Elmira Nurse Home Visitation and the Abecedarian projects). None of the well-researched demonstration projects for young children has included activities designed to improve the quality of the local neighbourhood for young children and

their parents, and outcome measures are restricted to either children or mothers.

Local community members have had little or no involvement in the development and implementation of the demonstration programs described above. University-based researchers designed, implemented, and evaluated the demonstration projects, and when their involvement ceased, typically after 2-5 years, the programs ceased to function. There was little sustainability to the projects; they were truly demonstrations, although children and sometimes mothers were followed longitudinally after the project ended.

There has been little attempt to weave the demonstration projects into the local fabric of service providing organizations, either formally or informally. Home visitors and case managers often attempt to refer and connect clients to existing services, but coordination at the agency level has not been a key goal of the projects. St. Pierre and Layzer (1998) reviewed the available evidence for the assumption that "To be effective for low-income families, existing services need to be coordinated". They concluded that there is little evidence to back up this assumption because there has been so little research on the question.

Conclusions

Most of the current knowledge about the long-term effects of prevention programs for young children rests on small-scale U.S. demonstration programs carried out 20-30 years ago on extremely disadvantaged, high-risk children or their mothers. These demonstration programs focused primarily on the intellectual and cognitive development of young children or on improving the quality of life for their mothers. None of these model programs focused on the child's neighbourhood, involved parents or other local residents in program or research planning or implementation, or attempted to integrate the program with other services or organizations in the community.

The extent to which the findings of these programs can be generalized to Canada today is unknown.

Several recent Canadian early intervention/prevention programs have the potential to yield important information regarding comprehensive, ecological, community-based programs for young children, their families, and their neighbourhoods. These include the national Community Action Programs for Children (CAPC), the Montreal 1,2,3 Go! Project, the Growing Together Project in Toronto, Montreal, and Halifax, and Ontario's Better Beginnings, Better Futures Project. Of these, the Better Beginnings, Better Futures Project has been operating for the longest period of time, and this report describes the development, implementation and short-term findings from that initiative.

THE BETTER BEGINNINGS, BETTER FUTURES INITIATIVE

The Ontario Child Health Study (Offord *et al.*, 1987), funded by the Ontario Ministry of Community and Social Services, showed that one in six children between 4 and 16 years of age in Ontario suffers from one or more severe emotional or behavioural disorders. Also, only 20% of all children suffering from one or more of these disorders had received any mental health services within the past six months. An important implication of these findings was the need to develop and evaluate prevention strategies for children's emotional and behavioural problems.

A Technical Advisory Group was convened in the Spring of 1988 by the Ontario Government. The task of this 25-member interdisciplinary group of program directors and researchers was:

- to review the literature and existing prevention programs, and
- to recommend a prevention model to the Ontario Government that had the greatest potential to prevent problems in child development for children living in economically disadvantaged communities/neighbourhoods.

The Technical Advisory Group concluded that the model with the greatest promise for preventing problems in child development must have seven characteristics:

- the model must be based on known effective prevention programs;
- the model must be ecological;
- the model must be tailored to meet local needs and desires;
- the model must be comprehensive;
- the model must be of high quality;
- the model must be integrated;
- the model must have meaningful, significant involvement of parents and community.

In 1990, the Better Beginnings, Better Futures Project was announced as "A 25-year longitudinal prevention policy research demonstration project to provide information on the effectiveness of prevention as a policy for children".

There were two variations of the Better Beginnings model to be evaluated, depending on the age of children involved. In the first, prenatal/infant development programs were to integrate with preschool programs for children from conception to age 4 (the younger cohort model). In the second variation, preschool programs were to integrate with primary-school programs for children between the ages of 4 and 8 (the older cohort model).

This Request for Proposals described the project model as follows:

> "This research demonstration project will consist of **all** promising components that can be launched within the budget constraints and with the support of the community. The purpose of such projects is not to discover the most efficient or leanest package of prevention services, but to determine how effective a reasonably-financed and community-supported project can be." (Government of Ontario, 1990, p. 12)

The Ontario Government released a Request for Proposals in the Spring of 1990. Forty-eight proposals were submitted in July 1990 and reviewed by a 15-member Proposal Review Panel. Eight selected communities were announced on January 29, 1991, five younger cohort sites and three older cohort sites.

PROJECT ORGANIZATION

The Better Beginnings, Better Futures Project consisted of three major partners: a) project sites, involving project coordinators and staff, parents and other community residents, and service providers and educators, established under local sponsorship in eight Ontario communities; b) a government committee, consisting of representatives from the co-funding Ontario ministries; and c) the Research Coordination Unit (RCU).

Community Projects

The Five Younger Cohort Project Sites [1]

- Guelph: Willow Road neighbourhood (625 children)
- North Kingston neighbourhood (1,095 children)
- Southeast Ottawa: Albion-Heatherington-Fairlea-Ledbury neighbourhoods (690 children)
- Toronto: Moss Park/Regent park (1,125 children)
- Walpole Island First Nation (250 children)

The Three Older Cohort Project Sites [2]

- Cornwall: 4 Francophone primary schools (530 children)
- Highfield: Highfield Junior School neighbourhood (517 children)
- Sudbury: Flour Mill/le Moulin à Fleur and Donovan neighbourhoods (503 children)

These sites were chosen, in part, because of socio-economic disadvantage. To illustrate, among those interviewed at the sites before programs were in place (to establish a baseline), at the younger cohort sites 37% of families were headed by a single parent, and 83% were below Statistics Canada's Low Income Cut Offs. At the older cohort sites, 36% of families were headed by a single parent, and 64% were below the Low Income Cut Offs.

Government Committee

This committee consisted of representatives from the Ontario Ministries of Community and Social Services, Health and Long-Term Care, and Education and Training.

The purpose of the Government Committee was to provide guidance, support, advice, monitoring, coordination, and approval for the Better Beginnings Project to: a) funding ministries, b) the eight communities, and c) the Research Coordination Unit.

The Children's Services Branch of the Ministry of Community and Social Services was responsible for central staff support to the Project as well as administrative and financial coordination of the Better Beginnings Project. The Branch provided a Project Design Coordinator for the Project, who was responsible for the overall design and implementation of the program and research. Two positions of Site Supervisor/Coordinators were responsible for the financial and administrative coordination and implementation of the Better Beginnings model in the eight communities.

The comprehensiveness of the scope of research, as well as the problems of implementing research in communities that are extremely cynical about the possibility of research to improve daily life, required innovation and sensitivity at almost every step of the research. The Government Committee worked closely with the communities and the researchers to develop research procedures that would not compromise confidentiality and/or freedom of information.

[1] Number of children between zero and four years of age estimated from 1996 Census data.

[2] Number of children between four and eight years of age estimated from local school records.

Research Coordination Unit

In the Spring of 1991, a separate Request for Proposals was issued by the Ontario Government to form a Research Coordination Unit (RCU) for the Better Beginnings, Better Futures Project to facilitate comparable research across the selected project sites.

A consortium of researchers from Queen's University, University of Guelph, and Wilfrid Laurier University was selected. Researchers from the University of Ottawa, Ryerson Polytechnic University, and the University of Windsor were added. The RCU employed research teams in each of the sites, plus a research director and central support staff located at Queen's University.

Major Goals of the Better Beginnings, Better Futures Project

Each selected community was funded to develop a local prevention project that would address the following goals:

Child Goals.
Prevention: to reduce emotional and behavioural problems in children.
Promotion: to promote social, emotional, behavioural, physical, and educational development in children.

Parent/Family Goals.
Parent Education and Support: to strengthen the abilities of parents and families to respond effectively to the needs of their children.

Neighbourhood/Community Goals.
Comprehensive/Holistic Programs: to develop high-quality programs for children from birth to age four or from four to eight years of age and their families that respond effectively to the local needs of the neighbourhood.
Resident Participation: to encourage neighbourhood parents and other citizens to participate as equal partners with service-providers in the development and implementation planning, designing and carrying out programs for children and families, as well as other activities in the local community.
Integrated Programs: to establish partnerships with existing and new service-providers and educational organizations and to coordinate program activities.

UNDERSTANDING THE DEVELOPMENT OF THE LOCAL BETTER BEGINNINGS, BETTER FUTURES PROJECTS: BALANCING BREADTH AND FOCUS [3]

Critical choices in defining the guidelines for a prevention demonstration project include how detailed and prescriptive to be about the program model to be demonstrated and how broad the project's scope or objectives should be. Most of the successful prevention demonstration projects for young children reported in the literature have clearly defined the program focus, participant population, and specifications for program content, frequency and duration (Schorr, 1997; Cameron & Vanderwoerd, 1997). Historically, prevention projects which provided demonstration sites with general principles and

[3] The *Finding a Balance: Project organization in Better Beginnings, Better Futures* report (Cameron & Jeffery, 1999) provides an in-depth consideration of these topics and links the Better Beginnings experiences and lessons with those reported in the literature. This report is available from the Better Beginnings, Better Futures Research Coordination Unit at Queen's University.

allowed local participatory processes to define the prevention initiative often produced less conclusive results (Larner, Halpern & Harkavy, 1992).

The initial prevention project guidelines available to the Better Beginnings, Better Futures demonstration sites were both very ambitious and expressed as general principles to be followed (Government of Ontario, 1990). Overall, demonstration sites were expected to: 1) develop high-quality prevention programming in small and very disadvantaged communities or elementary school attendance areas; 2) blend and unite services for children and families; and, 3) involve families and community leaders to determine local needs and desires for healthy child development (p. 9).

Our research confirms that the broad and general nature of the original Better Beginnings, Better Futures mandate had significant implications for project development and organization at the demonstration sites. First, sites interpreted the mandate in various ways and significant differences in project organization and programming evolved across demonstration communities. Second, sites were unable to pay equal attention to all parts of the mandate and different choices from site to site were made about where to invest the most energy. Third, the mandate proved challenging to understand and implement.

From its inception, prior to the sites creating their proposals, the mandate for Better Beginnings, Better Futures was very broad. The site mandates did not give priority importance to any portion of these expectations. The implication is that Better Beginnings, Better Futures cannot be credibly understood based on the limited range of operating principles or evaluation criteria employed by the more focused programs commonly described in the literature.

The Role of Project Development Infrastructures

The program development literature is unequivocal about the pivotal importance of an infrastructure in building and replicating programs (Dryfoos, 1997; Cameron & Vanderwoerd, 1997b). Two broad roles or functions have been identified for these infrastructures. The first is encouragement and expert guidance with the myriad of organizational challenges in creating a complex program/project, along with training and consultation about intervention procedures. The second is management to assure that quality conditions are maintained in project development and in working with program participants. This includes the responsibility and the ability to intervene if concerns arise.

The guidance available to Better Beginnings, Better Futures demonstration sites bears little resemblance to the in-depth support recommended in the development literature. It is also true, however, that the literature includes few references to projects with mandates as broad and complex as Better Beginnings, Better Futures, particularly with the expectation that programs be tailored to local needs. Site reports provide ample evidence of their struggle to implement complex challenges such as service integration, resident involvement and program development.

Notwithstanding the lack of a centralized infrastructure, a great deal of effort to support project development was provided in various ways by the government committee around the need to increase resident participation, re-negotiate agreements with host organizations, remain affiliated with existing sponsors, move more quickly with staff hiring and program development, improve accountability arrangements, modify relations between professional and paraprofessional employees, modification of salary scales, steering committee functioning, the development of program working groups, and geographic areas to be served.

With limited central guidance, and with a broad prevention mandate given to the demonstration sites, local processes had a major impact on the nature of the prevention projects created in the eight demonstration communities. The next sections illustrate how the demonstration sites put varying emphases on different elements of the Better Beginnings, Better Futures model and created prevention strategies that differed in important ways across some communities.

Five Project Development Threads

In the Better Beginnings, Better Futures model, various project development threads had to be woven together. Our analyses have identified five threads.[4]

- **Focused Programming:** This thread concerns the implementation and maintenance of a defined prevention program model. Most of the prevention programs with demonstrated positive impacts on disadvantaged children and families in the literature are guided by an articulated theory base and have well-defined service delivery parameters. While this is not a direct reflection of the quality of programs, because many of the better known promising prevention models have concentrated larger budgets than the demonstration sites on one or two specific programs, concentration of programming resources is one measure of similarity with these earlier efforts.

- **Creating Partnerships and Integrating Services:** This project development thread focuses on fostering voluntary collaborations among relevant service organizations in the local community.

- **Empowering Resident Participation:** This thread focuses on generating and maintaining local resident involvement and influence in project/program design, implementation and maintenance. In Better Beginnings, Better Futures, this was accomplished mainly through resident involvement in project governance, by residents volunteering in project programming and activities, and through hiring residents as program staff.

- **Community Development:** This thread focuses on the use of locally controlled, participatory processes to create the project organization and to identify priorities for prevention programming as well as on investments in broad community development efforts to bring additional resources to the neighbourhood and to carry out initiatives beyond the original mandate of the Better Beginnings Project.

- **Building a Project Organization:** This focuses on the requirements of creating and maintaining a project organization and developing appropriate management capabilities.

Each of these project development threads comes from the original Better Beginnings prevention model for the project as well as from evolutionary processes at each of the the demonstration sites. Figure 1.1 provides a general overview of the nature and anticipated outcomes for each of these threads.

These threads have been woven together into different patterns at each site. Our argument is that these types of project organization differences make a difference. While these threads can at times complement each other, each has a different focus and requires that attention be paid to different tasks and activities. Most importantly, each produces different types of benefits. From this perspective, an emphasis on

[4] A more detailed discussion of the nature and expected outcomes from each project development thread is available in *Finding a Balance: Project organization in Better Beginnings, Better Futures* (Cameron & Jeffery, 1999).

Figure 1.1

FIVE PROJECT DEVELOPMENT THREADS FOR THE BETTER BEGINNINGS, BETTER FUTURES INITIATIVE

Threads	Focused Programming	Creating Partnerships	Empowering Resident Participation	Community Development	Building a Project Organization
Focus	The implementation and maintenance of a set of defined programs	Fostering voluntary collaborations among service organizations	Increasing local resident involvement and influence in project design, implementation and maintenance	The increase of local community capacity to make decisions and to take action on its own priorities	Creating and maintaining project organization and management capabilities
Development Requirements	• understanding and respecting the theory/evidence guiding the model • respecting the prescribed service parameters: type of participants, frequency and consistency of involvement, duration of participation, service content • adapting to local community conditions • monitoring and correcting deviations from effectiveness criteria • attracting and training qualified personnel	• creating incentives and motivation to collaborate • animating dialogue and information exchange between service-providers • creating venues and structures for decision-making • promoting exchanges of information, resources and personnel • encouraging joint programs and activities • improving coordination of existing programs	• recruiting and training sufficient numbers of residents on governance structures • modifying procedures at meetings and offering supports for resident participation in governance • controlling behaviours and numbers of professionals in meetings • creating a self-sustaining resident membership base • hiring, training and supporting residents	• creating non-directive, democratic functioning processes • fostering self-help and mutual aid • building self-sustaining representative organizations • increasing community pride and commitment • developing local leadership • fostering local consensus and positive working relationships among all local groupings	• creating and supporting project steering committee and sub-committees • developing administrative policies and procedures • creating management and personnel policies and procedures • building management and supervision capabilities • recruiting, training and sustaining staff • creating financial and other formal control and accountability procedures
Anticipated Outcomes	• benefits for active program participants (children, parents, families) in areas related to program content (if effectiveness criteria are respected) e.g., child development, school success, mental health	• new projects, programs and initiatives • new resources attracted into community • increased collaboration between project and existing agencies • increased collaboration among existing agencies	• higher levels of meaningful resident participation and influence in project governance • new learning opportunities and roles for volunteer leadership • benefits from employment in project for sub-set of participants • greater adaptation of project programs to local conditions	• having locally-controlled representative decision-making structures • new learning opportunities and roles for leaders/members • creation of new locally-acceptable programs and resources • greater community pride and involvement • more cooperation between various groupings • improved professional-resident relations	• a viable and stable project organization • appropriate and efficient use of project resources • greater volunteer and employee satisfaction with participation

focused programming is not necessarily preferable to a concentration on creating partnerships or on resident involvement or on broader community development.

On the basis of the extensive information collected and reported by local researchers beginning in 1991, we have attempted to compare the seven urban demonstration sites in terms of the relative emphasis placed on four threads of the Better Beginnings model: focused programming, creating partnerships, resident participation, and broader community development. The unique situation of the Walpole Island First Nation site is described later.

The position of each site on these project development threads is relative to the other sites; that is, is there a greater or lesser emphasis on each dimension. For example, while all of the demonstration sites had a much greater investment in supporting and empowering resident participation than other prevention programs for young children or most established social agencies, there remain important differences in these investments across the demonstration sites. In addition, these are general rather than precise estimates. They are useful only when the differences between sites are clear and substantial.

Figure 1.2 compares the younger cohort sites on the four project development threads, and Figure 1.3 profiles the older cohort sites.

Figure 1.2 shows substantial comparability among the Toronto, Ottawa and Kingston sites on these dimensions. Toronto and Ottawa had a relatively moderate investment in broader community development efforts, while Kingston had one of the lowest investments of the demonstration sites on broad community development efforts outside of its core programming. Kingston, rather, tried to incorporate community building into development and delivery of all its core programs. All three sites had similar ratings on the concentration of programming resources, with Kingston having the least diversity in its programming efforts. All three had moderate investments in creating partnerships, while Kingston experienced more success in sustaining adequate levels of consistent resident involvement on its governance structures. Guelph, on the other hand, showed a very different profile than the other younger cohort sites on these dimensions. It had a very high emphasis on broader community development efforts, creating partnerships and resident participation in project governance along with a lower concentration on programming resources, having perhaps the broadest range of programs/activities for varied groups of participants of any demonstration site (Pancer, 1995; Pancer, Cornfield & Amio, 1999). Its overall profile is similar to that of Sudbury, except for Guelph's high valuing of creating partnerships. The Sudbury and Guelph sites are the only sites with clearly articulated philosophies of broad community development processes as the core element in building the project organization and in deciding on programming priorities.

Figure 1.3 shows little similarity among the three older cohort sites. Sudbury was the most distinct with a higher emphasis on broader community development efforts as well as on resident participation in project governance along with a much lower emphasis on concentration of programming resources in one or two core program strategies (Pancer, 1995; Pancer *et al.*, 1999) and creating partnerships. Highfield had a relatively low emphasis on broader community development efforts and on resident participation in project governance. However, Highfield had a high relative emphasis on concentration of programming resources, both in terms of its emphasis on school-based programming in one primary school and concentrating several programs exclusively on the research cohort of children and their families (Pancer, 1995; Pancer *et al.*, 1999). Highfield placed a moderate emphasis on creating partnerships with organizations other than its host school. Cornwall placed the greatest emphasis on creating partnerships of the three older cohort sites, and a moderate emphasis on concentration of programming resources and resident participation in project governance. Cornwall also had an increasing investment in broader

Figure 1.2

YOUNGER COHORT SITES:
RELATIVE EMPHASIS ON THE FOUR PROJECT THREADS

	Higher Relative Emphasis		**Lower Relative Emphasis**
Concentration of Programming Resources	Toronto, Ottawa, Kingston		Guelph
Creating Partnerships	Guelph	Toronto, Ottawa, Kingston	
Resident Participation in Project Governance	Guelph	Kingston, Ottawa	Toronto
Broader Community Development Efforts	Guelph	Toronto, Ottawa	Kingston

Figure 1.3

OLDER COHORT SITES:
RELATIVE EMPHASIS ON THE FOUR PROJECT THREADS

	Higher Relative Emphasis		**Lower Relative Emphasis**
Concentration of Programming Resources	Highfield	Cornwall	Sudbury
Creating Partnerships	Cornwall	Highfield	Sudbury
Resident Participation in Project Governance	Sudbury	Cornwall	Highfield
Broader Community Development Efforts	Sudbury	Cornwall	Highfield

community development efforts over the demonstration period finishing with a relatively high investment in this area compared to most demonstration sites.

Each of these project development threads requires that attention be paid to different requirements and produces different types of benefits. The development requirements of each of the threads are only partially compatible with each other. This introduced both tension and complexity into the project development at the demonstration sites. In addition, having multiple development threads requires that a range of types of outcomes be considered when assessing the demonstration project. Finally, given the variability across demonstration sites on these development threads, outcome expectations should be tailored to the development pattern at each site.

The Unique Situation of Walpole Island

There are two reasons for considering Walpole Island separately from the other seven demonstration sites. First, it was the only demonstration site working exclusively within a First Nation. Also, since Walpole Island did not participate in our program model/project development research on the same basis or with the same intensity as the other sites, much less detailed information is available on which to base comparisons.

The Walpole Island Better Beginnings site stressed a set of community and project values and working principles which differentiated it from the seven urban sites:

- Tribal people practice an ethic of non-interference. People do not tell each other what to do even if it is for their own good.
- Kinship is the strongest bond and people interact as members of families.
- In tribal societies, everyone knows everyone else. When strangers arrive, tribe members ask about kinship ties and seek ways of relating as families.
- In Ojibway teachings, the seventh and last stage of life is the teaching stage. If the teacher is an elder, the class has a greater chance of success.
- Learning by observation is the usual way.
- Decision making by consensus is universal to tribal societies and the most acceptable procedure for most modern Native groups.
- Work is done as communally as possible. Members encourage each other and share in the rewards.
- One must never take oneself too seriously. All members must maintain flexibility in their viewpoints. The Ojibway are a "laughing ... people". "The ability to laugh is central to our Being and should be formally recognized within any new programs as it was central to our original teachings."
- "We are a strongly kinesthetic or 'feeling' people."
- Because of the effects of colonialism, "...we are still in a survival mode... and change may be experienced as a threat to our cultural survival and... met with... resistence..."
- "Tribal people view life and society as circular, whose aim is to live in harmony. We had no linear sense of progress and had no ways of instituting change except by consensus."

Another unique aspect of Walpole Island is that the Band Council is the host agency for the demonstration project. The Band Council has the power to write community by-laws, restructure community services and override any program decisions. "The Band Council also promotes the integration of all Walpole Island First Nation services and requires representatives from the Parent/Child Support Program and Bkejwanong Children's Centre to sit on the project's Steering Committee."

It is important that the unique situation of Walpole Island be considered both in understanding the demonstration site as well as in interpreting the project's outcomes presented in this report.

