

## Targeted child-focused programs

### 3.1 INTRODUCTION

This chapter explores what the research tells us about the effectiveness of targeted child-focused programs, specifically programs that provide a centre-based group educational experience for children. Some of these programs also provide support services such as nutritional supplements, child health and development screening, and/or parent counseling and parenting education. Four important findings emerge:

- The development of at-risk children is significantly enhanced by targeted centre-based programs where warm, supportive adults who understand child development and know how to encourage it provide challenging but developmentally-appropriate activities<sup>1</sup> for small groups of children, i.e. a high quality program. The benefits to children's development from these programs continue to be evident throughout their school career.
- At-risk children *do not* benefit from targeted centre-based group programs that are characterized by poorly trained adults who do not provide the type of developmentally-appropriate activities that stimulate children's skill acquisition, i.e. a poor-quality program.
- Targeted centre-based group programs are most effective in enhancing the development of at-risk children when the children begin attending them prior to age three and attend on a full-day rather than a part-day basis.
- Combining a high quality centre-based group program with home visits by a specially qualified teacher who demonstrates developmental activities that the parent can do with the child does not appear to be any more effective in promoting the children's development than the provision of the centre program on its own.

While this paper has identified other variables that put children at risk for developmental problems, research on the effectiveness of targeted programs is currently restricted to children living in poverty. Therefore, this is the literature upon which we have to rely. It is,

however, reasonable to assume that programs that enhance development in such children would also assist children whose vulnerability stems from other environmental variables. Rates of maternal depression, stress, negative parenting styles and lack of stimulation have been found to be higher among low-income families than other families. <sup>2</sup> The association between low socio-economic status and vulnerability to developmental problems probably reflects the influence of one or more of these other variables.

### 3.2 Single-site research projects

Single-site research projects target a group of selected children. In so-doing, they are different from large-scale multi-site programs (discussed in the following section) that target whole neighbourhoods considered to be high risk because of their socio-demographic characteristics. The findings from single-site research projects demonstrate what can be achieved under good circumstances. These projects had well-trained staff provided with on-going supervision and consultation, the number of children for whom each staff person was responsible was small, the children's experiences were specifically planned and developmentally-appropriate, and there were adequate budgets for programming materials and activities.

#### 3.2a *The Consortium for Longitudinal Studies* <sup>3</sup>

Eleven early American single-site research projects agreed to form a consortium and to pool their follow-up data on the subsequent development and school performance of children who participated in their study and control children who did not. Data collected when the children were between nine and 13 years of age are available from 2,008 (56%) of the 3,593 children who had participated in the eleven projects.

TABLE 3.1: EVALUATION FINDINGS FROM THE CONSORTIUM FOR LONGITUDINAL STUDIES PROJECTS

Outcome measure	Findings
Grade retention	E = 25%, C= 30%
Placement in special education class	E = 14%, C = 29%
Scores on a standard mathematics test	E significantly higher at grades 3, 4, and 5 but not at grade 6
Scores on a stand test of reading ability	E higher at grade 3 but not at later grades

**Notes:** E = the children who received the program, C = the control group. None of the 11 projects collected data on all of the outcomes.

As indicated in Table 3.1, the pooled data from the 11 Consortium projects indicate that high quality centre-based early childhood programs prior to school entry can reduce the rate of placement in special education classes and improve school achievement. The ability of these programs to produce such benefits may be under estimated when findings are pooled since this averaging results in a ‘watering-down’ of the findings from the more successful projects. For example, in one study, only 3% percent of the project children had been retained a grade while 29% of the control children had been.<sup>4</sup>

Four of the Consortium projects have reported further follow-up data. When the data from these four were pooled, 65% of the children who received the program compared with 52% of the control children graduated from high school – a statistically significant difference. Pooling the outcome data masked the higher benefit obtained by one study where 66% of the participants graduated from high school in comparison to 49% of the control children.<sup>5</sup>

As noted in Chapter 1, the most convincing evidence comes from research that used random assignment to the participant and the control groups and followed the children for a substantial period of time. Two single-site research projects – the High/Scope Perry Preschool Project <sup>6</sup> and the Abecedarian Project <sup>7</sup> – meet these criteria. They are particularly informative because they have followed the project and the control children into adulthood. The remainder of this section describes these two projects and then presents their outcome data in Table 3.2. A third study, Project CARE,<sup>8</sup> is also discussed in this section. Although it has not published outcome data beyond age four-and-a-half, it is of interest because it specifically examined the effectiveness of a centre-based program by itself and one that also provided home visits.

### **3.2b    *The High/Scope Perry Preschool Project***

#### *The subjects*

The subjects were 123 African-American children selected from families that obtained a low rating on a measure of socio-economic status that took into account variables such as parent education, family income, receipt of social assistance, and household density. All the three-year-olds were given an intelligence test and if they scored between 60 and 85 they were added to the potential subject pool. Seventy-nine percent of the mothers and 89% of the fathers of these children had not completed high school, and forty-nine percent of the families were receiving social assistance. The 123 children were randomly assigned to either the preschool group or the control group. Over the course of the study, 45 children entered the project at age three and received the program for two years while 13 entered at age four and participated for one year.

### *The program*

The children received a two-and-a-half hour centre-based program for five mornings a week from October to May of each year. There were also weekly 90 minute teacher home visits with mother and child that were intended to encourage parents to do educational activities with the child at home, and monthly parent group meetings. The centre program was staffed by certified public school teachers trained in child development, had a ratio of six children to each teacher, group sizes between ten and thirteen, and used a curriculum that emphasized learning through activities. The teachers were closely supervised by the researchers and participated in weekly seminars to discuss the children and the implementation of the program.<sup>9</sup>

### *Follow-up findings*

The program participants and the control group were followed annually through age eleven, and again at ages 14, 15, 19, and 27, with data collected through interviews, school records, and public records. At the age twenty-seven follow-up, 117 of the 121 children still living completed interviews and data from both school and public records were obtained for all 121 of them. While initial I.Q. gains for the participant group faded by age eight, achievement test scores for program participants remained significantly higher than those for the control group through age 14. Children who received the program had better grades and were more likely to graduate from high school. At age 27, program participants had significantly lower rates of current and past use of social assistance and lower rates of criminal activity. However, there were no significant differences between the groups in the percentage currently employed, see Table 3.2 for more detail.

### **3.2c    *The Abecedarian Project***

#### *The subjects*

The subjects were 111 children, 98% of whom were African-American, selected from families that obtained a high score on a risk index similar to that used by the Perry Preschool project. The mothers had an average I.Q. of 85, and on average were 20 years of age and had attained 10 years of schooling. Seventy-five percent were single-parents and 55% of the families were on social assistance. The children were randomly assigned at average age of six weeks to a centre-based program or the control group.

Children receiving the program did so from admission until entry into kindergarten at age five. Just before entering kindergarten the two groups were again randomly divided into a control group and a group that received bi-weekly individual tutoring in basic skills such as

TABLE 3.2: EVALUATION FINDINGS FROM THE PERRY PRESCHOOL AND THE ABECEDARIAN PROJECTS

Project	Initial sample	Follow-up sample	Age at latest follow-up	Education	Economic Well-Being/Criminal Charges and Arrests
High/Scope Perry Preschool	E = 58 C = 65	E = 58 C = 63	age 27	reading, mathematics and language achievement test scores at age 14 E>C high school grade point average, E>C use of special education by grade 12, E = C E = 37%, C = 50% average years of school completed, E = C E = 11.9 years, C = 11.0 years high school graduation rate at age 27, E>C E = 66%, C = 49% post-secondary credits by age 27, E = C E = 33%, C = 28%	Employment rate at age 27, E = C E = 71%, C = 59% Monthly earnings at age 27 (1993 dollars) E = \$1,219, C = \$766 Received social assistance in the past ten years at age 27, E>C E = 59%, C = 80% Ever arrested by age 27, E<C E = 57%, C = 69% Lifetime arrests by age 27, E<C E = 2.3, C = 4.6
Abecedarian	E = 57 C = 54	Age 15 E = 48 C = 44  Age 21 E = 53 C = 51	age 21	reading, mathematics, written language and general knowledge achievement test scores at age 12 E>C on all four tests use of special education by age 15, E<C E = 24%, C = 48% grade retention by age 15, E<C E = 39%, C = 59% high school graduation rate at age 19, E=C E = 66.7%, C = 51.0% attend college by age 21, E>C E = 34.5%, C = 13.7%	Employed or in college at age 21 E = 65%, C = 40% Ever been charged by age 21, E = C E = 44.9%, C = 41.2% Mean number of charges at age 21, E = C E = 2.76, C = 2.69 Lifetime arrests by age 21, E = C E = 1.82, C = 1.53