Program Models at the Demonstration Sites

Tables 1.1 and 1.2 provide an overview of programming for children, families and neighbourhoods at the younger and older cohort communities respectively. There are three reasons for this presentation: 1) to provide an understanding of programming at each site as a guide to interpreting the outcome patterns described in this report; 2) to allow a comparison of the similarities and differences in prevention programming across the eight demonstration sites; and, 3) in conjunction with the previous analyses of the development threads, to help comprehend in a general fashion the complexity of the Better Beginnings, Better Futures Prevention Project.

The Kingston, Ottawa and Toronto younger cohort demonstration sites invest over half of their base government funding in family/community visitor programs and also invest in childcare and playgroup supports. However, Kingston is unique in investing almost all of its programming efforts directly into family visitor, perinatal and postnatal support and childcare programming. Toronto and Ottawa have greater investments in programming activities which fall outside of their government mandate.

The Guelph and Walpole Island younger cohort sites present very different programming profiles. Guelph devoted about half as much of its core government budget to family visiting as the above younger cohort sites and has more variety in its programming strategies for preschoolers and children. There has been substantial investments in broader community development efforts and programming beyond their government mandate, with strong emphasis on local leadership development as a prevention vehicle. Walpole Island invested about 60% of their base budget in community development and community healing activities. They reported very little activity outside of the government mandate.

There are substantial programming differences across the three older cohort demonstration sites. Cornwall had a substantial investment in in-school programming activities including classroom enrichment, homework help and a breakfast program. Highfield had the highest investment in classroom enrichment activities and all of their programming took place on the school premises. Even additional resources raised by Highfield went in good measure to support additional in-school programming. Sudbury had comparatively very little classroom enrichment activities and has been quite successful in raising money to support activities beyond their core mandate. It had the lowest proportion of its programming resources focused on the 4 to 8 age group among the older cohort sites.

It is clear that there is substantial variation in programming attributes across these demonstration sites. While there are similarities in broad emphases across some younger cohort sites, it will be important to consider each site's outcomes in light of its particular programming investments, project development emphases and community context.

Table 1.1

PROGRAM MODEL SUMMARY OF YOUNGER COHORT SITES

SITE	SUMMARY
GUELPH	Onward Willow - Better Beginnings, Better Futures places a strong emphasis on community development and empowering residents to assume greater control of their community. A guiding principle behind the project is that everyone should have a voice. As well, there is a high value placed on partnerships – between the project and other agencies as well as between residents and service providers. The programming at Guelph is quite diverse, and there is less concentration of programming resources in one or two program strategies than at the other younger cohort sites. Their program model report described the highest number of different programming strategies and activities of all the demonstration sites. One-third of the core government budget is devoted to family visiting, less than the other younger cohort sites which devote at least one-half of their core government budgets to home visiting. Programs for preschoolers and parents are another major emphasis. Included in this program area are many different activities such as playgroups, drop-ins, Books for Birthdays, Kindergarten readiness, a toy library, and parent workshops. The project reports that about 85% of its core government budget is invested in programming for children from birth to four years of age. Community development processes and values have been central to how creating the project organization, building programming and working with the neighbourhood were approached. About 15% of the core government budget was allocated to directly support community development. The recruitment and training of community leadership and their participation in project governance has also been an important priority. Guelph is the only demonstration site with an independent residents association which influences program development. Onward Willow - Better Beginnings, Better Futures also had the highest number of resident volunteer hours of all eight sites during the demonstration period. The project has stressed broader community development efforts, which have lead to an expansion of the Better Beginnings mandate to provide programming for children outside of the mandated age range (0 to 4), and have resulted in more resources becoming available in the neighbourhood. A fundraising committee raises approximately $90,000 per year. Additional activities offered by the site include programs for school-aged children and youth including after school programs, camps and drop-ins, special interest groups (e.g., karate, cooking club, Vietnamese group for parents and children), employment readiness and skills workshops, adult education, clothing program, emergency food program, and legal clinic. The project also raised $120,000 for a Stay in School program. There also has been an emphasis on participation in broader coalitions which extend beyond the neighbourhood.

TABLE 1.1 (CONTINUED)

SITE	SUMMARY
KINGSTON	Better Beginnings for Kingston Children is committed to the development of primary prevention programs and community ownership. One of the guiding values is that partnerships among agencies, and between agencies and community residents should be developed. The strongest concentration of resources is on the family visitor program. Over one-half of the Better Beginnings core government budget is devoted to this program. It is modelled after the Parents Helping Parents program and strives to provide information on all phases of healthy infant and child development. Perinatal and postnatal support is another significant component of the project. This includes weekly prenatal sessions, infant groups, parenting workshops and considerable information dissemination. Child care provision is another major component of Better Beginnings programming at this site. This includes child care during meetings and program participation, parent relief, and assistance to existing preschool groups in the community to enhance the provision of service at those locations. Additional activities or programs offered at Better Beginnings for Kingston Children include a good food box, hot meal program, playground equipment fundraising committee, food buying club, Christmas referrals, a low income needs coalition and special events. Compared to most other Better Beginnings sites, there has been very little additional fundraising and expansion of programs and activities beyond the Better Beginnings mandate in Kingston.
OTTAWA	One of the guiding philosophies for the South-East Ottawa Better Beginnings, Better Futures has been a holistic and ecological approach to supporting children and families from prenatal to preschool years. There is an emphasis on community development, parent and service provider collaboration, and inter-agency coordination. Approximately 60% of the Better Beginnings core government budget is devoted to the family visitor program. The emphasis is on providing support and information, linking the parent with necessary resources, intervention in crisis situations, and on practical/concrete assistance and advocacy. Playgroups, offered four days a week, for parents and children are the other major component of South-East Ottawa's programs. These two programming components make up 82.4% of the Better Beginnings core government budget. This site also has a community nurse (.6 FTE) who conducts two morning groups on site (as well as occasional groups off-site) designed to educate family visitors, pregnant women, new mothers, and mothers with young children on health-related topics (e.g., breastfeeding, adjusting to a new lifestyle, self-care, nutrition and care of babies, etc.). Other activities or programs offered include a mobile toy lending library, subsidized child care at a local nursery school, parent workshops, and respite for parents. Better Beginnings is located in a community house and is very visible in the neighbourhood. The house is open to all residents and is very welcoming in nature. The project also has its own school bus, brightly painted by neighbourhood children, that offers necessary transportation to families in the community.

TABLE 1.1 (CONTINUED)

SITE	SUMMARY
OTTAWA (Continued)	Other community-oriented activities include a clothing exchange, a sewing crafts group, a women's group, and a food buying club. The project has expanded beyond the Better Beginnings mandate to involve teens and the community. The project supports the Kids in the Hood program, a weekly drop-in for kids aged 10 to 14. Teens are also involved as volunteers and grants have been received to provide summer employment for anywhere from 1 to 4 teens. The project raises from $20,000 to $70,000 annually to fund additional activities.
TORONTO	Parents for Better Beginnings believes that the approach to be taken to prevention programming should be ecological and holistic. There is a belief in the capacities of individuals, and that their strengths and capacities should be nurtured and supported in an empowering fashion. Programs have to be community-driven, and there is an emphasis on inclusiveness and flexibility. Over one-half of the Better Beginnings core government budget has been devoted to the community visitor program. The program involves one-to-one visits with expectant moms, and families with children aged 0 to 5. Community visitors provide support and information on child development and prenatal development. Referrals are also made on behalf of the family, and community visitors will advocate on their behalf when necessary. Education and support for parents, including perinatal nutrition and support groups, and parenting groups and workshops, are also important components of Parents for Better Beginnings programming. Additional activities and programs include parent relief, playgroups, a play-and-learn resource centre, and a family drop-in. Community-oriented activities include special events, community clean-up and barbeque, a women's group, Kindergarten registration, outreach, and community organizing and advocacy. Parents for Better Beginnings has developed partnerships beyond the scope of the Better Beginnings mandate. They worked on an extensive review of the local police division, and have partnered with Parks and Recreation and the Housing Authority to provide a youth and community drop-in and community garden. The site was also able to secure funding to run an anti-racism education training program in which project staff, committee members, staff and board members from eight local agencies, and community residents were involved. The project was also successful in fundraising with a private company. That company raised money to send 42 children to a 10-day summer camp and to purchase a school bus. Fundraising efforts also resulted in a nutritional component being added to the perinatal group.

TABLE 1.1 (CONTINUED)

SITE	SUMMARY
WALPOLE ISLAND	Two visions guide programming at Walpole Island Better Beginnings, Better Futures. One, that healthy child development is crucial for the future, and two, that community ownership is critical. The Native philosophies and values guiding both the community and the project differ in important ways from those influencing the urban demonstration sites, stressing for example, the importance of kinship patterns, valued ways of working together, and teaching methods that include elders as teachers and involve learning by observation. Community development and community healing programming take up approximately 60% of the Better Beginnings core government budget. Native language instruction is an important component of this type of programming, including weekly language classes, and the enrichment during the preschool playgroups. In addition to the Native language classes, cultural and community enrichment (e.g., Women's Time Out, Native learning circles, craft teachings) have also been offered. In addition, Better Beginnings produces a Boozhoo Niijii newsletter, a monthly publication providing information about events/activities which includes Native language content. Another main component of the project is child and family-focussed programming. Three family support workers conduct home visits and provide other child and family activities and programs through the Parent/Child Support Program and the Bkejwanong Children's Centre. Home visiting constitutes approximately 20% of the Better Beginnings core government budget. The purpose of the home visits is to provide support and resources to expectant mothers and families with young children. Other family and parent-focussed programming take up approximately 20% of the Better Beginnings core government budget. The family resource drop-in centre runs twice-weekly playgroups, one drop-in "day" per week, and monthly parent workshops and information sessions. The drop-in day offers a clothing exchange, weighing and measuring of babies, breastfeeding support, a toy-lending library, and socialization and networking for mothers, children, and staff. The parent information sessions cover topics related to child development and parenting, as well as prenatal nutrition, and the parent workshops have included You Make the Difference and Nobody's Perfect workshops. Other activities and programs offered by Walpole Island Better Beginnings include an outdoor playgroup where children are brought to different parks on the island (offered only during the summer months), and a monthly food box draw for seniors and community members on social assistance. Unlike most of the other sites, there is no mention of additional fundraising and only one activity is reported as serving children outside of the mandated 0 to 4 age range: the blanket program, an outdoor playgroup is open to all children, not just those aged 0 to 4.

Table 1.2

PROGRAM MODEL SUMMARY OF OLDER COHORT SITES

SITE	SUMMARY
CORNWALL	Partir d'un bon pas values a comprehensive approach to child development. There is a strong emphasis on resident participation and partnerships with different agencies and services. This project strives to facilitate active participation at all levels. A substantial proportion of the Better Beginnings core government budget is devoted to school-based activities including full-time school animators in four schools, who provide classroom enrichment in JK to Grade 2 classes. Homework help and summer tutoring also is provided by Better Beginnings. A breakfast program is available in each of the four schools. Finally, a toy library, including various resources and materials, is also funded by Better Beginnings. Additional project activities include: activities for children and families during holidays, school breaks, and summer holidays, play groups for children, family visits, welcome baskets and home visits to new families, and local French initiatives/activities for the community. At the Cornwall site, there is more of an equal balance between a concentration of programming resources and broader community development efforts than in the other two older cohort sites. There has been an evolution towards greater partnerships with other organizations and more effort to provide programming that falls outside of the Better Beginnings mandate. For example, Better Beginnings was instrumental in the creation of the incorporated Community Action Group, which has successfully created prevention initiatives beyond the Partir d'un bon pas mandate. There also are several examples of the project's success in securing additional funding for programs outside of their mandate.
HIGHFIELD	The Highfield Community Enrichment Project places considerable value on an ecological approach to child development. There is a philosophy to address a child's major environments: the family, the school, and the community. There is also an emphasis on resident involvement, and a respect for the various ethnocultural groups represented in the community. There are two unique programming aspects of this project: the focussing of much of the in school programming resources directly on the research focal cohort and the creation of a strong relationship with a single school. All programming is provided on school premises. The research focal cohort had educational assistants in the classrooms from JK to Grade 2 (currently, the assistants focus exclusively on the JK classes) and received summer enrichment programming for each summer from JK to Grade 2. In addition to the above, major program activities include the Lion's Quest social skills programming in the classroom, health and nutrition programming (including a snack program, hot lunch program, and most recently, a breakfast program), and programs for parents and children including parent-child drop-in, parent relief, before and after school programs, a toy library, and programs during school breaks and summer holidays.

TABLE 1.2 (CONTINUED)

SITE	SUMMARY
HIGHFIELD (Continued)	Additional program activities include professional development activities for teachers, ethnocultural activities, community celebrations, neighbourhood safety activities, and a number of smaller programs for children and parents that responded to the community's wishes (e.g., fitness classes for parents, ballet classes for children, bus trips to the US). At Highfield, more emphasis has been placed on concentrating programming resources on the focal cohort children than at the other older cohort sites. Comparatively, less emphasis has been placed on broader community development efforts and on resident participation in project governance. The project has been successful in building a very strong partnership with its host school. The project has done additional fund raising to provide programming outside the original government mandate (e.g., expansion of the snack program, creation of the breakfast program, recreation program for pre-teens). Many of these resources have supported additional in-school programming.
SUDBURY	Sudbury Better Beginnings, Better Futures strives to promote a healthy environment for families. They place a very strong emphasis on community involvement and ownership in the project, and in building community leaders. Their philosophy is to provide integrated and universal services to all groups within the community. A fair proportion of the Better Beginnings' core government budget is devoted to before and after school and holiday programs. These programs include games, craft activities, outings, and the provision of nutritious snacks. The focus on community development processes as central to the creation of the project organization and programming and in working with the neighbourhood also is very strong. Community kitchens, community gardens, environmental enhancement, as well as other community initiatives are all components of the strong community development focus at this site. A strong emphasis has been placed on resident control of project organization and management. In fact, the Board of Directors is now composed solely of community residents. There has also been a comparatively high investment in alternative ways of organizing and administering the project. Additional project activities include school-based activities including a Peaceful Playground Program (e.g., project staff run cooperative games, children discuss anger management), a Native Cultural Program, and a Multicultural Program in the Francophone schools. Parent and child-based programs including a parent and tot drop-in, organized workshops, play group activities, and family visiting are also provided. At the Sudbury site, there is less concentration of programming resources on children aged 4 to 8 than at the other older cohort sites. Their has been an emphasis on securing additional funds for programs and activities that fall outside of the Better Beginnings mandate. The project has been very successful in raising additional money through its own incorporated Education Fund. The Education Fund raises more than $100,000 a year. Because of these additional funds, several self-sustaining projects have been created (e.g., Myths and Mirrors, a community arts program, and a Community Economic Development project).

RESEARCH OBJECTIVES AND QUESTIONS

Research carried out in conjunction with the Better Beginnings Project was required to address several major objectives.

1. Outcome Evaluation Research

Objective: "The first research objective of a primary prevention research demonstration project should be to demonstrate how great an effect can be achieved from a primary prevention model. Thus, the Better Beginnings, Better Futures research demonstration package will consist of all promising components that can be launched within the budget constraints and with the support of the community. The purpose of such projects is not to discover the most efficient or leanest package of prevention services, but to determine how effective a reasonably financed and community-supported project can be." (Government of Ontario, 1990) .

Questions: Are the Better Beginnings programs effective in:

- preventing serious emotional and behavioural problems in young children?
- promoting healthy child and family development?
- enhancing the abilities of disadvantaged communities to provide for children and their families?

2. Economic Analysis Research

Objective: "One of the major inadequacies of primary prevention research to date has been the lack of attention to program costs. Often the issue has been ignored. When costs were addressed, they were almost always computed retrospectively. Therefore, the second research objective is to investigate the costs of the Better Beginnings model from the commencement of funding." (Government of Ontario, 1990).

Question: What are the annual costs of the Better Beginnings programs?

3. Project Development and Program Model Research

Objective: "The third important research objective is process evaluation and organizational analysis. This area has also been largely overlooked in past research demonstration projects. There has been little documentation of the structure, processes, activities and organization of the programs that are associated with positive outcomes for children. In the Better Beginnings Project, investigating process and organizational issues will be one of the three main research objectives." (Government of Ontario, 1990).

Questions: How do the Better Beginnings communities develop and implement the program model? To what extent are the local demonstration projects characterized by:

- parent and community involvement?
- integration of services?
- comprehensive, high-quality programs?

4. Follow-up Research

Objective: There are very few prevention programs for young children which have followed young children and their families into adolescence and beyond. Policy questions concerning long-term outcomes and cost savings can be answered only by longitudinal research. This is an important research objective of the Better Beginnings Project.

Questions: What are the long-term effects and cost benefits for children and their families in terms of:

- educational achievement and high school graduation rates?

- use of health, social and correctional services?
- employment and social assistance?
- criminal charges and convictions?
- teen pregnancy?
- drug and alcohol abuse?

How sustainable are the local Better Beginnings projects? Do they change in terms of programs, organization, budget? What changes in short-term outcomes for children, families and neighbourhoods occur over the first five years of annualized funding, i.e., 1998-2003?

The first three objectives are being addressed by the results of the RCU research on the Demonstration Phase of the Project (1991-1998) in this report.

The fourth and fifth questions are to be answered in follow-up research of Better Beginnings children as they develop into adolescence and as local programs continue to operate under the supervision of Ontario Ministry of Community and Social Services area offices.

RESEARCH DESIGN

Program funding of the eight sites began in April 1991. It took 2-1/2 years for local projects and programs to develop to the point where evaluation could begin in the Fall of 1993. Extensive information was collected and reported by Research Coordination Unit (RCU) local researchers on "start-up" processes from 1991 to 1993.

Determining program outcome effects across the various communities after the first five years of program implementation entailed an on-going collection of a wide range of child, family, and community characteristics. Due to the process adopted by the government for selecting project communities, it was neither possible nor feasible to employ a randomized controlled trial design. Therefore, several quasi-experimental designs were incorporated in the research plans: a) a baseline-focal design, b) a longitudinal comparison site (or non-random control group design), and c) a geographical comparison design where outcome data from a project site are compared to other geographical areas such as the surrounding metropolitan area.

The Baseline-Focal Design. Baseline measures on children, families and neighbourhoods in all Better Beginnings sites were collected in 1992-93 before the local programs were fully operational. These baseline measures were collected on 350 four-year-old children in the younger cohort sites and 200 eight-year-old children in the older cohort sites. Then, five years later in 1997/8, the same measures were collected from four and eight year old children and their families who were part of the "focal" longitudinal research group described below. Measures collected from the focal group in 1997/8 were compared with those collected from the baseline group in 1992/3 to determine what changes had occurred in four and eight year old children and their families during the first five years of Better Beginnings programs.

The Longitudinal Comparison Site Design. In 1993-94, a "focal" longitudinal research group of children and their families were recruited in the eight project sites and in three comparison neighbourhoods where there was no Better Beginnings funding. In the younger cohort sites, approximately 700 children born in 1994 and their families constitute the focal research group, and outcome measures were collected when these children were 3, 18, 33, and 48 months of age. In the older

cohort sites, it is children who turned four years of age in 1993 and their families that constitute the focal research group, and data were collected on this group of approximately 700 children at ages 4, 5, 6, 7, and 8 between 1993/4 and 1997/8. Longitudinal analyses contrast changes over time in measures from the Better Beginnings sites relative to those that occur in the comparison sites.

Child, Family and Neighbourhood Measures. Information about children, parents, families, and neighbourhoods was collected in a variety of ways:

- annual two-hour in-home parent interviews carried out by RCU local site researchers;
- annual direct child measures also collected by RCU researchers;
- annual teacher reports;
- existing neighbourhood level data (e.g., police and CAS records, Canadian Institute of Health Information, Statistics Canada Census data);
- federal and provincial databases (e.g., Statistics Canada Census data, Health Canada's Recommended Nutrient Intake, Ontario Principals' Report data of Special Education Instruction).

Economic Analysis. To monitor project costs, the RCU worked closely with government committee and site representatives to develop a cost accounting format. Costs were collected using a common accounting system and software at each site.

The cost data collected have included both direct dollar expenditures and the other costs of operating the programs, particularly volunteer time (so-called "service in kind" or "opportunity costs"). These latter costs typically have not been measured in projects of this sort.

Project Development and Program Model Analysis. In the Better Beginnings Project, the generation of extensive descriptions of all aspects of project development and program implementation at the local project level is an important research objective.

This qualitative research has concentrated on collecting information which describes how the individual communities developed and implemented child, family, and community development programs adhering to the major characteristics of the Better Beginnings Model: high-quality programs, developed with meaningful local resident participation, and involving the integration of new and existing child and family services.

Local site researchers have written descriptive reports on various aspects of program development and implementation at each site. These individual local site reports were summarized in comprehensive "cross-site" reports that discuss similarities and differences across the various project sites. These cross-site reports cover the following topics: 1) how the original Better Beginnings initiative was developed; 2) how local communities generated their proposals for the original competition in 1990; 3) how local residents are involved in project decision-making; 4) how local service providers and educators are involved in project decision-making and resource provision; 5) the specific program activities and components, as well as the staffing patterns at each site; 6) the formal and informal decision-making structures and values, committee structure, and management procedures in each project site; and 7) personal stories from program participants, staff, and local residents concerning their experiences with the Better Beginnings Project. Updated information on several of these topics appears later in this document. Brief descriptions of the sites themselves are found in Appendix B.

Implementing the Research

During 1991-92, the Research Coordination Unit finalized research designs, outcome measures, and procedures for collecting qualitative data about local project development; formed local research committees; hired and trained local research staff in each site; and began to collect data. Since this was all accomplished before the local programs were in place, the research had to be undertaken on the basis of certain assumptions about how the Better Beginnings programs would be implemented. These assumptions included the following:

- High-quality programs would be implemented in each site to provide continuous, ongoing services and support to all children and their families, starting before or at birth though to four years of age in the younger cohort sites, and from four to eight years of age in the older cohort sites.
- These programs would reflect the most effective models identified in the Technical Advisory Group report published in 1989. Thus in the younger sites, home visiting programs based on the Elmira project would start at birth and be provided for several years, followed by high-quality preschool programs based on the Perry Preschool Project for children ages three and four. In the older cohort sites, high-quality preschool programs would be combined with comprehensive primary school programs for all children from four to eight year of age.
- All or most children and their families would be actively involved in these prevention and promotion programs as well as in other child, parent, and community programs developed to meet local needs.
- Children and families in the research cohort would receive continuous and meaningful levels of program support throughout the five years they were involved in the research, i.e., from 1993/94 to 1997/98.