**Sources:** (1) **Perry Preschool** - Barnett, 1998, Table 1.1; Karoly et al., 1998, Table 2.2. (2) **Abecedarian** - Barnett, 1998, Table 1.1, Campbell et al., in press (a); Clarke and Campbell, 1998; Karoly et al., 1998, Table 2.2; Ramey, 1999, p.3

**Notes:** E= the children who received the intervention, C = control group who did not. Results that are not statistically significant are indicated by E=C, results that are significant at p<.05 level or better for the intervention group are indicated by E>C (E greater than). For the Abecedarian Study, E = children who received the preschool intervention, either on its own or followed by the elementary school intervention.

reading and mathematics until age eight and bi-weekly visits to the home by a resource teacher who provided customized learning activities for the parent to use with the child. Thus children in the project received one of the following between age four months and age eight:

- A centre-based program prior to school entry but nothing else.
- No preschool centre-based program but bi-weekly individual tutoring in basic academic skills and bi-weekly visits to the child's home for each of the first three years of elementary school.
- Both the preschool centre-based program and the individual tutoring and home visits in the first three years of elementary school.

### *The program*

The child care program lasted eight hours a day, five days a week, 50 weeks a year. Parents also could voluntarily participate in a series of courses focusing on parenting skills, nutrition and health. Both project and control group families were provided with social work services as requested to assist with problems such as housing, both groups had access to free medical care, and the control children were given nutritional supplements to compensate for the nutritionally balanced snacks and meals received by the children attending the centre. The provision of social work, free medical care, and nutritional supplements to the control group adds confidence that the benefits found for the program reflect the effect of it, not other variables such as better nutrition. The centre program was staffed by trained teachers and had a ratio of one adult to three infants which gradually increased to one-to-six for preschoolers. Programming included activities to enhance social, perceptual-motor, language and cognitive development. The teachers were given in-service education and weekly consultative help in assessing children's needs, setting objectives, and implementing appropriate activities.<sup>10</sup>

### *Follow-up findings*

The children in the project received one of the following between age four months and age eight:

- A centre-based program prior to school entry but nothing else.
- No centre-based program prior to school entry but bi-weekly individual tutoring in basic academic skills and bi-weekly visits to the child's home for each of the first three years of elementary school.

- Both the centre-based program prior to school entry and the individual tutoring and home visits in the first three years of elementary school.

Follow-up was done on the project participants and the control group children at ages 8, 12, 15 and 21. At age eight, the children who participated in the centre-based program prior to school entry out-performed those in the control group in both reading and mathematical skills as measured by standard assessment tests. This included out-performing children who did not receive the centre-based experience prior to school entry but did receive individual tutoring and the bi-weekly visits of a resource teacher to their home during the first three years of elementary school.

At age 12, children who had received only the centre-based program prior to school entry, or the centre program and the three-year individual tutoring and home visits in elementary school did better than the other children on standard tests of reading, mathematics, written language and general knowledge, see Table 3.3. The children who received only the elementary school intervention did better than children who did not receive any project program. There was little difference in ability between the group that attended only the centre-based program prior to school entry and the group that received both the centre-based and the elementary school programs. Thus, the addition of the individual tutoring and home visits during the first three years of elementary school did not result in a substantial additional benefit.