In several ways, these assumptions may not have been valid, thus rendering the research design and outcome measure less sensitive to program outcomes than originally intended. Of particular relevance is the fact that there is little evidence that all or most children and families in the research cohorts received a "seamless web" of services and supports over the five-year period. In fact, the degree to which programs were focused on children in the designated age range showed considerable variability across the demonstration sites. Also, there was little explicit attempt to exactly replicate the intervention procedures of the effective models identified by the Technical Advisory Group. For example, none of the preschool programs attempted to directly employ the High/Scope preschool curriculum procedures.

STAGES/TIMELINES OF THE BETTER BEGINNINGS PROJECT DEVELOPMENT

New projects typically progress through stages of development, each of which has its own tasks and challenges. Generally, projects progress from earlier stages characterized by informality and trial and error towards more clarity, structure, and stability in their core operations. These stages and timelines for the Better Beginnings Project provide a context for what the sites were focussing on while the research was being implemented.

The project development cycle is divided into three stages: a start-up stage, a stabilization stage, and a transition stage. The data for this report do not allow a consideration of developments after the transition from demonstration to annualized funding in 1997.

Start-up. A unique aspect of the Better Beginnings, Better Futures Project was having proposal development and initial project design prior to, and separated by about a year from, the start of project

funding. Our estimation is that the start-up phase lasted from three to four years (1990 to 1994) before basic organizational structures, procedures and core programming were relatively stable. For a project so complex, combining multiple organizational processes in innovative ways with participants learning as they proceeded, this time frame is consistent with the start-up experiences described in the literature. Although the original Better Beginnings, Better Futures one-year timeline did not make sufficient allowance for these start-up processes to unfold, the start-up phase was eventually extended by 1½ years.

Start-up of the Better Beginnings, Better Futures sites, like that of other complex projects, was a time of high enthusiasm, but also of learning, experimentation, and frustration along with pride in accomplishment. It was several years before most sites regularly maintained at least 50% resident membership in project governance. Sites went through a long process, with little external guidance, of modifying committee procedures to support resident involvement and working out relations between professional and resident participants. Struggling to understand what was meant by service integration and what was within their power to accomplish was common at every site. Hiring the initial group of management and program staff was demanding at every site. Educating new personnel for their particular jobs and also about Better Beginnings, Better Futures and the principles and ways of working of their site took a great deal of effort and time. Training and supervision represented unusual challenges with the large numbers of local residents employed at most sites.

Stabilization. If the challenges of the start-up stage have been successfully negotiated, a project should be at the peak of its organizational and program capacity during the stabilization phase. It is at this point that assessments of program effectiveness should take place. Stabilization is characterized by greater clarity about how things are done and more detailed specification of roles and procedures. Usually, there is a cadre of experienced staff, and authority distinctions often become more evident. There is a focus on "doing what we do as efficiently and as effectively as possible" as well as on organization and staff development and maintenance. Under optimal circumstances, assessment of project effectiveness would begin only at the point when a relatively stable project organization and programming existed.

Better Beginnings, Better Futures had a relatively short period of stabilization for the demonstration sites. There were from one to two years (1994 to 1996) of functioning with relatively well-defined and stable core organizational and programming elements. In permanently funded projects, this period of stable operations, barring unanticipated crises, would be expected to continue for at least several more years, providing an ongoing opportunity to assess project and program effectiveness.

Transition. The fate faced by many promising projects once the funded demonstration period ends is not encouraging. Lerner (1995) reports that about fifty percent of the programs described by Schorr (1988) as effective did not exist one year after she visited them. The stress and uncertainty about future prospects faced by project personnel as the end of demonstration funding approaches are substantial, inevitably diverting attention from normal work preoccupations and making morale hard to sustain.

For Better Beginnings, Better Futures, this transition period (which included both preparing for the possible end of demonstration funding and then adjusting to acquiring annualized funding) extended from 1996 until the end of our data collection period in 1998. While there were clear differences, many sites reported high levels of anxiety and lower morale prior to the announcement of annualized funding. On a very positive note, none of the Better Beginnings, Better Futures demonstration sites experienced the radical changes to their basic operating principles and programs at the end of the demonstration period so commonly experienced by demonstration projects elsewhere.

To summarize, the project sites were in a start-up phase from 1990 to 1994, then experienced stabilization for approximately two years, followed by a transitional phase from 1996 to 1997 until permanent funding was announced.

SHORT-TERM OUTCOMES

The results of the Baseline-Focal and the Longitudinal statistical analyses on the child, family, neighbourhood and school outcome measures are presented in Appendix 1.1 for the younger cohort sites and Appendix 1.2 for the older cohort sites. The analyses were performed and are reported separately for younger and older cohort sites due to differences in programs and outcome measures.

Each variable in the table is assigned a '+' or '-' symbol to indicate whether the tested difference favoured Better Beginnings or the control group (either baseline or comparison site). All variables were coded so that a '+' represents a desirable or beneficial effect for Better Beginnings and a '-' represents an undesirable or non-beneficial effect. If the result was statistically significant, this was indicated with a '**' if the p value was .01 or with a '*' if the p value was .05. A p value of .01 means the result would be expected to occur by chance less than one time in 100; similarly, a p value of .05 means the result would be expected to occur by chance less than five times in 100.

Patterns of outcome effects were identified for the younger and older site analyses, respectively, from the data in these tables. The shaded areas in Appendices 1.1 and 1.2 identify two types of outcome patterns. Horizontal shading reflects a pattern of consistent results on a particular outcome measure *across* the Better Beginnings sites (general patterns). Vertical shading indicates a pattern of consistent results on a series of related measures *within* a site, (site-specific patterns).

General "Cross Site" Patterns: In a study with two basic designs, sometimes the results will not match. Also, with many dependent variables, sometimes apparently meaningful results will arise by chance, i.e., through random processes. Finally, with programs set up to meet local conditions, results may differ between sites. To deal with differing results from the two basic designs, with the risk of taking random fluctuations seriously, and with the need to pick up systematic differences among sites, the following criteria were adopted:

- If results were available from both designs, statistically significant results from one must be confirmed in direction by the other, or no Better Beginnings effect would be suggested.
- If the results for all older or younger cohort sites, taken together, were significant, but if more than one site showed results in the opposite direction, or one site was significant in the opposite direction, no general Better Beginnings effect would be suggested.
- A result for a single site, on a single dependent variable, would need to reach a p-value of .01 to be discussed as evidence of a statistically significant effect for that site. Insisting on a p-value of .01, rather than the more usual .05, is a way to deal with the number of tests possible within a cohort. At the 0-to-4-year-old level, there are five sites, so that to require .01 sets the overall p-value to .05. At the 4-to-8-year-old level, there are three sites, so that to require .01 sets the overall p-value to .03.

Site-Specific Patterns: Often variables within a content area yielded consistent results for a site. Such patterns are mentioned frequently in the report. Some of the patterns mentioned include variables which are all individually significant. In other instances, where results are favourable (or unfavourable) for several variables, but not all are individually significant, we have taken a nonparametric approach. At minimum, a sign test must reach .05, and some individual variables must do so as well.

Effect Sizes: Appendices 1.1 and 1.2 also present effect sizes for all the identified patterns of outcome results for the younger and older cohort site analyses, respectively. Effect sizes indicate how large a statistical difference or change is in a standard way across different analyses or different measures. An effect size of 0.2 is considered small, 0.5 is considered moderate, and 0.8 or above is considered large. In program outcome research, especially involving universal interventions such as Better Beginnings, effect sizes are typically small (Hundert *et al.*, 1999; McCartney & Rosenthal, 2000).

In the following sections, the results of the short-term findings of the Better Beginnings initiative from 1992 to 1998 are presented and discussed in terms of the Project's main goals.

GOAL: TO PREVENT EMOTIONAL AND BEHAVIOURAL PROBLEMS AND PROMOTE SOCIAL FUNCTIONING IN YOUNG CHILDREN

This was the first goal outlined in the Request for Proposals in 1990 and was the main reason for undertaking the Better Beginnings Project.

In three of the younger cohort Better Beginnings sites (Kingston, Ottawa and Toronto), there was a decrease in children's emotional problems as rated by JK teachers from 1993/4 to 19989. (No data were available for Guelph because few children had access to JK.) This decrease was substantially larger in Kingston where JK teachers also rated children as showing decreases in behavioural problems, increases in prosocial behaviour, and an increase in school readiness over the same time period. In the Kingston Better Beginnings programs, home visiting and informal playgroups were important components, as they were in all the other younger cohort sites. However, Kingston also invested extensive program resources in childcare, both by enriching local daycare centres in the neighbourhood and also by providing a large number of informal childcare experiences for children. This combination of supports, available from birth to JK entry, may have contributed to the more consistent improvements in social and emotional functioning of children in the Kingston site.

Few studies have reported improvements in social-emotional functioning in young children before school entry. Two studies which have reported such effects provided full-time, year-round, centre-based childcare for a minimum of two years, and in both cases the improvement disappeared after the children entered school. No home visiting programs have reported improvements in preschool children's social-emotional functioning. The finding of reduced emotional problems at school entry in three of the younger cohort sites suggests that the combination of home visiting, playgroups and childcare provided in these Better Beginnings sites may be effective in allowing children to begin school with less anxiety. The additional improvements in JK teacher ratings of behavioural problems, prosocial behaviour and school readiness at the Kingston site are promising.

In the three older cohort Better Beginning sites, children also showed declines in teacher ratings of overanxious emotional problems, as well as improvements in social skills as rated by both parents and teachers. In Cornwall, teacher ratings of behavioural problems also showed substantial decreases. Improvements in social-emotional functioning as rated by teachers were strongest in Cornwall and Highfield, where school-based programming was more intense than in Sudbury. Although there were programming differences, both the Cornwall and Highfield programs included educational assistants who provided in-class individual and group activities for children from JK through Grade 2.

Decreases in emotional and behavioural problems as rated by parents were noted only in Highfield where there was a direct connection between the Better Beginnings school-based programs and the children's

parents via regular home visits by Better Beginnings staff. Also, Highfield teachers were trained to provide a social skills program in their classrooms which included specific activities involving parents.

The original Better Beginnings program model recommended the establishment of continuous program supports for children from pre-birth to age four in the younger cohort sites and from age four to age eight in the older cohort sites. The results of the outcome measures of children's emotional and behavioural problems, as well as social skills, suggest that the improvements in these areas of children's functioning were more apparent in those sites where continuity in programming was most evident. The combination of early home-visiting in Kingston followed by a variety of playgroups and childcare programs may have provided the intensity and continuity of support required to positively influence social-emotional development in children up to the age of four and allow them to enter kindergarten with less anxiety and better able to relate effectively to teachers and peers.

The improvements in children's emotional problems, behavioural problems and social skills were substantially greater in the older than the younger cohort Better Beginnings sites. These improvements were larger and more widespread in the two sites (Cornwall and Highfield), that provided in-classroom individual and group support to all children continuously from JK to Grade 2. These findings suggest the value of classroom-based program strategies for preventing emotional and behavioural problems in young primary school children. The specific outreach to parents in order to connect them with the school and other Better Beginnings programs in Highfield was associated with large improvements in their ratings of children's social-emotional functioning.

It is interesting to compare these findings with those of the Helping Children Adjust Project, also funded by the Ontario Government (Hundert *et al.*, 1999). That project provided one year of teacher-provided social skills training and enhanced reading instruction in kindergarten through Grade 2 for 1,400 children attending 30 primary schools in disadvantaged neighbourhoods. (A third program component, parent training, was poorly attended and dropped after the first year.) Children receiving social skills training showed significant improvements in ratings of prosocial behaviour on the playground, as well as decreases in parent and teacher ratings of behavioural problems over a three year period relative to comparison groups which received no social skills training. There were, however, no improvements in parent or teacher ratings of prosocial behaviour, and no results were presented concerning ratings of emotional problems.

The overall decreases in teacher ratings of children's emotional problems and increases in children's self-control found in the older cohort Better Beginnings sites were nearly three times larger than the decreases in behavioural problems reported for the Helping Children Adjust Project, and the size of the differences in Cornwall teacher ratings were even greater.

In Highfield, the effect sizes for parent-reported decreases of both emotional and behavioural problems and improved social skills in their children also were substantially larger than those reported in the Helping Children Adjust Project over a similar period of time.

There are several possible reasons why the size of the improvements in the social, emotional and behavioural functioning in young primary school children were larger in the Better Beginnings Project. An obvious one is the fact that the classroom programs in the Cornwall and Highfield schools were provided for four years, compared with one year in the Helping Children Adjust study. This again points to the potential value of continuous, longer-term programs. Costs between the two programs would be interesting to explore, but no financial data were provided on the Helping Children Adjust Project by Hundert *et al.* (1999). A second relevant factor may be differences in the way in which the school-based

programs were designed in the two projects. In the Helping Children Adjust study,

> "... there was little or no contact between the investigator team and individual teachers in schools. Interventions were introduced in the schools using an "expert" consultation model. Here, the program was developed outside of the school and was introduced with slight modification in the same manner from school to school.
>
> There is considerable evidence that the commitment of individuals to an intervention is determined by the extent to which they contribute to its design. The effectiveness of the programs may have been weakened by the absence of a collaborative consultation process with teachers, intended to enlist their help in program design. Perhaps the time has come to develop and evaluate programs that start with a process of school engagement around the definition of behavioural issues that need to be addressed and the identification of promising alternative responses. The creation of a partnership in the formulation of programs may facilitate their relevance, acceptance, implementation, and sustainability – program ingredients likely to be associated with bringing about desirable change." (p. 1071, Hundert *et al.*, 1999)

The engagement of principals, teachers, parents and project personnel in developing the school-based programs is precisely what occurred in the Better Beginnings sites, particularly the classroom programs in Cornwall and Highfield, and may have been an important influence on the size of the "desirable changes" which occurred in these sites.

GOAL: TO PROMOTE OPTIMAL DEVELOPMENT IN CHILDREN

To reflect the holistic view of the child emphasized in the Better Beginnings model, a wide range of measures were collected on various aspects of children's development, in addition to those assessing social, emotional, and behavioural functioning described in the previous section. These included the child's physical health, growth, nutrition, and general and cognitive development, as well as academic achievement.

Child Health

In the younger cohort Better Beginnings sites, children had more timely immunizations at 18 months than in the comparison site. On the other hand, there was less encouragement by parents to wear bicycle helmets in the Better Beginnings sites. Direct measures of health promotion status showed no consistent differences.

The failure to find any consistent indication of positive Better Beginnings effects on children's physical health in the younger cohort sites is consistent with other studies employing home-visiting, playgroups, and childcare programs for infants and preschoolers which have failed to demonstrate positive program effects on children's health (Karoly *et al.*, 1998; Gomby *et al.*, 1999).

In the older cohort sites, improved parent ratings of their children's general health status occurred in all three Better Beginnings sites. Also, in both Cornwall and Sudbury, a general pattern of improvement occurred on preventive and promotive activities, including reduced child injuries, more timely booster shots, more parental encouragement to wear a bicycle helmet, and an increase in parents' sense of control over their children's health.

The positive outcomes in the older cohort sites indicate an increase in parents' knowledge and actions taken to prevent injury and disease in their children similar to changes regarding their own health described later.

Child Growth and Nutrition

Better Beginnings, Better Futures provides the first population-based information on dietary intake, height and weight status of Canadian children since the Nutrition Canada Survey (1973).

The growth patterns of all children in the study compared favourably with normative data for height and for the percentage of children who were underweight. There was, however, a higher than average percentage of children who were overweight. This remained unchanged over the five years and underscores the need to increase opportunities for physical activity in young children.

In the younger cohort sites, only children in the Toronto Better Beginnings neighbourhood showed improvements in nutrition, and these improvements were substantial and involved 11 of the 12 nutrients measured. However, the overall nutrient intake was within acceptable levels for children in all younger cohort sites, a finding in sharp contrast to U.S. studies which show several dietary inadequacies in preschool children.

In the older cohort Better Beginnings sites, there was a general increase in children's intake of all nutrients over the first two years of the project. This was likely accomplished in two ways. First, parents had increased access to food though emergency food cupboards and other food resources set up in each site, thereby increasing the amount of food available to each family. Secondly, all three sites set up one or more snack or meal programs before, during or after school, as well as offering food in all child-related programs, thereby increasing all children's access to foods of high nutritional quality. The programs in Cornwall were particularly effective in improving children's nutritional intake.

Other approaches to improving the nutritional health of low-income children have been dominated by federally mandated programs such as the National School Lunch and School Breakfast Programs in the United States (Gordon *et al.*, 1995). Although these programs have improved the daily nutrient intake of children, they are formally structured and do not allow for either parent input or involvement. Nor are they amenable to the changing needs of the community. The Better Beginnings approach is unique and empowers neighbourhood residents to decide how food programs should be designed and implemented.

General/Cognitive Development and Academic Achievement

In all the younger cohort Better Beginnings sites, there was consistent improvement on a measure of auditory attention and memory, one of the six subtests from a standardized test of general developmental skills. That is, children in the Better Beginnings sites improved in their ability to hear, process, and act on simple instructions and to repeat increasingly complex words and numbers in sequence. This is an important area of development, reflecting children's ability to process and respond to verbal communication. There were no other consistent cross-site improvements on any of the other subtests, which included expressive and receptive language, fine and gross motor skills, and visual attention and memory.

The Walpole Island First Nation Better Beginnings site was the only younger cohort site to show consistent improvements in child development. Children in the research sample showed improved performance overall on the standardized test of development and on all of the six subscales. One possible

explanation for this finding in Walpole Island is the continuity of home-visiting and parent-child play-group programs provided to young children by the Better Beginnings Project, in conjunction with a high-quality local daycare facility, that was attended by over 50% of the children participating in the research at 48 months.

There were no improvements in the older cohort Better Beginnings sites on any of the measures of cognitive development or on measures of reading or mathematics achievement.

The failure to find any other consistent improvement in cognitive development or academic achievement may reflect the difficulty of effecting positive changes in this domain in young children. A recent review of home-visiting programs for families with children from birth to five years of age (Gomby *et al.*, 1999) concluded that these programs have produced no general improvement in children's cognitive development. Projects that have been successful in improving cognitive/intellectual development in preschool-aged children have all provided intensive, centre-based educational programs to very high-risk young children with a heavy emphasis on cognitive activities (e.g., the Abecedarian and Perry Preschool Projects). Since none of the younger cohort Better Beginnings sites provided this type of intensive centre-based programming, the failure to demonstrate general improvements in intellectual functioning is not surprising.

In the older cohort sites, the failure to find improvements in cognitive functioning or academic achievement again is consistent with findings from other projects focusing on this early primary school age group. The Helping Children Adjust Project, described earlier, provided one year of enriched experiences in reading to children from JK to Grade 2, yet found no positive effects on the same reading achievement measure employed in the Better Beginning's research. This was the only cognitive outcome measure reported in the Helping Children Adjust Project (Hundert *et al.*, 1999).

One reason for the difficulty in demonstrating improved cognitive and academic achievement in this older age group is that all children in project and comparison schools receive regular primary school education programs throughout the implementation period. In order for a positive effect to show, programs would have to improve academic achievement over and above that being accomplished by regular Kindergarten and Grade 1 and 2 educational activities. It is unlikely that any of the Better Beginnings programs, designed to improve cognitive/academic performance, was intensive enough to produce such an effect; nor, apparently, was the reading program in the Helping Children Adjust Project.

GOAL: TO IMPROVE PARENTS' AND FAMILIES' ABILITIES TO FOSTER HEALTHY DEVELOPMENT IN THEIR CHILDREN

Parent Health and Nutrition

The rates for overweight in parents were higher than Ontario rates, and these rates did not change over time. Between 52 to 76% of male parents in the Better Beginnings sample were overweight compared to 48% reported in 1990 Ontario Health Survey. Between 42 to 57% of the female parents in the Better Beginnings sample were overweight compared to 28% in the 1990 Ontario Health Survey.

There were higher levels of exercise prenatally in all the younger cohort Better Beginnings sites which may have resulted from the heavy emphasis on prenatal classes and home-visiting. However, mothers in the Peterborough comparison site reported higher rates of breastfeeding their children at birth than in the Better Beginnings sites, although the breastfeeding rates after three months were comparable across all

sites. Peterborough mothers also reported higher levels of breast self-examinations and more exercise for the first 18 months after pregnancy than mothers in the Better Beginnings sites.

A strong breastfeeding campaign has been operated by the local health unit and hospital for several years in Peterborough, resulting in extremely high rates of mother's initiating breastfeeding, substantially higher than the Ontario average. The higher levels of breast self-examinations and exercise during the first 18 months after pregnancy may also be affected by this public health program in Peterborough.

Energy, zinc, folate, and calcium intakes of women in all sites who were breastfeeding were below the recommended nutrient intakes. This has little effect on the quality of the breast milk, but may jeopardize the nutritional health of the mother. Since these data were collected, the Canadian recommended intake of folate has been increased substantially. Thus, the dietary intake of women who are breastfeeding is an even greater concern. The public health initiatives to encourage breastfeeding among low-income women must include strategies to ensure their access to fresh fruits and vegetables (best sources of folate) and milk and other dairy products (or alternate sources of calcium and zinc).

In the younger cohort sites, there were few indications of improved health status or health behaviours in the parents. In fact, mothers in the Peterborough comparison site showed greater improvements in several health areas than the mothers in the Better Beginnings sites. The possibility that these differences resulted from the effects of a highly organized and long-standing maternal health program in Peterborough focusing on breastfeeding appears plausible.

For all of the older cohort sites, there was reduced smoking by mothers and others in the home. The reduction in maternal smoking and smokers in the home is an important outcome since smoking levels are high in disadvantaged communities and often are considered the leading health problem in Ontario. The reduction in smoking may have resulted from the increased opportunities for mothers to interact with others in parent support groups, Better Beginnings committees and volunteering for a variety of community activities where smoking is restricted or discouraged. Parents in the Highfield site showed the greatest improvements on a variety of health measures, perhaps a result of the strong emphasis in that site on providing outreach to parents through home visits, and active encouragement of parents to engage in a variety of programs offered by Better Beginnings at their child's school.