As illustrated in Tables 3.2 and 3.3, the children who participated in the centre-based program prior to school entry consistently did better than those who did not. This was in spite of the fact that 41 (75.9%) of the children in the control group attended a community child care centre for 12 months or more prior to school entry.<sup>11</sup>

TABLE 3.3: COMPARISON OF AVERAGE SCORES ON STANDARD TESTS OF ACADEMIC ACHIEVEMENT AT AGE TWELVE, ABECEDARIAN PROJECT

Group	Reading	Mathematics	ritten Language	General Knowledge
No intervention (N = 22)	83.77	84.68	87.41	84.00
Preschool only (N = 22)	89.41	91.82	93.14	93.77
Elementary school intervention only (N = 21)	85.76	87.43	91.62	86.67
Both preschool and elementary school interventions (N = 25)	90.96	90.80	97.68	92.24

**Source:** Campbell and Ramey, 1994, Table 4, no information provided on tests of significance.

### 3.2d *Project CARE* <sup>12</sup>

#### *The program*

This project, designed as a follow-up to the Abecedarian Project discussed above, compared at-risk children who were randomly assigned to:

- Home visiting only.
- Home visiting and participation in a centre-based program.
- A comparison group.

Families in the two project groups began receiving home visits one month after the child's birth and the children who participated in the centre-based program entered between age six weeks and three months. The home visiting and centre-based programs lasted until the children were, on average, age four-and-a-half. Home visits were done by a trained teacher who demonstrated activities to stimulate children's development and assisted the parents to develop problem-solving skills. On average, the project families received 2.5 visits a month until the children were age four, and then monthly visits until the end of the project. They also participated in monthly workshops that provided additional information about child development. The full-day, year-round program was based on that used by the Abecedarian project and had the same low staff-to-child ratios. The children in both project groups and the control group received iron-fortified formula until age 15 months and free medical and social services throughout the duration of the study.

#### *The findings*

At age four-and-a-half, the children in the group that received both the centre program and the home visiting obtained significantly higher scores on standard tests of language and of cognitive skills than did the children in the control group or whose parents received home visiting only. However, the combined centre based and home visiting program was not more successful in improving child test scores than the original Abecedarian centre-based only program had been.<sup>13</sup> No difference was found in outcomes between the group of children whose parents received home visiting only and the children in the control group who received nothing. This finding is consistent with the findings on the lack of effect on child development reported by other research on parent support services and discussed in the following chapter. No follow-up data past age five appear to have been reported.

### 3.2e *Discussion*

The Abecedarian, the Perry Preschool, and the eleven Consortium projects provided real-life, tangible benefits to the participating children in terms of enhancing their public school



careers and their life situation and prospects as young adults. These outcomes also benefited society through costs not incurred for services such as special education and social assistance. The costs not incurred can be substantial. In the U.S., the cost of repeating a grade is estimated to be about \$6,000 per year per child while the cost of special education is estimated at roughly \$8,000 annually per child.<sup>14</sup>

The centre-based program provided through Project CARE enhanced the children's school-readiness. Adding a home visiting component did not provide any additional benefit even though it was delivered by specially trained teachers, began almost immediately after the child's birth, and continued until the child was age four-and-a-half. It should be noted that Project CARE appears to have been the only study to specifically examine whether adding parental support services improves the outcomes for children who are receiving a high quality centre-based program. While it is inappropriate to draw conclusions on the basis of one study, the findings are provocative.

It should be noted that the centre-based programs provided by the Abecedarian and the Perry Preschool projects and by Project CARE were not unusually enriched. The researchers' descriptions indicate the sort of experience provided by high quality community child care centres when ratios and group sizes are within those recommended by experts,<sup>15</sup> the teachers have post-secondary education related to child development, the activities are developmentally-appropriate and encourage children to explore their environment, and there is a variety of stimulating materials. The one substantial and perhaps very important difference between these one-site research projects and high quality community child care is the on-going provision of in-service education and frequent consultation with experts. This could be expected to encourage and assist the teachers to engage in regular reflection about their practices and the resultant effects on the children's progress.