Parenting Practices and Parent-Child Interactions

There were few consistent changes in measures of parenting practices or parent/child interactions in either the younger or older cohort sites. Ratings of the quality of parent-child interactions were made by researchers during their in-home visits in the younger cohort sites when the children were 18, 33, and 48 months old. These ratings were highest at Kingston and Toronto at 18 months and remained stable over the two following periods. The ratings were lower in Ottawa, Walpole Island, and Peterborough at 18 months. However, all three sites showed improved ratings over the following periods with the ratings in Walpole Island showing large improvements, ending up substantially higher at 48 months compared with all other sites where ratings at 48 months were essentially equal. This large increase in the quality of parent-child interactions in Walpole Island (effect size = 1.01) may reflect the emphasis on Better Beginnings programs that were developed and implemented in conjunction with the local parent-child centre.

In the older cohort sites, the only consistent change in parenting measures occurred in Highfield, where there was a general improvement in parenting practices, especially increases in consistent parenting, decreases in hostile/ineffective parenting, and an increase in reported satisfaction with the parenting role. The measure of hostile/ineffective parenting, also used in the National Longitudinal Survey of Children

and Youth, has been found to relate strongly with children's emotional and behavioural problems. The fact that this measure showed a very large decrease in Highfield (the effect size was 1.73), along with decreases in children's behavioural and emotional problems, provides further evidence for the strong impact that the Better Beginnings programs had on parents in that site.

Parent/Family Social and Emotional Functioning

A general pattern of decreased domestic violence reported between parents and their partners occurred in the younger and the older cohort Better Beginnings sites, accompanied by an increased rating of marital satisfaction in the older cohort sites. The changes in reports of domestic violence occurred early in the program between 1993 and 1995. After that, reports remained stable. The processes by which the early changes were produced are not clear, as explained in Chapter 8.

In two of the younger cohort sites, Toronto and Walpole Island, parents also reported decreases on several measures of parent and family stress. In Walpole Island, this finding, in conjunction with the improvement in parent/child interactions, again suggests that the program was effectively influencing parents and children in that site, possibly through the variety of activities provided by the parent/child centre. In Toronto, a major source of the reduced stress derived from a reduction in the tension experienced by employed parents who had to juggle childcare with other responsibilities.

In Highfield, there was a general pattern of improvement in parents' level of stress, depression, and social support, in addition to the general improvements in marital satisfaction and domestic violence reported in all sites.

The strongest Better Beginnings effects on parent/family functioning occurred in Highfield, including improvements in a number of measures of parents' health, health risk and health promotion behaviours, parenting practices, and parent/family social and emotional functioning. The intensity and breadth of these changes are impressive, given the outcomes of other studies.

Not to be overlooked, however, were positive outcomes on several parent measures in the other two older cohort sites in Cornwall and Sudbury. In addition to reductions in reports of domestic violence and increased marital satisfaction, parents in both Cornwall and Sudbury showed a pattern of increased health promotion behaviours, both for themselves (reduced smoking) and for their children (more timely booster shots, less child injuries, more parental encouragement of their children to wear bicycle helmets and to be vigilant when crossing streets, and increases in a sense of control over their children's health). These outcomes suggest a general increase in parents' awareness of preventive and promotive health behaviours, which, in turn, could have important long-term influences on their own health as well as that of their children.

GOAL: TO IMPROVE THE QUALITY OF LOCAL NEIGHBOURHOODS AND SCHOOLS FOR YOUNG CHILDREN AND THEIR FAMILIES

According to the ecological model of child development, the quality of neighbourhoods and schools exerts a strong influence on young children, both directly in terms of such factors as safety and resources for play, and indirectly through parents, friends, and neighbours.

Effecting and demonstrating changes in the quality of neighbourhood characteristics within a five year time frame is an extremely challenging task, especially when the neighbourhoods are large, and contain high percentages of socioeconomically disadvantaged families. Also, personnel in all the Better

Beginnings projects reported that the changes that occurred to the welfare system during the period of this study decreased disposable income and access to affordable housing for some families in their neighbourhoods, raising stress and increasing crises in these families. These changes were widely viewed as increasing the difficulty of improving neighbourhood characteristics.

In the younger cohort Better Beginnings sites, parents reported increased feelings of safety on the street at night. One negative finding, a relative decrease in the reported frequency of getting together with friends, resulted from a small group of parents in the Peterborough comparison site reporting substantially larger increases in the frequency of social contacts with friends relative to all of the Better Beginnings sites.

Parents at both Guelph and Kingston perceived an improvement in neighbourhood cohesion; less deviant activity (alcohol and drug use, violence and theft); and gave more favourable ratings to the condition of their homes, safety walking on the street, and the general quality of their neighbourhood. In contrast, at Toronto there was a consistent pattern of decline in all ratings of neighbourhood cohesion, satisfaction and quality.

In all three older cohort Better Beginnings sites, a scale for general neighbourhood satisfaction showed modest but consistent improvements, and there was an increase in parents' satisfaction with the condition of their personal dwellings, particularly large in Highfield. Also, there was a large increase in children using neighbourhood playgrounds in Highfield and Sudbury.

In addition to parents' interview responses to questions concerning characteristics of their neighbourhoods, two other sources of data regarding characteristics of Better Beginnings neighbourhoods were collected and analyzed: a) Children's Aid Society records reflecting the percentage of total agency open family/child cases and children-in-care cases that came from the local Better Beginnings neighbourhoods, and b) police records reflecting the percentage of total municipal occurences of break-and-entry and for vandalism/wilful damage which came from the local Better Beginnings neighbourhood.

There were no consistent substantial changes in either the CAS data from 1992 to 1997 or the police records from 1991 to 1998 for the Better Beginnings neighbourhoods. In many ways, the lack of results was to be expected, since so many people living in each neighbourhood would not be expected to be involved or influenced by Better Beginnings programs in any direct way. This is not to imply that there were no attempts by Better Beginnings projects to establish close working relationships with their local CAS and police. In several communities, CAS connections with the Better Beginnings projects were strong from the point of proposal development in 1990. This was especially true in Guelph where the CAS is the host agency for the Better Beginnings project, the CAS Executive Director has been actively involved from the beginnings, and a satellite CAS office was established in the same building with close working relationships with the Better Beginnings project. Also, in most other project sites, connections between Better Beginnings and CAS programs have been ongoing. Although these efforts have been successful in forging partnerships and may be helping to break down local suspicion, the official CAS figures do not yet reflect any consistent changes in involvement. The same observations apply to police records.

One exception occurred in Highfield, where analyses of both police and CAS records yielded statistically significant decreases in the percentage of total municipal arrests for break-and-entry and for vandalism, as well as decreases in the percentage of total CAS cases and children-in-care coming from the Better Beginnings community since the project started in 1992. While the effect sizes were very small, this overall pattern of decrease in arrests and CAS involvement adds to the improvements in child behaviour and parent functioning in Highfield.

None of the other "model" prevention programs for young children described earlier has included measures of neighbourhood characteristics or attempted to focus programs on neighbourhood change; programs and their outcome measures have been limited to one or more aspects of child development or parent functioning. The fact that the Better Beginnings program model included local neighbourhood improvement as an important goal for the project is another unique aspect of this initiative.

The positive changes reported indicate that parents in several of the Better Beginnings sites view their local neighbourhoods as improving in safety and quality for young children and families. Neighbourhood improvements were most evident in two younger cohort sites, Kingston and Guelph, where parents reported improvements in neighbourhood safety, cohesion, satisfaction, and quality.

A strong program emphasis in Guelph on community development and local capacity building beginning with the original project proposal have likely resulted in the improved parent perceptions of neighbourhood quality in that site. In Kingston, an attempt has been made to incorporate community building in all aspects of project management and organization, including the development and implementation of individual programs, and establishing partnerships with other service organizations.

Explanations for the negative pattern of neighbourhood effects in the Toronto Better Beginnings site are not apparent from its programming. The Toronto site has the greatest multicultural diversity, the highest percentage of single-parent families, and the lowest mean income of the urban Better Beginnings sites. Combined with major revisions to welfare support, these factors may have overwhelmed any ability of the Better Beginnings programs to foster improvements in parents' perceptions of neighbourhood quality, satisfaction and cohesion.

These findings will make an important contribution to the literature on the effects of prevention programs for young children by demonstrating that improvements in the quality of disadvantaged neighbourhoods can occur in conjunction with programs which are also providing supports to children and their families. It is important to determine whether these improvements can be maintained or enhanced, and what long-term consequences these changes have on the children who have experienced these improvements.

Neighbourhood Schools

Next to parents and family, schools are among the most important influences on the development of young children, particularly between the ages of 4 and 8. In the older cohort Better Beginnings program model, described in the original Request for Proposals, school-based programs were to be a key program ingredient, and one of the model programs described was Comer's comprehensive school change project (Comer, 1985). Information was collected from three sources concerning a variety of characteristics of the schools in the older cohort Better Beginnings and comparison sites: the parent interview, teacher ratings of various school characteristics, and Principals' September Reports concerning special education students.

Parents answered interview questions on a scale about their children's teacher, including how much they enjoyed talking with their children's teacher, and how much the parent asked the teacher questions or made suggestions about their children. A second series of questions asked the parent about their children's school, including whether they thought the school was a good place for their children to be, and whether they felt confident in the people at their children's school. In Highfield, parents showed improved ratings concerning both their children's teacher and school, while parents in Sudbury and Cornwall did not show any consistent changes. The size of the effects were moderate. The finding that parents increased in satisfaction both with their child's teacher and school again underscores the potential value of programs designed to actively forge parent-school connections and involvement.

A set of ratings concerning various aspects of school climate collected from Senior Kindergarten through Grade 3 teachers in all the demonstration and comparison site schools yielded no changes over time. Unfortunately, the first set of school climate ratings were collected in 1995, at least one and a half years after the school programs were implemented, so changes may already have taken place.

Information concerning the percentage of students in all grades who received special education instruction was provided by the Ontario Ministry of Education and Training for every school in the three older cohort Better Beginnings sites, as well as those in the comparison sites from 1992 to 1997. These were students identified as those with exceptionalities such as learning disabilities and behavioural problems. These data show schools in all Better Beginnings sites decreasing in the number of all students identified for special education instruction, and schools in both comparison sites with increases over the study period. The largest relative decreases occurred in the Cornwall schools between 1992 and 1994 with a decrease from 20% to 8% of the students receiving special education instruction. However, the percentage continued to decrease through to 1997. In Highfield, the percentage of students receiving special educational services was the lowest of all sites beginning in 1992 at 5%. Despite this, however, the percentage decreased slowly but significantly over the five year period through to 1997. There was no decrease in the Sudbury schools from 1992 to 1996, but a substantial drop from 1996 to 1997. It will be interesting to see whether this one year change is maintained when data for 1998 and 1999 become available.

It is possible that the in-classroom supports provided through the Better Beginnings programs from JK to Grade 2 in both Cornwall and Highfield may have contributed to reducing the number of special education students in these schools. In Sudbury, the major programs for early school-aged children were outside the classroom, and many were outside of school hours, which might account for the smaller overall reductions of special education students in that site. It is important to note that reductions in the numbers of special education students reported by schools in the Cornwall and Highfield Better Beginnings sites occurred over the same time period when numbers were increasing in schools in the two comparison sites. The possibility that school-based Better Beginnings programs reduced or replaced the need for special education resources provided by Boards of Education has important implications for the way in which the integration of services for young children can yield potential cost savings.

SUMMARY OF OUTCOME MEASURES

Given the complex mandate of the Better Beginnings model and the finite project resources, it was expected that successful program implementation would yield broad but modest outcome effects. The patterns of results confirm this and can be summarized as follows.

A. Younger Cohort Sites

I. Child Outcomes

a. General Cross-Site Patterns

(+) decreased emotional problems rated by JK teachers
(+) improved auditory attention and memory
(+) more timely immunizations at 18 months
(-) less parental encouragement to use bicycle helmets

b. Site-Specific Patterns

(+) Kingston: improved social-emotional functioning and school readiness
(+) Walpole Island: improved language, motor, attention and memory development
(+) Toronto: improved nutrition

II. Parent and Family Outcomes

a. General Cross-Site Patterns

(+) increased accessibility to professionals when desired
(+) more frequent exercise during pregnancy
(+) reduction in reports of domestic violence: respondent to partner
(+) reduction in reports of domestic violence: partner to respondent
(-) less frequent exercise after pregnancy
(-) lower initiation rates for breastfeeding (but rates are comparable to national norms)
(-) less frequent breast self-examinations
(-) less frequent get-togethers with friends

b. Site-Specific Patterns

(+) Walpole Island: improved quality of parent-child interactions
(+) Toronto: decreased parent and family stress and tension
(+) Walpole Island: decreased parent and family stress and tension
(-) Kingston: decreased quality of parent-child interactions

III. Neighbourhood Outcomes

a. General Cross-Site Patterns

(+) increased safety walking at night

b. Site-Specific Patterns

(+) Guelph: improved sense of neighbourhood cohesion, satisfaction and safety, and decreased neighbourhood deviance
(+) Kingston: improved sense of neighbourhood cohesion, satisfaction and safety, and decreased neighbourhood deviance
(-) Toronto: decreased sense of neighbourhood cohesion, satisfaction and safety, and increased neighbourhood deviance

B. Older Cohort Sites

I. Child Outcomes

a. General Cross-Site Patterns
- (+) decrease in overanxious emotional problems as rated by teachers
- (+) improved self-controlled behaviours as rated by teachers
- (+) improved cooperative behaviours as rated by parents
- (+) improved health as rated by parents
- (+) improved nutrition

b. Site-Specific Patterns
- (+) Cornwall: decreased emotional and behavioural problems
- (+) Cornwall: increased health promotion and injury prevention
- (+) Highfield: decreased emotional and behavioural problems; improved prosocial behaviour
- (+) Sudbury: increased health promotion and injury prevention
- (-) Sudbury: increased emotional and behavioural problems

II. Parent and Family Outcomes

a. General Cross-Site Patterns
- (+) reduction in smoking
- (+) fewer smokers in the home
- (+) increased marital satisfaction
- (+) reduced reports of domestic violence: respondent to partner
- (+) reduced reports of domestic violence: partner to respondent

b. Site-Specific Patterns
- (+) Highfield: improved parent health and health promotion; decreased health-risk behaviour
- (+) Highfield: improved parenting
- (+) Highfield: improved parent and family social and emotional functioning

III. Neighbourhood Outcomes

a. General Cross-Site Patterns
- (+) increased satisfaction with personal housing
- (+) increased use of playground and recreational facilities in the neighbourhood
- (+) increased general neighbourhood satisfaction
- (+) decreased number of all students identified for special education instruction

b. Site-Specific Patterns
- (+) Highfield: improved parent ratings of child's school and teacher

GOAL: TO DEVELOP HIGH-QUALITY PROGRAMS TO MEET THE LOCAL NEEDS OF YOUNG CHILDREN AND THEIR FAMILIES

Balancing the goals of high-quality programs with those of community capacity building and resident involvement and also building partnerships with other service-providing organizations proved to be very challenging for the Better Beginnings sites. The younger cohort projects all developed home-visiting (also referred to as family visiting) programs and placed an emphasis on hiring and training local residents to staff the programs. These programs provided information and support to mothers and their children beginning prenatally or at birth. In addition, all younger cohort sites provided parent-child play groups and a variety of other programs for parent support or training. Given the responsiveness of the programs to local needs, the number and range of programs was large, including some programs and activities open to all community members and in some cases, programs for children of school age and older.

When the costs of operating the Better Beginnings' programs are compared to programs which have provided only home-visiting for two to five years, the Better Beginnings programs are strikingly inexpensive. This suggests that the amount of financial resources available to operate any of the individual program activities may have been too low to allow for maximum effects to be realized. Despite this limitation, however, the positive outcomes that were realized in the younger cohort Better Beginnings sites are encouraging.

Several outcome effects in the younger cohort communities warrant comment is terms of specific programs. One is the general finding of reduced teacher ratings of emotional problems in JK students. A plausible influence on this change in the Better Beginnings communities is the number and variety of play group experiences provided to young children and their parents, including informal and formal childcare programs. Anxiety at school entry is a common phenomenon in young children and increased experience with other children and other adults during the preschool years increases the likelihood of positive emotional adjustment to kindergarten. Play groups and informal childcare activities were provided by all Better Beginnings programs but an emphasis on organizing an ongoing continuum of such activities from infancy through to kindergarten appeared to be intentionally supported in the Kingston Better Beginnings programs and as noted earlier, may be related to the greater improvements in several areas of social-emotional functioning for JK students at that site. How Kingston organized their programs to follow the development of children was described on a local report,

> "Moms are contacted during pregnancy and the Health Educator does an intake assessment that would lead to Prenatal classes and/or Family Visiting. Family Visiting can continue until the child reaches his 5th birthday. During this time, a parent and her child might participate in the Infant Group, Toddler Group, attend playgroups and use Parent Relief. Parents may place their children in Childcare while they attend committee meetings. Some weekends, the whole family might attend a Special Event or visit the Parks program in the summer."

Organizing programs in this fashion is consistent with the original Better Beginnings, Better Futures program model which emphasized the development of a "seamless network" of programs for children and their families throughout the four years of children's development.

In Walpole Island, the Better Beginnings project provided home visiting as well as a variety of programs through a local parent-child centre. These programs, offered in conjunction with a separately funded, high-quality childcare centre, also provided a continuum of child and parent programs which may have contributed to the positive child development, parent-child and stress outcome effects in that site.

In the older cohort Better Beginnings sites, Cornwall and Highfield developed programs in conjunction with the primary schools in the neighbourhood, providing classroom and school based social skills training and academic enrichment.

In Highfield, educational assistants, called "Enrichment Workers", provided by the Better Beginnings Project worked with the children in the focal research cohort and their families throughout the first four years of primary school, following them from JK to Grade 2. Although similar educational assistant positions (Animateurs) existed at Cornwall, they worked with children at all four grade levels simultaneously. Although this arrangement in Cornwall provided continuous classroom support as children moved through JK, SK, Grades 1 and 2, the concentration of resources in Highfield on one age group of children likely provided them with more intense program support than in Cornwall. A second important role of the enrichment worker in Highfield was to visit each child's parents on a regular basis in order to provide information concerning the child's activities in school, to encourage parent involvement in various Better Beginnings programs, and to provide support for parents concerning child and family issues and information regarding community resources. The enrichment workers followed the same group of children and families for four years. This strategy in Highfield yielded more concentrated Better Beginnings program support to the research children and their families than in any other project site. In addition, several other programs were provided in Highfield: a health and nutrition program which provided lunch for children who required it, and also, beginning in 1995, the Lion's Quest Skills for Growing program, which is a comprehensive social skills development program provided by all primary classroom teachers. This later program receives support from Better Beginnings and the Highfield Junior School. Although Highfield, like other Better Beginnings sites offered a variety of additional child, parent and community programs, it appears to be unique in having provided several major programs to the children and families in the focal research cohort from 1993/4 to 1996/7, with a heavy emphasis on classroom assistance and connecting parents to the local school and other Better Beginnings programs. Also, Highfield Junior School is the only school in the Better Beginnings neighbourhood, in contrast to Sudbury and Cornwall where there were five local primary schools in 1996/7. These factors may well account for the fact that Highfield yielded more positive outcome results for children and their parents than any other Better Beginnings site.

GOAL: TO STRENGTHEN THE ABILITY OF SOCIO-ECONOMICALLY DISADVANTAGED COMMUNITIES TO RESPOND MORE EFFECTIVELY TO THE NEEDS OF YOUNG CHILDREN AND THEIR FAMILIES: DEVELOPING COMMUNITY CAPACITY THROUGH RESIDENT INVOLVEMENT

The involvement of community residents in all aspects of Better Beginnings program development and implementation was a key element in the original conceptualization of the Better Beginnings, Better Futures model. This community-driven nature of Better Beginnings distinguishes it from other prevention programs involving young children and their families.

Developing local Better Beginnings organizations that successfully involved neighbourhood residents was an extremely challenging task, and was one of the major reasons that most sites took up to three years to establish and begin to implement programs.

Community representation is present in many private and public organizations, typically in the form of one or two volunteer nonprofessionals who sit on the boards of directors and its committees. It became apparent early in the Better Beginnings Project that including one or two community members on a committee with six to 10 paid professionals from area service-providing agencies did not provide the "critical mass" required for neighbourhood residents to feel comfortable and confident in raising concerns

and offering opinions. Therefore, a "50% rule" was established, requiring that each Better Beginnings organization's steering committee and subcommittees contain at least 50% local residents as members.

There have been many challenges in establishing and maintaining this level of resident involvement in all of the Better Beginnings sites. These include: unfamiliar terms and procedures used by professionals; feelings of intimidation and power imbalances felt by residents in relation to professionals; ethnic tensions; jealousy; feelings of favouritism; failed expectations for residents not hired for project positions; difficulties experienced by both staff and volunteers in setting boundaries between work and personal life; juggling family and project responsibilities; and language barriers in bilingual and multilingual communities.

Despite these challenges and through the hard work of many people in each site, resident participation with the local projects and other community activities and organizations has become firmly established, and represents one of the most successful short-term outcomes of the Better Beginnings projects. For example, residents are involved as active members of major project committees, and subcommittees, often as chair or co-chars, and in program management and support, including hiring project and research staff. They also donate goods and services and raise funds. Some local residents have been employed as project staff and many others volunteer time to Better Beginnings programs; for example, in schools, parent-child centres, and community events. Also, residents have become actively involved as local leaders in advocacy and promotional activities including making presentations to public officials.

In 1998, local RCU researchers interviewed many residents, project staff, and other agency representatives who had been involved with the local Better Beginnings projects for several years. Based on these interviews several areas of positive outcomes resulting from resident participation were identified.

Personal Benefits for the participating residents. The kind and degree of benefit that residents experienced appeared to relate to the type and level of their involvement. Individuals who participated in the planning and development of programs as members of steering and working groups, who were hired as program staff, or who had spoken on behalf of their project to outside audiences, were the ones who appeared to derive the greatest benefit. These included greater confidence, self-esteem, self-knowledge, assertiveness, awareness of rights, political awareness and involvement. They also reported the development of skills, including public speaking, improved language ability, and employment skills. These experiences have encouraged some residents to go back to school or seek employment.

Benefits of resident participation for the Better Beginnings projects. Resident volunteers have freed up staff time, making more and better quality programs possible.

Information on volunteer hours were systematically collected at each site from 1994 to 1997. The time volunteered to the Better Beginnings projects by neighbourhood residents totalled over 128,000 hours for the three-year period, which is equivalent to three full-time staff positions per year per site.

Resident's knowledge of their community has enhanced the relevance of programs and organizational structures, making projects more accountable to the community in which they operate. Also, local resident involvement in the promotion and advocacy of the programs, both as program staff and volunteers, has increased the level of trust and respect for the Better Beginnings projects, from other neighbourhood residents, but also more widely from other service providing organizations and local politicians.

Benefits of resident involvement for the communities. Residents who have been actively involved are seen as positive role models for their children and other community members. Many of the residents expressed increased feelings of ownership and responsibility for their neighbourhoods, and also felt an increased understanding and acceptance of people with different personalities and cultural backgrounds.

Finally, individuals from other local organizations felt that they benefited from seeing how the Better Beginning projects successfully involved local residents, and many began to adopt a similar approach in the management of their own organizations.

Some residents reported that their neighbourhoods had become more safe and more secure places for themselves and their children. Two examples of this were reported in both Sudbury and Guelph where the buildings in which the Better Beginnings projects were based had been vandalized repeatedly early in the project, but not at all during the past four years.

As with all the different threads of the Better Beginnings program model, the relative emphasis placed on resident participation varies across the eight project sites, although it is present in all.

Two sites, Guelph and Sudbury, have placed a particularly strong emphasis on resident involvement in developing programs and managing their organizations. Interestingly both of these project sites had employed community development activities and personnel to assist with the preparation of their original Better Beginnings proposals in 1990. Empowering local residents, creating local leaders, and fostering broad community development have remained key principles for the Guelph and Sudbury Better Beginnings projects throughout the decade.

Broad community development and healing activities have played an important role in the Walpole Island project and also have become central to the Cornwall project (Partir d'un bon pas) where preserving and strengthening Franco-Ontarian culture is the foundation for all program activities.

GOAL: TO ESTABLISH A LOCAL ORGANIZATION CAPABLE OF IMPLEMENTING THE BETTER BEGINNINGS. BETTER FUTURES MODEL

Although this was not stated as a formal goal of the Better Beginnings, Better futures initiative, developing a viable local organization represented one of the most formidable challenges faced by each demonstration site.

Because of the breadth of the Better Beginnings mandate, and its innovative nature, designing and putting in place stable organizational structures and programs took at least two to three years. At almost every site, there was initial difficulty in recruiting and maintaining an appropriate number of residents to participate in project committees. This occurred more easily in Sudbury and Guelph where great effort had been made to involve local residents in the proposal development process in 1990. Sites went through a long process of modifying decision making procedures, working out relationships between resident participants and professionals, and developing strategies to build partnerships with other service-providing organizations.

In developing their projects, sites differed in the relative emphasis on community development and involvement, establishing focused programs and creating partnerships among service organizations. Because the project goals were so broad, and time and money limited, choices had to be made as to where to invest most heavily.

Sites also varied in the extent to which they embraced 'alternative' organizational models, defined in terms of egalitarian structure and remuneration, hiring on the basis of local residency and life experience, and consensus decision making.

There was little variation, though, in the criteria for hiring managers. Except for one site, this was done on the basis of formal qualifications and relevant work experience. On the other hand, service delivery staff at most sites were chosen almost exclusively on the basis of personal characteristics and life experience. Across the sites, the average proportion of service delivery staff who worked part time was 55%; the proportion tended to be lower for core program staff. The use of many paraprofessional and part time staff required much attention to training, which was done in varied ways from site to site.

A consistent finding was that project coordinators, besides coordinating and supporting activities, influenced many core aspects of program development, contributing, for example, to the strong emphasis on community development and resident empowerment at one site, and to clear articulation of an alternative organizational approach at another. Hiring the project coordinator was consistently linked to the beginning of rapid program development at all sites.

Ontario Government representatives were involved with the Better Beginnings sites around many issues, including: increasing resident participation, dealing with the sponsoring organization, hiring, program creation, accountability arrangements, staff relations, salary structures, development of program working groups, and consideration of geographic areas to be served. Although there has been much more direction and guidance from funders in other projects reported in the literature, there are few references to projects as broad or as community-based as Better Beginnings.

Finally, most sites have been blessed with markedly positive and productive relations between the local Better Beginnings project and the sponsoring organization that assumes financial and legal responsibility for the project. In Sudbury, a new corporation was formed to serve this sponsoring function.

GOAL: TO ESTABLISH PARTNERSHIPS AND PROGRAMS WITH OTHER EDUCATIONAL AND SERVICE-PROVIDING ORGANIZATIONS: INTEGRATING SERVICES

All the Better Beginnings sites had a number of representatives from local organizations involved in the original proposal development process in 1990. Except for Sudbury, the sites have maintained a core of service-providers from other organizations as members of project committees, including the steering or executive committee.

In the early years of the project, the local Better Beginnings organizations had great difficulty understanding how to translate the idea of service integration into practice. Over time, less effort was invested in defining service integration as attention turned to creating voluntary partnerships with service agencies in order to increase resources and programming in the Better Beginnings communities.

Service-providers became involved in these voluntary collaborations because they shared objectives similar to those of Better Beginnings, Better Futures, because they saw possibilities of improving their access to resources or improving their services through the partnerships, or both. As the reputation of the Better Beginnings, Better Futures projects improved over the demonstration period, outside agencies saw increased advantages in connecting with a neighbourhood-based participatory project with networks and credibility different from their own.

There is agreement that Better Beginnings is the catalyst for most of these voluntary collaborations. There is general recognition that these partnerships would not have happened if not for the initiative of Better Beginnings personnel and volunteers.

A number of obstacles made these voluntary partnerships more difficult to achieve. Financial cutbacks at participating agencies decreased the resources available for the collaborations. The time required to develop trust, and to overcome of different mandates and self-interests, were common obstacles. Sorting out issues of power and control was a challenge, as was balancing service provider and resident involvement in the projects.

Good interpersonal relationships based on mutual trust and respect were considered essential to the productive partnerships that developed. This trust took a lot of time to develop. Several sites commented that partnerships were easier with agencies that shared similar mandates and had existing commitments to the neighbourhood.

The creation of partnerships has resulted in significant new resources and programming being created in each Better Beginnings community; resources and programming that would not exist without these collaborations. This has come about through joint programming, finding of new sources of funding, encouragement of agencies to locate in the neighbourhoods, and by mutual enrichment of programming between Better Beginnings, Better Futures and partner agencies.

Increased visibility and accessibility for the service of the partner agencies in the Better Beginnings communities is a frequently mentioned benefit from these partnerships. Service providers also comment about changing their attitudes about communities and residents and about the appropriateness of their own programs because of their involvement.

Better working relations between partner agencies, and more positive attitudes towards collaboration, also are reported. In three communities, new structures supporting ongoing dialogue among agencies outside of the auspices of Better Beginnings have resulted from the demonstration project.

There is substantial interest among policy makers, service providers and community leaders in the potential value of local coordination and/or integration of social and educational services; this is particularly true for children and family services in disadvantaged neighbourhoods. Unfortunately, there have been few demonstrations available to guide the development of such initiatives or to provide evidence concerning the value of local service integration. St. Pierre and Layzer (1998) recently concluded that there is little evidence to support the assumption that "To be effective for low-income families, existing services need to be coordinated" (p.13). In fact, the results of the Comprehensive Child Development Project in the U.S. indicated that providing low-income families with a home visitor/case manager, in order to coordinate service had no positive effects on children or families, mainly because families in the control group equally accessed services without the assistance of a home visitor/case manager.

In the Better Beginnings neighbourhoods, however, the focus has been on building partnerships among the service providing organizations themselves as a way of maximizing service accessibility and availability. The Better Beginning projects have demonstrated that these partnerships can be successfully established, and that organizations that were providing services independently of each other or not at all in the neighbourhood, can work effectively together.

There are many examples of these partnerships and details of how they were developed in an RCU technical report entitled *Partnerships and Programs: Service Provider Involvement in Better Beginnings,*

Better Futures (Cameron, Hayward, McKenzie, Hancock & Jeffery, 1999).

A few specific examples are worth noting here. The integration of the Better Beginnings projects with local primary schools in Cornwall and Highfield have yielded positive effects on children's social skills and reductions in emotional and behavioural problems during the early primary school years. In Highfield, the school functions as the hub for all Better Beginnings programs which have also been particularly effective in involving parents and fostering improvements in a wide range of parent and family outcomes. In Guelph, a partnership between the Better Beginnings project and the Children's Aid Society (Wellington County Child and Family Services), the project's sponsoring agency, is unique in the Province. The Executive Director has been actively involved in the Better Beginnings organization from the start of funding in 1991. This partnership has resulted in a CAS satellite office moving into the neighbourhood, sharing space and establishing close day-to-day working relationships with the Better Beginnings project. The Guelph project also has a very active parallel neighbourhood association, Onward Willow.

The experiences of the Better Beginnings projects in fostering these service partnerships serve as valuable examples for other disadvantaged neighbourhoods.

PROGRAM COSTS

Program costs were collected from the quarterly financial reports and audited annual statements submitted by each of the demonstration sites to the Ontario Government. Annual site program budgets have stayed quite stable from 1993/4 through 1997/8. On average, each site receives $570,000 per year from direct government funding. A second cost was the services-in-kind donation from volunteers.

Averaging approximately $300 per child per year, the value of the volunteer services is an important ingredient in the implementation and operation of the programs. Without these services-in-kind, either the sites would have had to scale back or government would have had to increase its direct costs.

Since the intent of Better Beginnings, Better Futures programs is to be available to and potentially accessed by *all* children in the respective site locations, one method of calculating program costs was to relate program expenditures to the total number of children in each of these areas; that is, a "cost per capita" ratio.

Younger Cohort Sites. The 1996 Census was used to calculate a "cost-per-child" of the overall programs in each site. Census data report the number of children age 0 to 4 living in a particular area; this age range directly corresponds to the main programming focus of the younger cohort sites. Since not all children did in fact, participate, this cost figure will be too low.

Therefore, a second way costs were examined was by relating them to the users of, or participants in, the services. Each of the younger cohort sites (with the exception of Walpole Island) collected program participation information from the families in the community attending Better Beginnings programs and meetings for at least one year. For the younger cohort sites, no site collected program participation data on all of their programs: three sites collected participation data on approximately one third of their programs, and one site gathered data on approximately half of its programs. Still, these site-provided program participation data do offer some insight into the degree of contacts families made with the Better Beginnings programs, although they certainly *underestimate* family involvement due to the fact that these data were collected on half or less of all programs offered.

Table 1.3 shows the distribution of program expenditures per child and per family in the five younger cohort sites for 1996/7.

Table 1.3: Total Number of Children in Younger Cohort Sites, and Direct Cost per Child and Family in 1996/7 Year, Ontario Better Beginnings, Better Futures

Sites	Direct Costs 1996/7	Number of Children [1]	Cost/Child	Number of Families [2]	Cost/Family
Guelph	$ 499,992	625	$ 800	279	$1,792
Kingston	$ 723,559	1095	$ 661	533	$1,358
Ottawa	$ 515,979	690	$ 748	585	$ 882
Toronto	$ 710,512	1125	$ 632	365	$1,947
Walpole Island	$ 325,857	250	$1,303	na	na
ALL SITES	$2,775,899	3785	$ 733	1762	$1,390 [3]

Notes:

[1] 1996 Census tract data for areas served by Better Beginnings for children ages 0-4.

[2] This number reflects the number of families participating in Better Beginnings programs/meetings as recorded by the programs. This number is an underestimate of the total number of families participating, as not every program recorded attendance (program attendance was only recorded for approximately 20% to 50% of programs offered at each of the sites). Walpole Island did not collect any program participation information.

[3] This figure was calculated by using the summed budgets for 1996/7 for all the younger cohort sites, excluding Walpole Island as no program participation figures are available ($2,450,042 divided by 1,762 families).

Older Cohort Sites. For the older cohort sites, school records were used to obtain estimates of the number of children from 4 to 8 years old attending schools served by Better Beginnings; Census data were not specific enough because data were reported for the age group 5 to 14 years. In Highfield and Cornwall, many of their programs were classroom-based, so that all children attending school would have access to the programs. In Sudbury, the site-provided program participation data on 3 of their 18 programs revealed that over 80% of the cohort participated in programs, and it is very likely that the bulk of the remaining children would have been involved in one of their school-based programs. Therefore, we are confident that using the school records to estimate the number of children in the sites between 4 to 8 years of age provides a realistic estimate of program participation. Table 1.4 reveals that the cost-per-child in the three sites combined for 1996/7 was $1,130 and ranged from $991 in Highfield to $1,308 in Sudbury.

Table 1.4: Total Number of Children in Older Cohort Sites and Direct Cost-per-child in 1996/7 Year, Ontario Better Beginnings, Better Futures

Sites	Direct Costs 1996/7	Number of Children [1]	Cost / Child
Cornwall	$ 580,938	529	$1,098
Highfield	$ 512,166	517	$ 991
Sudbury	$ 657,942	503	$1,308
ALL SITES	$1,751,046	1549	$1,130

Notes

[1] Based on the school records for areas served by Better Beginnings for children in Junior Kindergarten through to Grade 2 in 1996/7.

Calculations yielded an estimate of the average costs of the Better Beginnings, Better Futures Project of approximately $1,400 per family per year in the younger cohort sites, and approximately $1,100 per family per year in the older cohort sites.

How reasonable are these costs? That is difficult to answer in any absolute sense, but one way to put these estimated annual costs in perspective is to compare them with costs of other prevention programs. Unfortunately, few programs have reported costs, and many that have tend to be the small-scale, U.S.-based programs that were carried out in the 1960s and 1970s. However, comparisons with several other programs are presented in Table 1.5.

Table 1.5: Comparison of Better Beginnings Program Costs with Other Prevention Programs

Programs/Services	Costs in 1997 Canadian Dollars [1]
Better Beginnings, Better Futures	$1,100 - $1,400 /child or family/year
Perry Preschool Project	$8,600 /family/year
Elmira (NY) Home Visiting Project	$4,300 /family/year
U.S. Comprehensive Child Development Project (CCDP: 1989-1994)	$21,000 /family/year
U.S. HeadStart Program	$6,400 /family/year
U.S. Infant Health and Development Program	$14,300 /family/year

Notes:
[1] Canadian dollar worth $0.70 in U.S. dollars in 1997.

These comparisons are instructive. The Elmira Home Visiting Project, which provided an average of nine nurse home visits prenatally and monthly home visits for a maximum of two years postnatally cost $4,300/family/year, and the short-term outcomes of that project yielded no effects on children, while maternal outcomes were limited primarily to a group of 38 very high-risk mothers.

The CCDP Project, which provided low-income families with a home visitor/case manager for up to five years from the birth of a child to school entry, cost an astounding $21,000 per family per year and there were no important project outcome effects on either children or parents.

The Perry Preschool Project, costing $8,600 per family per year for two years, reported short-term improvements on children's IQ performance, but no significant positive short-term effects on children's social, emotional, or health outcomes, nor on outcomes for parents.

From these comparisons, it appears that the annual costs of operating the Better Beginnings projects are extremely modest, particularly when one considers that many of the programs were new to the neighbourhoods, and also that the programs were so broad, i.e., not focused exclusively on either children or parents, but also on the local neighbourhood, on integrating local services, and on involving residents in project management and other community development activities.

CURRENT CONTEXT

This report has commented repeatedly on how different the Better Beginnings, Better Futures program model is from other demonstration projects for young children and their families. The most salient differences are:

- a holistic focus on all aspects of children's development;
- an ecological focus on young children, their mothers, and their neighbourhoods;
- a universal focus on all children and families in the local neighbourhood, rather than focusing programs exclusively on the highest-risk children or mothers;
- a focus on local resident involvement in project decision-making and other neighbourhood activities in order to build community capacity and sustainable local leadership;
- a focus on integrating Better Beginnings programs by establishing partnerships with other local service-providing and educational organizations; and
- supporting on-going research concerning outcomes, costs, and implementation processes of local programs.

A question might be raised as to whether or not a program model as ambitious, complex, and broad as Better Beginnings, initiated 10 years ago in 1990, is relevant to government policy interests in 2000. Two recent government announcements are particularly relevant to this question.

The Canadian National Children's Agenda

The Federal Government, along with the provinces and territories, have identified children as a critical area for developing coordinated social policy in Canada. In the Fall of 1999, the framework for a National Children's Agenda was released for discussion. An important part of the National Children's Agenda involves procedures for sharing effective practices and programs for children. Quoting from the National Children's Agenda framework, "Developing a Shared Vision":

> "Approaches to sharing effective practices could include: Profiling effective practices in the area of "integrated" or "coordinated" services. That is, initiatives that are:
> - holistic;
> - child-centered;
> - focused on outcomes;
> - family-oriented;
> - community-oriented;
> - intersectoral and collaborative in terms of service delivery;
> - balanced in terms of prevention and intervention (with a goal of earliest possible intervention, when necessary); and
> - rigorously evaluated, with an emphasis on outcomes."

The short-term findings from the Better Beginnings, Better Futures Project are in an excellent position to make valuable contributions to the understanding of effective practices in the area of integrated or coordinated services.

The Ontario Early Years Demonstration Projects

Following the release of the Early Years Study in 1994, the Ontario Government announced the funding of five Early Years Demonstration Projects throughout the province "to test and evaluate approaches to supporting good early child development and parenting.

An important focus of these demonstration projects will be to document:

- sustainable leadership;
- community involvement in decision making;
- linkages with other services and supports for children and families;
- successful integration of existing community resources and infrastructure;
- parent/care-giver participation;
- accessibility to all children and parents living in the community/neighbourhood; and
- private-public sector partnerships, including other levels of government."

These program characteristics are very similar to those outlined for the National Children's Agenda. The local Better Beginnings, Better Futures projects have incorporated many of these characteristics into their program model for the past eight years. Thus it appears that the Better Beginnings, Better Futures model is as relevant to current interest with effective programs for young children, their families, and their communities as it was ten years ago.

Lessons learned from the short-term findings of the Better Beginnings programs should be of substantial value to those currently involved in the development of initiatives such as the National Children's Agenda and the Early Years Project.

CHALLENGES AND LIMITATIONS

The broad and complex mandate of Better Beginnings may provide its greatest advantage in terms of opportunities to contribute new knowledge, especially concerning large-scale multi-site initiatives. However, some limitations of the project and the research carried out to evaluate it stem from this same complexity.

Program Quality

One limitation is the lack of formal assessment of the quality of individual programs. Although some sites carried out evaluations for some of their programs, there was no provision in the research contract for systematically evaluating them. Since each site tailored programs to its circumstances, there was substantial variation even in programs which, like home visiting, existed in some form at most sites, so each important program at each site would require separate evaluation. Given the sheer number of programs, such an undertaking would have been extremely expensive.

Reflecting their commitment to resident participation and community economic development, each site emphasized employment of neighbourhood residents as program staff, often relying more on life experience than formal credentials. This is in sharp contrast to "model" programs such as the Abecedarian, Perry Preschool, and Elmira Home-Visiting Projects, which employed highly credentialed staff, who were given explicit procedures to follow and received extensive training and ongoing supervision. No assessment of alternate staffing models could be made.

Program Involvement

Another limitation in this research is the lack of information on program involvement by children and families in either the demonstration or comparison sites. This concern might have been met by a common management information system. In 1995, Ontario attempted to introduce a program participation data collection system, and all eight sites were to employ it in fiscal 1996/7. However, this turned out to be a very demanding undertaking from the point of view of project personnel, and incomplete information is

available for even that one year. The only information on program involvement available over time was that collected in the parent interview, which provides only broad indicators of parent and child participation in major program categories. Extensive exploration of these data for links between intensity or breadth of program involvement and child and parent outcome yielded no systematic patterns in either the demonstration or comparison sites. Interestingly, similar results were recently reported from the Comprehensive Child Development Project (CCDP), a five-year intensive home-visiting/case management project for disadvantaged families with young children in the U.S. Neither data from a standardized management information system nor that from parent interviews revealed consistent relationships between participation data and any child or parent outcomes. Taken together, these findings suggest that program effects may not be best understood from the sheer extent of participation. This issue requires further study.

Selection of Research Outcome Measures Before Specific Programs Were Developed

The research design, together with the organization of the project, required outcome measures to be approved by both government funders and local project sites before programs were in place. This required adoption of a large number of quantitative and qualitative measure, to reflect the broad goals of the Better Beginnings program model. However, as site-specific programs developed, measures to address some unique program goals were weak or absent. For example, the heavy emphasis placed on creating local leadership or broader community/economic development may not have been adequately reflected in the measures collected. Knowledge of specific program emphasis will influence the selection of outcome measures for the proposed follow-up research.

Relating Outcome Effects to Better Beginnings Programs: The Issue of "Signal Versus Noise"

Some of the major challenges in assessing Better Beginnings' effects result from the impossibility of tight experimental design. The "gold standard" for studies which allow for tight experimental controls (e.g., drug trials), is the double blind randomized controlled trial, where participants are randomly assigned to either a drug or a non-drug/placebo condition, and neither participants nor researchers are aware of who received what until after the study is completed. Better Beginnings, by its nature, could not be conducted double blind, and program participation could not be randomized, so that "quasi-experimental" designs were required.

The research employed two major designs: a "before-after" design and a longitudinal comparison group design. In the "before-after" (or "baseline-focal") design, outcome measures were collected in 1992/3 on one group of children and their parents in each Better Beginnings site, before programs were fully implemented, and then again several years later on another group of same-aged children and their families after Better Beginnings had been present for four years. Since changes in outcome measures may have resulted from influences impacting all Ontario children and families, such as changes in economic conditions, health services or welfare practices, one-year birth cohorts of children and their families were studied over time, both in the Better Beginnings sites and in several comparison sites where no Better Beginnings funding was available (the longitudinal-comparison group design). If children and families in the comparison communities were similar to those in the Better Beginnings communities, and if, apart from Better Beginnings, human services were similar as well, outcome differences could be attributed straightforwardly to Better Beginnings.

In the present study, it is difficult to determine precisely the degree to which these conditions were met. First, due to limited funds, only three comparison sites were employed; two comparison sites for the three older cohort demonstration sites, and one comparison site for the five younger cohort demonstration sites. Due to the extensive cultural and socio-economic diversity among the five younger cohort Better

Beginnings sites, the one comparison site in Peterborough provided a poorer match demographically than the older cohort comparison sites. To minimize the effects of any socio-demographic differences between sites, all of the analyses of outcome variables statistically controlled for demographic differences.