### **3.3 Large scale multi-site programs**

The term 'large-scale programs' has been used in the U.S. to describe multi-site province/state or national programs provided free-to-the-user and targeting neighbourhoods whose socio-demographic characteristics are believed to put children at risk for developmental problems. The U.S. Head Start program is by far the largest example of this type of child-focused program and has had the most evaluation. Therefore, this section will focus on the U.S. Head Start evaluations.

#### ***3.3a Factors influencing the findings of Head Start evaluations***

Starting with its inception in the mid-1960's, Head Start projects typically focused on providing four-year-olds with a five-days-a-week, half-day centre program during the nine-

month school year. As a result, the Head Start projects whose evaluation findings are discussed in this paper were all of shorter duration than the single-site research projects discussed earlier (nine months in contrast to two or more years) and began when the children were older. There is a growing body of evidence that intervention is more effective when started early in the child's life, and that there is an association between the intensity/duration of the program and its outcome.<sup>16</sup> In the past decade, Head Start has expanded into an Early Head Start program for children under age three and some Head Start and Early Head Start projects have begun to provide a full-day centre program.

Head Start is assumed to be a single model that is implemented in the same or very similar way across sites. This, however, is not the case. Although Head Start projects are required by the U.S. federal government to provide a centre-based program, health screening and referral, mental health services, hot meals that supply at least 1/3 of children's daily nutritional needs, social services for the child and family, and mechanisms for on-going parent involvement,<sup>17</sup> local communities have been encouraged to determine the programming approach that would be implemented at their site. As a result, Head Start centre programs range from being almost totally teacher-directed and didactic to having a curriculum that is child-centered and heavily dependent on learning games and exploratory activities. This means that an important component of Head Start and the one that has the most direct involvement with the children, the centre program, varies considerably across sites.

In addition, it is important to remember that Head Start was implemented as a service, not as a research or demonstration project. Instead of randomized assignment of children into program and control groups, evaluations have had to rely on comparison groups that have been matched on key variables, such as family income level, or on the use of statistical procedures to control for known differences between children who did or did not receive the program (see discussion of research methodology in chapter 1).

### ***3.3b Studies that report Head Start outcomes in elementary school***

In 1981, the U.S. government commissioned an in-depth review of the evaluation studies covering the first 20 years of Head Start. Over 1,800 research reports were reviewed and a meta analysis (a procedure that averages out the findings across all studies) was conducted on the 76 studies that had a comparison group of children who had not participated in Head Start.<sup>18</sup> The meta analysis found that at school entry, the Head Start children as a group had better health and nutritional status, higher levels of social skills, and obtained higher scores on tests of school readiness. Once in school, they tended to have lower rates of grade retention and lower rates of placement in special education classes. In light of the lack of universal health care in the U.S., the better health and nutrition status probably reflects the requirement that Head Start projects provide medical and dental screening with follow-

up treatment if required, ensure that children are immunized, and provide meals that supply at least 1/3 of children's daily nutritional requirements. Only nine of the 76 studies followed the children for more than three years. These studies indicated that the beneficial effects from Head Start participation found in the early years 'faded out' later with no between-group differences remaining for school achievement after grade three.

A more recent 1998 review concentrated on studies that followed the children until at least grade three and had a comparison group that was either comparable on key variables or where the researchers used statistical techniques to adjust for known differences between the two groups before doing data analyses.<sup>19</sup> All 12 studies reported achievement test results.<sup>20</sup> The findings were as follows:

- six studies — no significant difference at any point in time between the Head Start children and the comparison group.
- three studies — the Head Start children did better on achievement tests in grade one, but there was no between-group differences in higher grades.
- one study — higher achievement test scores among Head Start children at grade four, no follow-up in subsequent grades.
- one study — the Head Start children did better up to grade six, but no between-group differences after that grade.
- one study — higher achievement test scores among both African-American and white Head Start participants at school entry but only among white participants in later grades.<sup>21</sup>

Four studies measured rates of grade retention and all reported lower rates for Head Start children.<sup>22</sup> One study reported data on high school graduation with 50% percent of the Head Start participants graduating in contrast to 33% of the comparison group.<sup>23</sup>

In summary, the 1998 review found mixed results with some projects reporting clear benefits to the children while others did not, and some evidence that when academic benefits occur they may fade out over time. Possible reasons for the variability in findings include differences in the centre program approach and content in different studies and the well-known variability in the quality of Head Start centres.