Other human service experiences also presented a challenge. It would have been impossible to control other programs and activities for for children and families, either within the Better Beginnings sites or the comparison neighbourhoods. Their influences are background "noise" against which the effects of Better Beginnings programs must be determined. As mentioned previously, information was collected from parents in each interview concerning the type and frequency of programs and services they utilized during the past six months. Two clear differences between demonstration and comparison sites emerged. First, parents in the Peterborough comparison site reported much lower use of home-visiting services than parents in all of the younger cohort Better Beginnings sites. Second, parents in the Etobicoke comparison site reported consistently lower participation in all types of programs on which information was collected than those in the demonstration site at Highfield. Since both sites contained the highest percentages of immigrant and multicultural families of any study sites, it appears that the Highfield Better Beginnings programs may have been particularly effective in involving immigrant families in a wide variety of program activities that did not occur spontaneously in the Etobicoke neighbourhood.

Despite methodological precautions, however, it is difficult to attribute specific outcome differences to specific programs because of the lack of strict experimental control. This is likely the reason why, in the original Request for Proposals, the first research goal was "... not to discover the most efficient or leanest package of prevention services, but to determine how effective a reasonably-financed and community-supported project can be" (Government of Ontario, 1990).

Future prevention studies should explore the feasibility of employing large longitudinal databases, such as the National Longitudinal Survey of Children and Youth, as a means of providing comparison outcome data that can be based on cases with closely matched demographic characteristics, and also that should be less influenced by idiosyncratic program effects than are data from a small number of comparison sites.

Studying the First Cohort of Children and Families

Only one birth cohort in each urban site was studied because of funding limits, and the first wave of children and families to move through the full four years of Better Beginnings programming was chosen so as not to delay the study.

During the first year, however, each Better Beginnings site was adjusting and "fine-tuning" its programs. Since the demonstration was scheduled to end in 1997, the last two years of programming for the longitudinal cohort (1996 and 1997) were characterized by increasing staff uncertainty and stress. There is a definite belief among program staff that the program experiences by the longitudinal research cohort were less stable and of poorer quality than those currently being implemented. To the extent that this is true, the outcome results presented in this report may underestimate the effects that would be expected for those currently involved in programs. The periodic collection of several key outcome results on 4 and 8 year old children and their families in the younger and older cohort sites, respectively, would yield valuable information on the degree to which the outcomes presented in the current report are stable or changing in important ways.

PROJECT DEVELOPMENT CONSIDERATIONS FOR FUTURE PREVENTION INITIATIVES: LESSONS LEARNED FROM BETTER BEGINNINGS, BETTER FUTURES

Project development processes are as important to good outcomes as are credible approaches to helping attain project goals. The following are core considerations in developing programs that will match with original intentions and allow credible evaluation:

- Even moderately complex projects require at least two years of implementation before stable functioning can be expected. Complex projects such as Better Beginnings, Better Futures need a minimum of three years. This time requirement needs to be provided for in the project development and assessment time lines. Formative and process assessments have the potential to provide useful feedback during the start-up stage.

- Prevention projects which rely solely on local development processes to interpret and implement broad and general mandates have been characterized by a number of phenomena. They are: high levels of variation in approaches across demonstration sites, local communities having difficulty figuring out what to do and how, and original project intentions not being clearly tested over the demonstration period.

- Clearer outcomes are more frequently reported in projects when the original mandates are more specific about what is to be demonstrated and where project implementation is supported and monitored.

- Better Beginnings, Better Futures confirms that project relations with sponsor organizations generally are less complicated if they share similar priorities and ways of working. It is helpful if the funding organization, host organization and project negotiate early in the demonstration project how the project will be accountable to the sponsor, how the project's needs for independent functioning and buffering from host agency procedures will be accommodated, and what long-term administrative arrangements are foreseen for the project.

- Demonstration project mandates need to balance breadth and focus. While it is tempting to expand project mandates, doing so greatly increases project complexity and usually introduces priorities which are only partially compatible. It is important to be clear in the beginning about what are the most important elements to be tested in any particular demonstration project and how these elements might fit together.

- There is a deep tension between locally-controlled participatory processes and the implementation of predetermined focused programs. It is critical in project development to be clear about the role of participatory processes. Better Beginnings, Better Futures unequivocally illustrates how passionately commitments to locally-controlled processes can be held. Negotiating a balance with other priorities will not be simple. In community development, participatory processes are the core "definer" of what is to be accomplished. How decisions are made is more valued than what is done. Under such circumstances, community development is the prevention model that is being demonstrated. Participatory processes sometimes are central to program helping processes, as in self-help and mutual aid organizations. Or participatory process can focus on adapting programs to local circumstances without altering elements essential to the model's effectiveness. Involvement in project governance can create valuable opportunities for voluntary leadership and bring useful insights into project development. Difficult as the challenge may be, it is important to be clear in the beginning about the place of participatory processes in any prevention project or program.

- Most of the positive outcomes reported in the literature have been associated with clearly defined focused programs. It is critical in a prevention demonstration to be specific about what focused program model(s) are to be demonstrated and what is required for the potential of this approach to be adequately demonstrated. If particular focused-program models are to be used, their implementation must be carefully supported and monitored, and deviations from effectiveness requirements corrected. If focused programming is to be employed in conjunction with participatory processes and service integration, it is critical in the design phase of the demonstration project to clarify their respective roles and boundaries.

- Resident involvement/community development is not the *sine qua non* nor the heart of effective prevention. Neither is focused programming. Nor is service integration. Rather these are separate processes with different goals and implementation requirements. They produce different kinds of outcomes. Inclusion of any of these development threads represents a choice and, if multiple threads are given importance, their relationship to each other requires consideration.

- Project development requires developers. It is wasteful to have local communities solve major development puzzles by themselves or perhaps not to solve them at all (Schorr, 1997). Reports from many successful multi-site projects and from replications of promising programs have stressed the importance of centrally providing proper training, help with problem solving, and monitoring. Project guidance and overseeing a project (with adequate staff, resources, and authority) area as central an element, albeit a commonly neglected one, for good prevention projects as are credible intervention strategies.

- Hiring the initial complement of staff is a major challenge. Better Beginnings, Better Futures confirms that initial personnel, particularly project coordinators, have a pivotal influence over priorities and ways of working that endure for a long time. Clarity about the traits to be sought in a project coordinator is particularly critical. Informed support to demonstration projects in hiring initial personnel can be especially helpful.

- Demonstration projects often experience a time of turmoil and low functioning as the end of project funding approaches. This needs to be anticipated in project assessment strategies. It generally is useful to have plans in place at an earlier point in project development to facilitate demonstration projects' transition to ongoing funding or to close projects.

KEY SHORT TERM FINDINGS

The Better Beginnings, Better Futures Initiative

The Better Beginnings, Better Futures Project being implemented in eight disadvantaged communities throughout Ontario, is one of the most comprehensive and complex prevention initiatives ever implemented for young children. It is unique in that it attempts to incorporate the following aspects into a *single* program model: a) an ecological view which requires program strategies focusing on individual children, their families, and their neighbourhoods, including childcare and school programs; b) a holistic view of children, including social, emotional, behavioural, and cognitive development; c) programs universally available for all children within a specified age range and their families living in the neighbourhood; d) resident involvement in all aspects of the organization, management, and delivery of

programs; and e) partnerships with local social service, health, and educational organizations.

In the analyses of the operating costs presented in this report, it was concluded that the costs are quite modest when compared to other prevention projects for which comparable financial information is available. Further, these other demonstration projects have typically not been sustained for more than two or three years; have provided a much smaller number of programs to a smaller group of children and/or parents; have not involved local residents in any aspect of program development or implementation; have not attempted to integrate their programs with those of other organizations; and have collected evaluation information on a small number of child or parent measures, with modest short-term outcome effects. When placed in this context, the accomplishments of the Better Beginnings projects to date are encouraging.

Program Development

Better Beginnings, Better Futures has produced many new or improved programs for children and families, parents, schools and communities in the eight participating sites.

- These programs are characterized by high levels of community acceptance and accessibility to groups of differing languages and cultures.

- Many of these child and family support programs are typically found in middle-class neighbourhoods, but were missing or poorly accepted in the Better Beginnings neighbourhoods before the project began.

- The strong involvement of local residents in all aspects of program development and implementation are widely believed to be critical to the acceptance and appropriateness of the Better Beginnings programs.

Resident Involvement

At all program sites, local residents have played a wide variety of key roles in:
- project management and decision-making
- program development and implementation
- program staff (as volunteers and paid staff)
- program advocacy

This involvement has led to:
- enhanced skills and greater employability on the part of involved residents
- reduced program costs
- greater acceptance of programs

Service Integration

Significant partnerships have been established between Better Beginnings and programs in social services, health, and education. This has resulted in:
- sharing of staff and physical resources
- creation of new programs and organizations
- collaboration on other family and child initiatives (e.g., Healthy Babies, Healthy Children)

Child Outcomes

The most frequent and consistent patterns of positive child outcomes were in the area of emotional, behavioural and social functioning. This is encouraging since the major goal of the Better Beginnings project at its inception was the prevention of serious emotional and behavioural problems in young children.

Positive patterns of decreasing children's emotional and behavioural problems and improving social skills arose in three project sites that provided the greatest continuity of child-focused programs across the four-year age span, and that allocated the largest part of their budgets to programs for children in the focal age range (Kingston, Cornwall and Highfield).

Also, these positive patterns were stronger in the Cornwall and Highfield older cohort sites that provided continuous and extensive classroom-based programs for children from four to eight years of age than in the Kingston younger site. These differences may be due to the fact that all children in the older cohort sites participated in classroom programs daily throughout the school year, while child-focused programs for children from birth to four years of age (e.g., home visiting, playgroups, childcare) provided experiences that were substantially lower in frequency and duration.

These results are consistent with previous findings that programs which have been most successful in improving the development of very young children from birth to school entry have provided full or half day centre-based interventions directed at the child over a 2 to 4 year period. None of the younger cohort Better Beginnings projects provided child-focused programs of that intensity.

Parent and Family Outcomes

The strongest pattern of parent outcomes appeared at Highfield, where parents reported fewer tension producing events, less tension juggling child care and other responsibilities, more social support, reduced alcohol consumption and increased exercise. This combination of changes might be expected to reduce illness, particularly stress-related, and parents at this site reported reduced use of prescription drugs for pain, as well as a reduced number of types of prescription.

They also reported improved family relations, reflected in increased marital satisfaction, more consistent and less hostile-ineffective parenting, and increased parenting satisfaction.

Many of these variables could easily affect one another, so that Better Beginnings may well have produced its outcomes by affecting some of them directly, with these in turn influencing the others. This possibility makes it difficult to specify the pathways through which the programs achieved the effects they did, but it is possible to point to a distinctive feature of the Highfield program that could have produced the difference between this site and others.

Highfield made consistent, ongoing, attempts to involve parents in their programs and in school events, and to discuss issues that arose for their children or their families. The site's educational assistants visited all the parents of all focal cohort children regularly for four years, discussing how the children were coming along at school, issues in child rearing, and questions about family living. Parents were encouraged to become involved in parenting programs sponsored by Better Beginnings and other activities at the school, and informed about community resources that could be of assistance. In sum, at Highfield parents of the focal cohort, like their children, were the focus of more frequent, intensive and wide-ranging attention from Better Beginnings than those at any other site.

Neighbourhood Outcomes

There was improvement in general neighbourhood satisfaction, and improvement in housing satisfaction across the older cohort sites. The broadest patterns of change in neighbourhood ratings, however, arose at two younger cohort sites, Guelph and Kingston, where parents reported improvements in community cohesion, decreased levels of deviance (alcohol and drug use, violence and theft), and improvements in several other aspects of neighbourhood life (housing, safety walking on the street at night, and overall quality of life in the neighbourhood).

Guelph's strong emphasis on community development and local capacity building, which began with the creation of its original proposal, could well have led to the improvements seen at that site. Kingston has consistently attempted to incorporate community building into the development and implementation of all programs, including those it has worked on in partnership with other agencies.

School Outcomes

In Highfield, parents showed improved ratings concerning both their children's teacher and school, underscoring the potential value of programs designed to actively forge parent-school connections and involvement.

There were significant reductions in the percentage of special education students reported by schools in the Cornwall and Highfield Better Beginnings sites over the same time period when percentages were increasing in schools in the two comparison sites. The in-classroom supports provided through the Better Beginnings programs from JK to Grade 2 in both Cornwall and Highfield may have contributed to these findings.

The possibility that school-based Better Beginnings programs reduced or replaced the need for special education resources provided by Boards of Education has important implications for the way in which the integration of services for young children can yield potential cost savings.

CONCLUSIONS

- The original Better Beginnings, Better Futures Project model emphasized the ecological nature of child development, which resulted in all project sites developing some programs to support the improvement of child, family and neighbourhood functioning. Analyses of the short-term outcomes support the conclusion that changes were strongest for programs that were intensive, continuous and focused.

  Further, short-term outcomes were greatest in the area of program focus, with child-focused programs effecting child outcomes, parent/family-focused programs effecting parent and family and outcomes, and neighbourhood programs effecting neighbourhood characteristics. These conclusions are consistent with those presented recently in reviews of effective programs. For example, St. Pierre and Layzer (1998) concluded that recent evaluations "call into question the wisdom of relying too heavily on 'indirect' intervention impacts on children, especially when compared with the larger effects of more child-focused, developmental programs. Most researchers conclude that children are best served by programs that provide intensive services to children directly for long periods of time, instead of trying to achieve those effects by delivering parenting education to parents" (p. 18).

- In many ways, the eight "locally owned and operated" Better Beginnings, Better Futures organizations represent the greatest short-term outcome of this Ontario Government initiative. Faced with an extremely broad and complex mandate, high expectations and relatively little explicit direction, each of the eight communities has developed an organization characterized by significant and meaningful local resident involvement in all decisions. This alone represents a tremendous accomplishment in socioeconomically disadvantaged neighbourhoods where ten years ago, many local residents viewed government funded programs and social service organizations with skepticism, suspicion, or hostility.

  In developing their local organization, Better Beginnings projects have not only actively involved many local residents, but also played a major role in forming meaningful partnerships with other service organizations. They developed a wide range of programs, many of which are designed to respond to the locally identified needs of young children and their families, and others to the needs of the neighbourhood and broader community. As they strengthened and stabilized over the seven year demonstration period from 1991 to 1998, each Better Beginnings project increasingly gained the respect and support not only of local residents, service-providers and community leaders, but also of the Provincial Government which, in 1997, transferred all eight projects from demonstration to annualized funding, thus recognizing them as *sustainable*.

  The short-term findings from these projects are encouraging, and provide a unique foundation for determining the extent to which this comprehensive, community-based prevention initiative can promote the longer-term development of some of Ontario's most vulnerable children.

- There is mounting evidence that poverty and other manifestations of socioeconomic disadvantage are becoming increasingly concentrated in specific urban neighbourhoods across Canada (Zeesman, 2000). This "ghettoization" of family poverty is associated with fewer and lower quality child and family health and social services, poorer schools, and increased toxicity for child and family development. It is in exactly these types of neighbourhoods that the Better Beginnings projects are located. The lessons being learned in the eight Better Beginnings communities have much to contribute to other disadvantaged neighbourhoods searching for ways to foster the future well-being of their children and families.

NEXT STEPS FOR RESEARCH AND EVALUATION: DO BETTER BEGINNINGS LEAD TO BETTER FUTURES?

Longitudinal Followup Research

There is still much to be learned from the Better Beginnings, Better Futures initiative. As consistently pointed out in the recent reviews of the prevention and early- intervention programs, there are very few studies on the long-term effects of programs for young children, and those that do exist have involved small numbers of children and narrowly focused program interventions. Only one, the Montreal Longitudinal Experiment, has been carried out in Canada.

Research on the Better Beginnings project is in an excellent position to contribute to knowledge in this field, since the expectation of longitudinal follow-up research was established as an important goal in the original project design.

Therefore, the RCU is carrying out a longitudinal follow-up study of the focal cohort of children and their families to determine longer-term outcomes of the Better Beginnings programs as children develop into

adolescence. Research issues for the longitudinal follow-up study will include the following:

Pathways for Change. Based on results from this report, three models or pathways for change will be examined: child and family social-emotional development; parent health promotion and illness prevention; and neighbourhood/community change. This will provide a test of the hypothesis that these pathways can mediate long-term child outcome effects.

Cost Savings. Are there long-term cost-savings from the Better Beginnings Project? The short-term costs of delivering the Better Beginnings programs will be related to potential longer-term cost-saving outcomes such as secondary school graduation rates, use of health and special education services, employment and use of social assistance, criminal charges and convictions, teen pregnancy, and drug/alcohol abuse.

Ongoing Outcome Evaluation

An *ongoing outcome evaluation* of the local Better Beginnings projects will also be included in the longitudinal follow-up study. The programs in all eight Better Beginnings sites have developed and matured over the past 7 years. The longitudinal research cohort of children and families experienced many of these programs in their early stages of development and refinement. There is a definite belief among program staff that the programs experienced by the longitudinal research cohort were less stable and of poorer quality than those currently being implemented. To the extent that this is true, the outcome results presented in this report underestimate the effects that would be expected from children and families currently involved in the Better Beginnings programs. The periodic collection of several key outcome results on four and eight year old children in the younger and older cohort sites, respectively, would yield valuable information on the degree to which the child outcomes presented in the current report are stable or changing in important ways.

Project Sustainability Research

Very few model demonstration projects survive the end of the demonstration phase. Virtually all of these projects, however, have been "top-down", expert-driven interventions which end when demonstration grants end. Important questions remain to be answered concerning whether or not the community-based nature of the Better Beginnings projects will improve their sustainability and maintain continued resident participation, partnerships with other services, and the delivery of child, family and neighbourhood support programs.

Research on these questions, funded by the Ontario Ministry of Health and Long-Term Care, will provide important information concerning the long-term outcomes as well as the continued viability of the Better Beginnings, Better Futures Project.

Appendix 1.1

SUMMARY OF BETTER BEGINNINGS, BETTER FUTURES EFFECTS

YOUNGER COHORT SITES

SUMMARY OF BETTER BEGINNINGS, BETTER FUTURES EFFECTS YOUNGER COHORT SITES[1]

Measures	Baseline-Focal Analyses[2]					
	Guelph	**Kingston**	**Ottawa**	**Toronto**	**Walpole**	**All**
CHILD EMOTIONAL & BEHAVIOURAL PROBLEMS AND SOCIAL FUNCTIONING						
***Teacher-Rated*:**						
Decreased Emotional Problems	**na** [4]	**0.72** [5] **	**0.23**	**0.25**	**-0.09**	**0.27** [6] **
Decreased Behavioural Problems	na	**0.33**	+ [7]	-	-	+
Increased Prosocial Behaviour	na	**0.12**	+	-	-	+
School Readiness	na	**0.43** **	+	- *	+	+
Parent-Rated:						
Decreased Behavioural Problems	-	+	-	+	+	+ *
Improved Temperament						na
CHILD DEVELOPMENT						
Improved Developmental Quotient:						
• Overall						na
• Expressive Language						na
• Receptive Language						na
• Fine Motor						na
• Gross Motor						na
• Auditory Attention & Memory						na
• Visual Attention & Memory						na
COGNITIVE FUNCTIONING						
Improved Receptive Language (PPVT)	- **	+	+	+	- *	-
Improved Non-Verbal Problem-Solving	-	-	-	-	-	- *
PERINATAL HEALTH						
Reduction of Very Low Birth Weights	+	+	-	-	na	na
Increased Birth Weights						na
Reduction in C-Section Births	na	na	na	na	na	+
Reduction in Use of General Anaesthesia for Normal Births						+
Breast Feeding:						
• Increased Initiation						na
• Longer Duration						na
• Improved Dietary Intake of Breastfeeding Mothers						na

Note:

Explanatory notes for Appendix 1.1 appear at the end of the table.

SUMMARY OF BETTER BEGINNINGS, BETTER FUTURES EFFECTS YOUNGER COHORT SITES

Measures	Longitudinal Analyses[3]					
	Guelph	Kingston	Ottawa	Toronto	Walpole	All
CHILD EMOTIONAL & BEHAVIOURAL PROBLEMS AND SOCIAL FUNCTIONING						
***Teacher-Rated*:**						
Decreased Emotional Problems						na
Decreased Behavioural Problems						na
Increased Prosocial Behaviour						na
School Readiness						na
Parent-Rated:						
Decreased Behavioural Problems						na
Improved Temperament	+	-	+	-	-	-
CHILD DEVELOPMENT						
Improved Developmental Quotient:						
• Overall	-	-	-	-	**0.38**	-
• Expressive Language	-	-	- *	-	**0.57 ** **	-
• Receptive Language	-	+	+ **	+ *	**0.11**	+
• Fine Motor	+	-	+ *	-	**0.41**	+ *
• Gross Motor	+	- **	- **	+	**0.68 ** **	-
• Auditory Attention & Memory	**-0.12**	**0.35**	**0.52 ***	**0.47 ***	**0.47**	**0.36 ***
• Visual Attention & Memory	-	- *	-	+	**0.08**	-
COGNITIVE FUNCTIONING						
Improved Receptive Language (PPVT)						na
Improved Non-Verbal Problem-Solving						na
PERINATAL HEALTH						
Reduction of Very Low Birth Weights						na
Increased Birth Weights	-	-	-	-	-	-
Reduction in C-Section Births						na
Reduction in Use of General Anaesthesia for Normal Births						na
Breast Feeding:						
• Increased Initiation	**-0.55 ** **	**-0.38 ** **	**-0.59 ** **	**-0.42 ** **	**-0.33 ***	**-0.42 ** **
• Longer Duration	-	-	-	+	+	-
• Improved Dietary Intake of Breastfeeding Mothers						na

YOUNGER COHORT SITES (CONTINUED)

Measures	Baseline-Focal Analyses[2]					
	Guelph	Kingston	Ottawa	Toronto	Walpole	All
CHILD NUTRITION						
Height Adjusted for Age	+	+	+	+ *	-	+
Reduction in Weight/Height above the 90th Percentile	+	-	+	-	+	+
Increased Intake of:						
• Calories	-	+	+	**0.59 ****	-	+
• Carbohydrates	-	+	+ **	**0.27**	na	+ *
• Protein	-	-	-	**0.47 ****	-	+
• Vitamin A	+	-	-	**0.18**	- *	-
• Thiamin	-	+	+	**-0.01**	-	-
• Riboflavin	-	+ **	+	**0.08**	-	+
• Niacin	-	+	+	**0.73 ****	-	+ **
• Folate	+	+	+	**0.54 ****	-	+ *
• Vitamin C	-	-	-	**0.42 ****	-	-
• Calcium	-	+	-	**0.30 ***	na	-
• Iron	-	-	+	**0.42 ****	-	+
• Zinc	-	+	+	**0.51 ****	-	+
CHILD HEALTH						
Improved General Health Ratings						na
Fewer Health - Related Limitations						na
Injuries and Poisonings						na
Fewer Hospitalizations for:						
• asthma	+	-	-	+	na	+
• all surgeries						na
• all medical admissions						na
• pneumonia						na
CHILD HEALTH PROMOTION & PREVENTION OF INJURIES & ILLNESS						
Child Immunized on Time at 18 Months						na
Reduced Exposure to Second-Hand Smoke						na
Improved Parent's Sense of Control over Child's Health						na
Greater Parental Encouragement of Bicycle Helmet Use						na
USE OF HEALTH CARE SERVICES FOR CHILDREN						
Increased Doctor Visits	+	+	+	+	-	+
Increased Dentist Visits	+	-	-	- *	+	-
Increased Optometrist Visits	+	-	+	+	-	-
Decreased Trips to Emergency Room						na
Professional Seen When Desired for Child	**0.06**	**0.19 ****	**0.21**	**0.23**	**0.23 ***	**0.17 ***
Getting as Good Service as Others for Child	+	+	+	+	+	+ *

YOUNGER COHORT SITES (CONTINUED)

Measures	Longitudinal Analyses[3]					
	Guelph	Kingston	Ottawa	Toronto	Walpole	All
CHILD NUTRITION						
Height Adjusted for Age	+ *	-	-	+	+	+
Reduced Weight/Height Percentile above the 90th Percentile	+	-	-	-	-	-
Increased Intake of:						
• Calories						na
• Carbohydrates						na
• Protein						na
• Vitamin A						na
• Thiamin						na
• Riboflavin						na
• Niacin						na
• Folate						na
• Vitamin C						na
• Calcium						na
• Iron						na
• Zinc						na
CHILD HEALTH						
Improved General Health Ratings	-	-	-	+	-	-
Fewer Health - Related Limitations	-	-	+	-	-	- *
Injuries and Poisonings						na
Fewer Hospitalizations for:						
• asthma						na
• all surgeries						na
• all medical admissions						na
• pneumonia						na
CHILD HEALTH PROMOTION & PREVENTION OF INJURIES & ILLNESS						
Child Immunized on Time at 18 Months	**0.50 ****	**-0.21**	**0.47 ****	**0.38 ****	**0.03**	**0.18 ***
Reduced Exposure to Second-Hand Smoke	+	+	+	+	+	+
Improved Parent's Sense of Control over Child's Health	+	- *	-	+	+	+
Greater Parental Encouragement of Bicycle Helmet Use	**- 0.35 ***	**-0.56 ****	**-0.01**	**-0.02**	**-0.74 ****	**-0.74 ***
USE OF HEALTH CARE SERVICES FOR CHILDREN						
Increased Doctor Visits	-	+	-	+	-	+
Increased Dentist Visits	+	-	-	- *	+	-
Increased Optometrist Visits	+	-	+	+	-	-
Decreased Trips to Emergency Room	-	+	+	+ **	+	+
Professional Seen When Desired for Child	**0.25**	**0.29 ***	**0.28**	**0.31 ***	**0.34**	**0.24 ***
Getting as Good Service as Others for Child						na

YOUNGER COHORT SITES (CONTINUED)

Measures	Baseline-Focal Analyses[2]					
	Guelph	Kingston	Ottawa	Toronto	Walpole	All
PARENT HEALTH						
Improved Self-Rated Health	-	+	-	+	-	-
Decreased Limitations in Daily Activities from:						
• Physical Health Problems	+ *	+ *	-	+	-	+
• Emotional Problems	- *	+	+	+	+ **	+
• Pain	+	+	-	-	+	+
Decrease in Interference with Caring for Child because of Health Problems	-	-	+	-	+	-
Reduced Types of Prescriptions Use	+	+	-	-	na	-
Reduction in Overweight	+	-	-	+	+ **	+
PARENT HEALTH PROMOTION						
Increased Proportion of Pap Smears within Guidelines						na
More Frequent Breast Self-Exams						na
More Frequent Exercise during Pregnancy						na
More Frequent Exercise after Pregnancy						na
PARENT HEALTH -RISK BEHAVIOURS						
Reduced Smoking During Pregnancy						na
Reduced Smoking between Pregnancy and 3 Months Postnatal						na
Reduced Smoking between 3 and 48 Months Postnatal						na
Reduced Smoking at 48 Months	+ *	+ **	+	+ **	+	+ **
Fewer Smokers in the Home	+ *	+ **	+ **	+ *	+ **	+ **
Reduced Alcohol Consumption During Pregnancy						na
Reduced Alcohol Consumption between Pregnancy and 18 Months Postnatal						na
Reduced Alcohol Consumption between 18 and 48 Months Postnatal						na
Reduced Alcohol Consumption at 48 Months	+	+ *	-	+	-	+ **
Decreased Alcoholism Behaviours						na
PARENTING						
More Consistent Parenting						na
Less Hostile-Ineffective Parenting						na
More Positive Parenting						na
Improved Parent/Child Interaction						na
Improved General Ratings of Parent Quality						na
PARENT SOCIAL ACTIVITIES						
Increased Neighbourhood Activities	-	-	-	+	-	-
More Frequent Get-Togethers with Friends	**0.15**	**-.012**	**-0.17**	**-0.02**	**-0.15**	**-0.06**
More Frequent Get-Togethers with Other Families in the Neighbourhood	+	+	-	+	na	+
Increased Participation in Organized Recreation	-	-	+	+	na	-
Increased Volunteering in the Community	-	-	-	-	na	-
More Frequent Attendance at Meetings of Clubs	-	+	- *	-	na	+
More Frequent Religious Services Attendance	-	+	+	-	+	+

YOUNGER COHORT SITES (CONTINUED)

Measures	Longitudinal Analyses[3]					
	Guelph	Kingston	Ottawa	Toronto	Walpole	All
PARENT HEALTH						
Improved Self-Rated Health	-	-	+	-	-	-
Decreased Limitations in Daily Activities from:						
• Physical Health Problems	+	+	-	+	-	+
• Emotional Problems	-	+	+ **	-	+	+
• Pain	-	+	+	+	+	+
Decrease in Interference with Caring for Child because of Health Problems	-	-	+	-	-	-
Reduced Types of Prescriptions Use	-	+	+	+	+	+
Reduction in Overweight						na
PARENT HEALTH PROMOTION						
Increased Proportion of Pap Smears within Guidelines	+ **	-	+ *	+	-	+
More Frequent Breast Self-Exams	**-0.32**	**-0.48 ****	**-0.19**	**-0.36 ****	**-0.41 ***	**-0.25 ****
More Frequent Exercise during Pregnancy	**0.14 ***	**0.09**	**0.20 ****	**0.12 ****	**0.01**	**0.12 ****
More Frequent Exercise after Pregnancy	**-0.58 ****	**-0.27**	**-0.69 ****	**-0.06**	**-0.44 ****	**-0.33 ****
PARENT HEALTH -RISK BEHAVIOURS						
Reduced Smoking During Pregnancy	-	-	- *	+	+	-
Reduced Smoking between Pregnancy and 3 Months Postnatal	+	-	-	+	-	-
Reduced Smoking between 3 and 48 Months Postnatal	-	- *	- *	-	- **	- **
Reduced Smoking at 48 Months						na
Fewer Smokers in the Home	+	-	-	-	-	-
Reduced Alcohol Consumption During Pregnancy	-	+	-	- **	+	-
Reduced Alcohol Consumption between Pregnancy and 18 Months Postnatal	+	-	-	+	- *	-
Reduced Alcohol Consumption between 18 and 48 Months Postnatal	+	+	+	+	+	+
Reduced Alcohol Consumption at 48 Months						na
Decreased Alcoholism Behaviours						na
PARENTING						
More Consistent Parenting	-	- *	+	+	-	-
Less Hostile-Ineffective Parenting	-	-	-	+	-	-
More Positive Parenting	+	+ *	-	+	+	+
Improved Parent/Child Interaction	na	**-0.65 ****	+	-	**1.01 ****	-
Improved General Ratings of Parent Quality	na	**-0.08**	+	+	**0.35 ****	+
PARENT SOCIAL ACTIVITIES						
Increased Neighbourhood Activities	-	-	+	+	+	-
More Frequent Get-Togethers with Friends	**-0.40**	**-0.74 ****	**-0.91 ****	**-0.36 ***	**-0.72 ****	**-0.61 ****
More Frequent Get-Togethers with Other Families in the Neighbourhood	-	-	-	-	na	-
Increased Participation in Organized Recreation	-	-	+	+	na	+
Increased Volunteering in the Community	-	+	+	+	na	+
More Frequent Attendance at Meetings of Clubs	+	+	-	+	na	+
More Frequent Religious Services Attendance	+	-	+	+	+	+

YOUNGER COHORT SITES (CONTINUED)

Measures	Baseline-Focal Analyses[2]					
	Guelph	Kingston	Ottawa	Toronto	Walpole	All
PARENT AND FAMILY SOCIAL & EMOTIONAL FUNCTIONING						
Decreased Tension Juggling Child Care With Other Responsibilities:						
• As Rated by Employed Parent	-	+	+	**0.83 ****	**-0.12**	+
• As Rated by Unemployed Parent	-	+	+	**0.12**	**0.66**	+
Reduced Stressful Life Events	-	+	+	**-0.05**	**1.02 ****	+
Improved Social Support	-	+	+	+	+	+
Reduced Depression	-	+	+	+	+	+
Improved Intimacy with Partner	+ **	+	-	+	+	+
Improved Marital Satisfaction	+	+	-	+	+	+
Improved Family Functioning	-	+	-	+	-	-
Reduced Violence						
• By Respondent to Partner	**0.48**	**0.14**	**0.27**	**0.40**	**0.04**	**0.22 ***
• By Partner to Respondent	**0.48**	**0.41 ***	**-0.31**	**0.40**	**0.61**	**0.32 ****
USE OF COMMUNITY RESOURCES						
Increased Use of:						
• Toy-Lending Library	+ *	-	+ **	+	+	+
• Library	-	-	+ **	+	- **	-
• Playground or Recreation Programs	-	+ **	+	+	- *	+
• Sports/Clubs	-	-	-	-	-	- *
• Parent/Child Drop-In Centre	+	+	+	+	+	+
• Parent Resource Centre	-	-	+	+	+	+
SENSE OF COMMUNITY COHESION						
Increased:						
Sense of Belonging	**0.62 ****	**-0.10**	+ *	**-0.09**	-	+ **
Willingness to Prevent Negative Change	**-0.14**	**0.53 ****	-	**-0.37 ***	-	-
Sense of Importance to Neighbourhood	**0.21**	**0.08**	+	**-0.01**	-	+
Willingness to Improve Things	**0.11**	**0.44 ***	-	**-0.16**	-	-
Sense of Similarity to Neighbours	**0.54 ***	**0.06**	-	**0.04**	+	+ *
Feeling That Different Cultures/Races Are Accepted	**0.27 ***	**-0.61 ***	+	**-0.04**	-	+
Pride in Being a Community Member	**0.09**	**0.19**	+	**-0.14**	-	+
NEIGHBOURHOOD RATINGS						
Increased Satisfaction with:						
• Condition of Dwelling	**0.32**	**0.24**	-	**-0.19**	+	+ **
• Safety Walking on the Street	**0.25**	**0.77 ****	**0.31**	**0.06**	**na**	**0.40 ****
• General Neighbourhood Satisfaction	**0.24**	**0.30**	+	**-0.19**	na	+

YOUNGER COHORT SITES (CONTINUED)

Measures	Longitudinal Analyses[3]					
	Guelph	Kingston	Ottawa	Toronto	Walpole	All
PARENT AND FAMILY SOCIAL & EMOTIONAL FUNCTIONING						
Decreased Tension Juggling Child Care With Other Responsibilities:						
• As Rated by Employed Parent	-	-	+	**0.27**	**0.05**	+
• As Rated by Unemployed Parent	-	-	+	**0.18**	**0.37**	-
Reduced Stressful Life Events	+	+	-	**0.64 ***	**1.26 ***	+ *
Improved Social Support	+	-	- *	+	-	-
Reduced Depression	+	-	+	-	+	+
Improved Intimacy with Partner	-	-	-	-	-	-
Improved Marital Satisfaction	+	-	-	+	+	+
Improved Family Functioning	-	-	-	+	-	-
Reduced Violence						
• By Respondent to Partner						na
• By Partner to Respondent						na
USE OF COMMUNITY RESOURCES						
Increased Use of:						
• Toy-Lending Library	-	-	-	+	-	+
• Library	-	-	+ *	-	- *	-
• Playground or Recreation Programs	- **	-	+	-	- **	-
• Sports/Clubs						na
• Parent/Child Drop-In Centre	- **	-	-	-	- *	- *
• Parent Resource Centre	-	-	-	+	-	-
SENSE OF COMMUNITY COHESION						
Increased:						
Sense of Belonging	**0.01**	**0.15**	-	**-0.21**	+	-
Willingness to Prevent Negative Change	**-0.04**	**0.18**	+	**-0.61 ****	- *	-
Sense of Importance to Neighbourhood	**0.08**	**0.04**	+	**-0.15**	-	+
Willingness to Improve Things	**0.05**	**-0.04**	+	**-0.20**	-	+
Sense of Similarity to Neighbours	**-0.02**	**0.16**	-	**-0.25**	-	-
Feeling That Different Cultures/Races Are Accepted	**-0.07**	**0.27**	-	**-0.53 ****	-	- **
Pride in Being a Community Member	**0.13**	**-0.11**	+	**0.26**	+	+
NEIGHBOURHOOD RATINGS						
Increased Satisfaction with:						
• Condition of Dwelling	**0.48**	**0.12**	-	**-0.01**	-	+
• Safety Walking on the Street	**0.01**	**0.29**	**-0.18**	**0.19**	**0.07**	**0.18**
• General Neighbourhood Satisfaction	**0.12**	**0.20**	**+**	**-0.05**	**+**	**+**

YOUNGER COHORT SITES (CONTINUED)

Measures	Baseline-Focal Analyses[2]					
	Guelph	Kingston	Ottawa	Toronto	Walpole	All
NEIGHBOURHOOD RATINGS (Continued)						
Reduction in Perceived Prevalence of:						
• Alcohol Use in Neighbourhood	**0.26**	**0.28 ***	+	**-0.19**	-	+
• Marijuana Use in Neighbourhood	**0.67 ****	**0.18**	+	**-0.30**	+	+ **
• Hard Drug Use in Neighbourhood	**0.19**	**0.33 ***	-	**-0.31 ***	+	+
• Violence in Neighbourhood	**0.07**	**0.22**	+	**0.31**	+	-
• Theft in Neighbourhood	**0.17**	**0.06**	+	**-0.25**	-	-
Reduction in Police Statistics:						
• Breaking and Entering						na
• Vandalism						na
Reduction in Child Welfare Services:						
• Number of Open Child Protection/Family Service Cases						na
• Number of Children-in-Care						na

Explanatory Notes for Appendix 1.1

1. **Younger Cohort Sites.** This refers to the five Better Beginnings projects where programs focused on children prenatally to four years of age, and one comparison site. Approximately 800 children and their families participated in the research.

2. **Baseline-Focal Analyses.** Measures from a group of 48-month-old children, their parents and teachers, living in the Better Beginnings communities, were collected before the Better Beginnings programs were created in 1993 in order to get a "baseline" or "pre-Better Beginnings" snapshot. Then in 1998, after programs had been operating in the Better Beginnings sites for five years, measures were collected from another group of 48-month-old children and their parents and teachers, called the "focal cohort". Analyses examined changes between the baseline and focal cohorts.

3. **Longitudinal Analyses.** Measures from children and their families living in the Better Beginnings sites were collected repeatedly, beginning in 1994 when children were 3 months of age to 1998 when children were 48 months of age, to see if there were any changes as a result of living in a Better Beginnings neighbourhood. Because some of the changes that occur in the Better Beginnings communities may have resulted from factors other than the Project itself (e.g., major changes in the economy), measures were also collected from children, their parents and teachers, living in a *comparison* site, Peterborough, over the same period of time.

4. **NA.** This stands for Not Applicable. It means that the measure was not collected or that the response rate was very low and therefore the analyses could not be done, or that there was too little variability in responses to analyze. For this specific variable, JK teacher ratings, none were collected in Guelph because very few schools offer JK.

5. **Effect Sizes.** Effect sizes are intended to provide a sense of how impressive a change is by comparing it to the amount of variation found in a variable in the absence of an attempt to change it. They also provide an indication of the impact of programs in a common form for variables which have been measured in different ways. Here, for non-dichotomous variables, under the baseline-focal design effect, sizes are calculated by dividing each measure of change by the standard deviation of the baseline sample. Under the longitudinal design, they are calculated by taking the predicted difference between the first time of measurement and the last, under the model accepted, and dividing by the standard deviation from the first occasion. By convention, an effect of .20 is referred to as small, one of .50 is spoken of as moderate, and one of .80 is treated as large. (Further details on effect sizes are found in Chapter 6.) Variables with a '-' represent an undesirable or non-beneficial effect. Variables without a sign, represent a desirable or beneficial effect for Better Beginnings.

YOUNGER COHORT SITES (CONTINUED)

Measures	Longitudinal Analyses[3]					
	Guelph	Kingston	Ottawa	Toronto	Walpole	All
NEIGHBOURHOOD RATINGS (Continued)						
Reduction in Perceived Prevalence of:						
• Alcohol Use in Neighbourhood	**0.00**	**-0.16**	-	**-0.32**	-	-
• Marijuana Use in Neighbourhood	**0.34**	**0.35 ****	+	**-0.10**	-	+
• Hard Drug Use in Neighbourhood	**0.23**	**0.18**	-	**-0.34**	- **	-
• Violence in Neighbourhood	**-0.14**	**0.39 ****	+	**-0.26**	- **	-
• Theft in Neighbourhood	**0.11**	**0.13**	+	**-0.40**	- *	-
Reduction in Police Statistics:						
• Breaking and Entering	+	- **	+	+	na	na
• Vandalism	+	+	+	+ **	na	na
Reduction in Child Welfare Services:						
• Number of Open Child Protection/Family Service Cases	- *	- **	+ **	+ *	na	na
• Number of Children-in-Care	+	+ **	na	0	na	na

6. Criteria for Reporting Patterns.

General "Cross Site" Patterns (Horizontal Shading): In a study with two basic designs, sometimes the results will not match. Also, with many dependent variables, sometimes apparently meaningful results will arise by chance, i.e., through random processes. Finally, with programs set up to meet local conditions, results may well differ among sites. To deal with differing results from the two basic designs, with the risk of taking random fluctuations seriously, and with the need to pick up systematic differences among sites, the following criteria were adopted:

(1) If results were available from both designs, statistically significant results from one must be confirmed in direction by the other, or no Better Beginnings effect would be suggested.

(2) If the results for all younger cohort sites, taken together, were significant, but if more than one site showed results in the opposite direction, or one site was significant in the opposite direction, no general Better Beginnings effect would be suggested.

(3) A result for a single site, on a single dependent variable, would need to reach a p-value of .01 to be discussed as evidence of a statistically significant effect for that site. Insisting on a p-value of .01, rather than the more usual .05, is a way to deal with the number of tests possible within a cohort. At the 0-to-4-year-old level, there are five sites, so that to require .01 sets the overall p-value to .05.

Site-Specific Patterns (Vertical Shading): Often variables within a content area yielded consistent results for a site. Such patterns are mentioned frequently in the report. Some of the patterns mentioned include variables which are all individually significant. In other instances, where results are favourable (or unfavourable) for several variables, but not all are individually significant, we have taken a nonparametric approach. At minimum, a sign test must reach .05, and some individual variables must do so as well.

7. **Effects.** Each variable in the table is assigned a '+' or '-' symbol to indicate whether the tested difference favoured Better Beginnings or the control group (either baseline or comparison site). All variables were coded so that a '+' represents a desirable or beneficial effect for Better Beginnings and a '-' represents an undesirable or non-beneficial effect.

If the result was statistically significant, this was indicated with a '**' if the p value was 0.01 or with a '*' if the p value was 0.05. A p value of 0.01 means the result would be expected to occur by chance less than one time in 100; similarly, a p value of 0.05 means the result would be expected to occur by chance less than five times in 100.

Appendix 1.2

SUMMARY OF BETTER BEGINNINGS, BETTER FUTURES EFFECTS

OLDER COHORT SITES

SUMMARY OF BETTER BEGINNINGS, BETTER FUTURES EFFECTS OLDER COHORT SITES [1]

Measures	Baseline-Focal Analyses[2]			
	Cornwall	Highfield	Sudbury	All
CHILD EMOTIONAL & BEHAVIOURAL PROBLEMS AND SOCIAL FUNCTIONING				
***Teacher-Rated*:**				
Decreased Passive Victimization	**0.08** [4]	+ [5]	-	+
Decreased Overanxious Behaviour	**0.16**	**0.16**	**0.01**	**0.03** [6]
Decreased Depression	**0.22**	-	-	-
Decreased Attention-Deficit	**0.23**	+	-	-
Decreased Oppositional Behaviour	**-0.03**	-	+	-
Increased Self-Control	**0.12**	**0.46 ****	**0.08**	**0.18**
Increased Cooperation	-	**0.44 ***	- *	-
Increased Assertiveness	-	**-0.17**	-	-
Parent-Rated:				
Decreased Overanxious Behaviour	+	**0.66 ****	**-0.18**	+
Decreased Depression	-	**0.93 ****	**-0.32**	+
Decreased Attention-Deficit	-	**0.48 ***	**-0.46 ****	-
Decreased Oppositional Behaviour	-	**0.22**	**-0.13**	+
Increased Self-Control	-	**0.34**	-	-
Increased Cooperation	**0.24**	**0.38 ***	**0.16**	**0.26 ****
Increased Assertiveness	+	**0.48 ***	-	+
Child-Rated:				
Social Problem Solving:				
• Improved Social Competence	-	-	-	- *
• Reduced Aggression	+ *	+	-	+
• Improved Self-Perception	+ *	+	-	+
CHILD DEVELOPMENT				
Improved Developmental Quotient				na
COGNITIVE FUNCTIONING				
Improved Receptive Language:				
• For English Speaking Children	na	+	- **	-
• For French Speaking Children	-	na	+ *	+
Improved Non-Verbal Problem-Solving	+	+	-	-
Improved Reading Skills:				
• For English Speaking Children	na	+	- **	-
• For French Speaking Children	+	na	- **	- *
Improved Attitude towards Reading	-	-	+	+
Improved Math Skills	-	+	- **	- **

Note:

Explanatory notes for Appendix 1.2 appear at the end of the table.

SUMMARY OF BETTER BEGINNINGS, BETTER FUTURES EFFECTS OLDER COHORT SITES

Measures	Longitudinal Analyses[3]			
	Cornwall	Highfield	Sudbury	All
CHILD EMOTIONAL & BEHAVIOURAL PROBLEMS AND SOCIAL FUNCTIONING				
***Teacher-Rated*:**				
Decreased Passive Victimization	**0.74 ****	+	+	+ *
Decreased Overanxious Behaviour	**0.74 ****	**0.43**	**0.22**	**0.47 ****
Decreased Depression	**0.36**	+	+	+
Decreased Attention-Deficit	**0.12**	+	-	+
Decreased Oppositional Behaviour	**0.23**	+	+	+
Increased Self-Control	**0.63 ****	**0.55 ***	**0.25**	**0.46 ****
Increased Cooperation	+ **	**1.21 ****	+	+ **
Increased Assertiveness	+	**0.59 ***	+	+ *
Parent-Rated:				+
Decreased Overanxious Behaviour	-	**0.56 ****	**-0.22**	
Decreased Depression	-	**0.63 ****	**-0.02**	+
Decreased Attention-Deficit	-	**0.52 ****	**-0.17**	+
Decreased Oppositional Behaviour	+	**0.58 ****	**-0.09**	+
Increased Self-Control	-	**0.20**	+	+
Increased Cooperation	**-0.11**	**0.23**	**0.04**	**0.02**
Increased Assertiveness	-	**0.09**	-	-
Child-Rated:				
Social Problem Solving:				
• Improved Social Competence				na [7]
• Reduced Aggresstion				na
• Improved Self-Perception	- *	-	+	-
CHILD DEVELOPMENT				
Improved Developmental Quotient	+	- **	+ **	-
COGNITIVE FUNCTIONING				
Improved Receptive Language:				
• For English Speaking Children	na	+	+	+
• For French Speaking Children	+	na	-	+
Improved Non-Verbal Problem-Solving	-	-	+	+
Improved Reading Skills:				
• For English Speaking Children	na	+ *	-	-
• For French Speaking Children				na
Improved Attitude towards Reading	-	+	0	+
Improved Math Skills	-	+	-	+

OLDER COHORT SITES (CONTINUED)

Measures	Baseline-Focal Analyses[2]			
	Cornwall	Highfield	Sudbury	All
CHILD NUTRITION				
Height Adjusted for Age	+	+	- **	+
Reduction in Weight/Height above 90th Percentile	+	+	-	+
Increased Intake of:				
• Calories	+ **	+	+ **	**0.63 ****
• Carbohydrates	+ **	-	+ **	**0.51 ****
• Fat	+ **	+	+ *	**0.69 ****
• Protein	+ **	+ *	+ *	**0.55 ****
• Vitamin A	-	+	+	**0.14**
• Thiamin	+ **	+	+	**0.40 ****
• Riboflavin	+ **	+ **	+ **	**0.67 ****
• Niacin	+ **	+ *	+ **	**0.59 ****
• Folate	+ **	-	+	**0.27 ****
• Vitamin C	+ **	-	-	**0.14**
• Calcium	+	+	+	**0.34 ****
• Iron	+ **	+	+	**0.39 ****
• Zinc	+ **	+ **	+ **	**0.69 ****
CHILD HEALTH				
Improved General Health Ratings				na
Fewer Health-Related Limitations				na
Reduced Asthma				na
Reduced Injuries				na
CHILD HEALTH PROMOTION & PREVENTION OF INJURIES & ILLNESS				
Child Immunized on Time				na
Improved Parent's Sense of Control over Child's Health				na
Greater Parental Encouragement of Bicycle Helmet Use				na
Improved Traffic Safety				na
USE OF HEALTH CARE SERVICES FOR CHILDREN				
Increased Doctor Visits	+	+	-	+
Increased Dentist Visits	+	+	-	+
Increased Optometrist Visits	-	+	- *	-
Decreased Trips to Emergency Room				na
Professional Seen When Desired for Child	+ **	+ **	+	+ **
Getting as Good Service as Others for Child	+	-	+ **	+ **
PARENT HEALTH				
Improved Self-Rated Health	-	**0.02**	- *	-
Decreased Limitations in Daily Activities from:				
• Physical Health Problems	+	**0.59 ****	+	+
• Emotional Problems				na
• Pain				na

OLDER COHORT SITES (CONTINUED)

Measures	Longitudinal Analyses[3]			
	Cornwall	Highfield	Sudbury	All
CHILD NUTRITION				
Height Adjusted for Age	-	+	+	+
Reduction in Weight/Height above 90th Percentile	-	-	- *	- *
Increased Intake of:				
• Calories	+	-	-	-
• Carbohydrates	+	-	-	-
• Fat	+	-	-	+
• Protein	+	+	- *	-
• Vitamin A	+	+	+ *	+
• Thiamin	+	-	- **	- *
• Riboflavin	+ *	-	-	+
• Niacin	+	+	-	-
• Folate	+	-	- *	-
• Vitamin C	+	+	- *	-
• Calcium	+ **	+	-	+
• Iron	+	+	- *	-
• Zinc	+	+	- **	-
CHILD HEALTH				
Improved General Health Ratings	**0.28**	**1.02 ** **	**0.14**	**0.37 ***
Fewer Health-Related Limitations	+	+	-	+
Reduced Asthma	+	-	+	+
Reduced Injuries	+	+	+	+
CHILD HEALTH PROMOTION & PREVENTION OF INJURIES & ILLNESS				
Child Immunized on Time	**0.55 ****	-	**0.06**	+
Improved Parent's Sense of Control over Child's Health	**0.49 ****	- *	**0.48 ****	+ **
Greater Parental Encouragement of Bicycle Helmet Use	**0.24 ****	- *	**0.24 ****	+
Improved Traffic Safety	**0.21**	+	**-0.03**	+
USE OF HEALTH CARE SERVICES FOR CHILDREN				
Increased Doctor Visits	- **	+ **	+	+ **
Increased Dentist Visits	+	+	-	+
Increased Optometrist Visits				na
Decreased Trips to Emergency Room	- **	+	- **	- *
Professional Seen When Desired for Child	-	-	- **	-
Getting as Good Service as Others for Child	+	-	- *	-
PARENT HEALTH				
Improved Self-Rated Health	+	**0.55**	+	+
Decreased Limitations in Daily Activities from:				
• Physical Health Problems				na
• Emotional Problems	+	**0.30**	+ *	-
• Pain	+	**0.05**	-	-

OLDER COHORT SITES (CONTINUED)

Measures	Baseline-Focal Analyses[2]			
	Cornwall	Highfield	Sudbury	All
PARENT HEALTH (Continued)				
Decrease in Interference with Caring for Child because of Health Problems	-	**0.09**	-	-
Reduced Types of Prescriptions Use	-	**-0.16**	+	-
Reduced Amount of Prescription for Pain				na
Reduction in Overweight	+	**-0.05**	+	+
PARENT HEALTH PROMOTION				
Increased Proportion of Pap Smears within Guidelines	+	+	+ *	+ *
More Frequent Breast Self-Exams				na
More Frequent Exercise				na
PARENT HEALTH -RISK BEHAVIOURS				
Reduced Smoking	**0.36 ***	**0.11**	**0.25**	**0.30 ****
Fewer Smokers in the Home	**-0.09**	**0.10**	**0.28 ***	**0.18 ***
Reduced Alcohol Consumption	+	**0.46 ****	+	+ **
Decreased Alcoholism Behaviours				na
PARENTING				
More Consistent Parenting				na
Less Hostile-Ineffective Parenting				na
More Positive Parenting				na
Increased Sense of Parenting Efficacy				na
Increased Sense of Parenting Satisfaction				na
PARENT SOCIAL ACTIVITIES				
Increased Neighbourhood Activities	+	- **	-	-
More Frequent Get-Togethers with Friends	+	+	-	-
More Frequent Get-Togethers with Other Families in the Neighbourhood	+	+	-	-
Increased Participation in Organized Recreation	-	-	-	-
Increased Volunteering in the Community	+	-	+	+
More Frequent Attendance at Meetings of Clubs	+	-	-	-
More Frequent Religious Services Attendance	-	+ **	+	+
PARENT AND FAMILY SOCIAL & EMOTIONAL FUNCTIONING				
Decreased Tension Juggling Child Care with Other Responsibilities:				
• As Rated by Employed Parent	-	**1.09 ****	- *	+
• As Rated by Unemployed Parent	+	**0.70 ***	-	+
Reduced Stressful Life Events	+	**0.48 ****	-	+
Improved Social Support	+	**0.13**	-	+
Reduced Depression	-	**0.12**	-	+
Improved Intimacy with Partner	+	**0.38**	+	+ **
Improved Marital Satisfaction	**0.19**	**0.22**	**0.07**	**0.18**
Improved Family Functioning	-	**0.23**	+	+
Reduced Violence				
• By Respondent to Partner	**-0.02**	**0.17**	**0.00**	**0.18**
• By Partner to Respondent	**0.10**	**0.66 ***	**0.12 ***	**0.44 ****

OLDER COHORT SITES (CONTINUED)

Measures	Longitudinal Analyses[3]			
	Cornwall	Highfield	Sudbury	All
PARENT HEALTH (Continued)				
Decrease in Interference with Caring for Child because of Health Problems				na
Reduced Types of Prescriptions Use	-	**0.48 ****	- **	-
Reduced Amount of Prescription for Pain	+	**0.40 ****	-	+
Reduction in Overweight				na
PARENT HEALTH PROMOTION				
Increased Proportion of Pap Smears within Guidelines	**- ***	**+ ***	**-**	**+**
More Frequent Breast Self-Exams	-	**0.19**	-	-
More Frequent Exercise	-	**0.44 ***	+ *	+ *
PARENT HEALTH -RISK BEHAVIOURS				
Reduced Smoking	**0.50 ****	**-0.05**	**0.15**	**0.19 ***
Fewer Smokers in the Home	**0.86**	**0.71**	**0.29**	**0.57**
Reduced Alcohol Consumption	- *	**0.07**	+	-
Decreased Alcoholism Behaviours				na
PARENTING				
More Consistent Parenting	-	**0.80 ****	+	+
Less Hostile-Ineffective Parenting	-	**1.73 ****	+	+ **
More Positive Parenting	+	**0.30**	+	+
Increased Sense of Parenting Efficacy	+	**0.57**	+	+
Increased Sense of Parenting Satisfaction	-	**0.40 ***	-	+
PARENT SOCIAL ACTIVITIES				
Increased Neighbourhood Activities	-	- *	-	-
More Frequent Get-Togethers with Friends	+	- *	-	-
More Frequent Get-Togethers with Other Families in the Neighbourhood	-	-	-	- *
Increased Participation in Organized Recreation	+	-	+	+
Increased Volunteering in the Community	+	-	+	+
More Frequent Attendance at Meetings of Clubs	-	-	-	-
More Frequent Religious Services Attendance	+	-	-	-
PARENT AND FAMILY SOCIAL & EMOTIONAL FUNCTIONING				
Decreased Tension Juggling Child Care with Other Responsibilities:				
• As Rated by Employed Parent	-	**0.61**	-	+
• As Rated by Unemployed Parent	+	**-0.47**	-	-
Reduced Stressful Life Events	+	**0.59 ****	+	+ *
Improved Social Support	-	**0.61 ***	-	+
Reduced Depression	- *	**0.37**	+	-
Improved Intimacy with Partner	-	**0.36**	- *	-
Improved Marital Satisfaction	**0.44**	**1.60 ****	**0.30**	**0.72 ****
Improved Family Functioning	-	**0.16**	- **	- **
Reduced Violence				
• By Respondent to Partner				na
• By Partner to Respondent				na

OLDER COHORT SITES (CONTINUED)

Measures	Baseline-Focal Analyses[2]			
	Cornwall	Highfield	Sudbury	All
USE OF COMMUNITY RESOURCES				
Increased Use of:				
• Toy-Lending Library	na	+	-	-
• Library	-	- *	-	-
• Playground or Recreation Programs	**0.26**	**0.06**	**0.26**	**0.28 ***
• Sports/Clubs	+	-	- *	-
• Parent/Child Drop-In Centre	+	+ *	+ *	+
• Parent Resource Centre	-	-	-	-
SENSE OF COMMUNITY COHESION				
Increased:				
Sense of Belonging	-	-	+	+
Willingness to Prevent Negative Change	+	-	+	+
Sense of Importance to Neighbourhood	+	+	+	+
Willingness to Improve Things	-	+	-	+
Sense of Similarity to Neighbours	-	+	-	+
Feeling That Different Cultures/Races Are Accepted	+	+	+ *	+ **
Pride in Being a Community Member	+	+	-	+
NEIGHBOURHOOD RATINGS				
Increased Satisfaction with:				
• Condition of Dwelling	**0.25**	**0.48 ***	**-0.01**	**0.25 ***
• General Neighbourhood Satisfaction	**0.16**	**0.14**	**-0.11**	**0.13**
Reduction in Perceived Prevalence of:				
• Alcohol Use in Neighbourhood	-	-	+	+
• Marijuana Use in Neighbourhood	-	-	-	-
• Hard Drug Use in Neighbourhood	-	-	+	-
• Violence in Neighbourhood	-	-	+	+
• Theft in Neighbourhood	+	-	+	+
Reduction in Police Statistics:[8]				
• Breaking and Entering				na
• Vandalism				na
Reduction in Child Welfare Services:				
• Number of Open Child Protection/Family Service Cases				na
• Number of Children-in-Care				na
SCHOOL RATINGS				
Reduced Percentage of Special Education Students[9]				na
Improved Parent Ratings of:				
• Child's School	-	**0.37 ***	+	+
• Relationship with Child's Teacher/Involvement in School	-	**0.56 ****	+	+
Improved Teacher Ratings of School Climate[10]:				
• Children's Social Behaviours	-	-	+	na
• Teaching Climate	-	+	+	na
• Teacher Workload/Parent Support	+	+	-	na
• Parent Involvement	-	0	-	na

OLDER COHORT SITES (CONTINUED)

Measures	Longitudinal Analyses[3]			
	Cornwall	Highfield	Sudbury	All
USE OF COMMUNITY RESOURCES				
Increased Use of:				
• Toy-Lending Library	-	+ **	+	+
• Library	+	+ **	-	+ *
• Playground or Recreation Programs	**-0.13**	**1.55**	**1.81 ***	**1.29 ***
• Sports/Clubs	+ *	+ *	-	+ **
• Parent/Child Drop-In Centre	-	+ **	-	+
• Parent Resource Centre	+	+ **	+	+ **
SENSE OF COMMUNITY COHESION				
Increased:				
Sense of Belonging	+	-	+	+
Willingness to Prevent Negative Change	-	+	-	+
Sense of Importance to Neighbourhood	-	-	-	-
Willingness to Improve Things	-	+	-	-
Sense of Similarity to Neighbours	+	-	+	+
Feeling That Different Cultures/Races Are Accepted	-	+	-	-
Pride in Being a Community Member	-	+	-	-
NEIGHBOURHOOD RATINGS				
Increased Satisfaction with:				
• Condition of Dwelling	**0.39**	**0.63 ***	**0.36**	**0.43 ****
• General Neighbourhood Satisfaction	**0.27**	**0.51**	**0.10**	**0.33 ***
Reduction in Perceived Prevalence of:				
• Alcohol Use in Neighbourhood	-	+	+	+
• Marijuana Use in Neighbourhood	+	+	+	+
• Hard Drug Use in Neighbourhood	+	+	+	+
• Violence in Neighbourhood	-	+	-	+
• Theft in Neighbourhood	-	+	-	+
Reduction in Police Statistics:[8]				
• Breaking and Entering	na	0.02 **	- **	na
• Vandalism	na	0.02 **	+	na
Reduction in Child Welfare Services:				
• Number of Open Child Protection/Family Service Cases	na	0.05 **	na	na
• Number of Children-in-Care	na	0.06 *	na	na
SCHOOL RATINGS				
Reduced Percentage of Special Education Students[9]	**0.35 ****	**0.44 ****	**0.12**	**na**
Improved Parent Ratings of:				
• Child's School	-	**0.22**	-	+
• Relationship with Child's Teacher/Involvement in School	+	**0.47 ***	+	+ *
Improved Teacher Ratings of School Climate[10]:				
• Children's Social Behaviours	-	- **	-	na
• Teaching Climate	+	+	+	na
• Teacher Workload/Parent Support	+	+	+	na
• Parent Involvement	+	+	+	na

OLDER COHORT SITES (CONTINUED)

Explanatory Notes for Appendix 1.2

1. **Older Cohort Sites.** This refers to the three Better Beginnings projects where programs focused on children four to eight years of age, and two comparison sites. Approximately 1000 children and their families participated in the research.

2. **Baseline-Focal Analyses.** Measures from a group of children in Grade 2 and their parents and teachers living in the Better Beginnings communities were collected before the Better Beginnings programs were created in the 1992/3 school year in order to get a "baseline" or "pre-Better Beginnings" snapshot. Then in 1997/8, after programs had been operating in the Better Beginnings sites for four years, measures were collected from another group of children in Grade 2 and their parents and teachers, called the "focal cohort". Analyses examined changes between the baseline and focal cohorts.

3. **Longitudinal Analyses.** Measures from children and their families and teachers living in the Better Beginnings sites were collected repeatedly, beginning in 1993 when children were in Junior Kindergarten to 1997/8 when children were in Grade 3, to see if there were any changes as a result of living in a Better Beginnings neighbourhood. Because some of the changes that occur in the Better Beginnings communities may have resulted from factors other than the Project itself (e.g., major changes in the economy), measures were also collected from children and their parents and teachers living in a *comparison* site over the same period of time. Ottawa Vanier was the comparison site for Cornwall and Sudbury, and Etobicoke was the comparison site for Highfield.

4. **Effect Sizes.** Effect sizes are intended to provide a sense of how impressive a change is by comparing it to the amount of variation found in a variable in the absence of an attempt to change it. They also provide an indication of the impact of programs in a common form for variables which have been measured in different ways. Here, for non-dichotomous variables, under the baseline-focal design, effect sizes are calculated by dividing each measure of change by the standard deviation of the baseline sample. Under the longitudinal design, they are calculated by taking the predicted difference between the first time of measurement and the last, under the model accepted, and dividing by the standard deviation from the first occasion. By convention, an effect of .20 is referred to as small, one of .50 is spoken of as moderate, and one of .80 is treated as large. (Further details on effect sizes are found in Chapter 6.) Variables with a '-' represent an undesirable or non-beneficial effect. Variables without a sign represent a desirable or beneficial effect for Better Beginnings.

5. **Effects.** Each variable in the table is assigned a '+' or '-' symbol to indicate whether the tested difference favoured Better Beginnings or the control group (either baseline or comparison site). All variables were coded so that a '+' represents a desirable or beneficial effect for Better Beginnings and a '-' represents an undesirable or non-beneficial effect. If the result was statistically significant, this was indicated with a '**' if the p value was 0.01 or a '*" if the p value was 0.05. A p value of 0.01 means the result would be expected to occur by chance less than one time in 100; similarly, a p value of 0.05 means the result would be expected to occur by chance less than five times in 100.

OLDER COHORT SITES (CONTINUED)

6. Criteria for Reporting Patterns.

General "Cross Site" Patterns (Horizontal Shading): In a study with two basic designs, sometimes the results will not match. Also, with many dependent variables, sometimes apparently meaningful results will arise by chance, i.e., through random processes. Finally, with programs set up to meet local conditions, results may well differ systematically between sites. To deal with differing results from the two basic designs, with the risk of taking random fluctuations seriously, and with the need to pick up systematic differences among sites, the following criteria were adopted:

(1) If results were available from both designs, statistically significant results from one must be confirmed in direction by the other, or no Better Beginnings effect would be suggested.

(2) If the results for all older or younger cohort sites, taken together, were significant, but if more than one site showed results in the opposite direction, or one site was significant in the opposite direction, no general Better Beginnings effect would be suggested.

(3) A result for a single site, on a single dependent variable, would need to reach a p-value of .01 to be discussed as evidence of a statistically significant effect for that site. Insisting on a p-value of .01, rather than the more usual .05, is a way to deal with the number of tests possible within a cohort. At the 4-to-8-year-old level, there are three sites, so that to require .01 sets the overall p-value to .03.

Site-Specific Patterns (Vertical Shading): Often variables within a content area yielded consistent results for a site. Such patterns are mentioned frequently in the report. Some of the patterns mentioned include variables which are all individually significant. In other instances, where results are favourable (or unfavourable) for several variables, but not all are individually significant, we have taken a nonparametric approach. At minimum, a sign test must reach .05, and some individual variables must do so as well.

7. NA. This stands for Not Applicable. It means that the measure was not collected or that the response rate was very low and therefore the analyses could not be done, or that there was too little variability in responses to analyze.

8. Effect sizes for police and CAS data are based on the proportion of cases from the jurisdiction found in the Better Beginnings neighbourhood at the beginning and the end of the period for which data are available, under a logistic regression model predicting location of cases.

9. Effect sizes for percentages of exceptional students are based on the percentage predicted for a demonstration site and its comparison site in 1997, under a logistic regression model testing for differences in trend.

10. School Climate. The first data collection point for teachers' perceptions of school climate was in 1994/5, which is approximately 1½ years after Better Beginnings programs had been implemented in the sites. So the baseline-focal comparison refers to a comparison of teachers' ratings in 1994/5 and three years later in 1997/8.