### 3.3c *A study that followed Head Start participants into adulthood*

The first study to follow Head Start children and a comparison group beyond school, *Into Adulthood: The Effects of Head Start*, was released in 2000.<sup>24</sup> The sample consisted of 290 adults with an average age of 22 who had attended Head Start in 1970 or 1971 in one of two sites, Florida or Colorado, and a comparison group of 332 young adults who had neither attended Head Start nor any other centre-based early childhood program prior to school entry. The Florida Head Start group was further divided into 86 subjects who had attended a 'regular' Head Start program and 74 who attended a 'model' Head Start program. The model program had been part of the Head Start Planned Variation Project. It had used the High/Scope model curriculum that was used in the Perry Preschool project and was staffed by teachers who received special training in using this curriculum as well as on-going consultation from the curriculum designers. The researchers compared outcomes for both the total sample of Head Start participants and the total comparison group, and for the two different Florida Head Start groups.

The fact that the evaluation was a retrospective follow-up with a comparison group selected 17 years after the fact presented a major problem. The investigators made a concerted effort to match the Head Start and comparison groups on key factors, for example, by selecting comparison group members from young adults who had lived on the same streets or in the same census tracts as the Head Start children and then went to the same or a neighbouring elementary school.

However, as a result of interviews with the young adults, it became evident that the Head Start group was more disadvantaged. The parents of the Head Start group tended to have lower educational levels, Head Start children on average had a higher number of siblings, and a higher proportion of the families had been on social assistance. Two university-affiliated statisticians each did independent analyses and both used statistical techniques to adjust for differences between the two groups. Nevertheless, both reported that the initial non-comparability of the Head Start and comparison groups was a major threat to the data analyses and resulted in a bias *against* finding positive effects from participation in Head Start.<sup>25</sup>

TABLE 3.4: MEANS OF OUTCOME VARIABLES BY HEAD START STATUS AND GENDER; INTO ADULTHOOD: THE EFFECTS OF HEAD START STUDY

Outcome variable	Gender	Florida		Colorado	
		No H.S.	H.S.	No H.S.	H.S.
Grade point average, grades 1 - 4	male	2.53	2.51	2.82	2.66
	female	2.82	2.77	2.75	2.64
Grade point average, grades 9 - 12	male	1.98	1.80	2.30	1.76
	female	2.05	2.18	2.35	1.94
High school completion	male	89.3%	78.3%	88.6%	84.2%
	female	81.1%	95.1%	79.6%	83.9%
Attainment of some post-secondary education	male	47.3%	36.7%	48.6%	31.6%
	female	51.7%	64.3%	62.7%	42.1%
Adult literacy, numeracy test score	whites	29.8	26.3	30.2	26.5
	non-whites	27.9	27.8	27.5	24.4
Incidence of having been arrested	male	38.2%	44.8%	65.7%	60.4%
	female	14.9%	5.0%	35.7%	21.8%
Incidence of having been convicted	male	27.5%	30.7%	48.6%	49.9%
	female	9.6%	5.0%	23.1%	17.7%
Receipt of social assistance as an adult	male	16.0%	27.8%	20.0%	28.2%
	female	56.3%	66.0%	57.6%	65.0%

**Source:** Oden, Schweinhart and Weikart, 2000, Table D. 14.

**Note:** The means and percentages reported above reflect the findings after various statistical procedures had been used to compensate for baseline differences between the Head Start and the comparison groups. Instead of reporting findings for literacy and numeracy by gender, the investigators report by ethnic origin. Non-white is African-American in Florida and Hispanic-American in Colorado. In both states, 'white' refers to all subjects other than African- or Hispanic-American.

After statistical procedures to adjust for differences in the level of disadvantage between the Head Start and the comparison groups, there were no statistically significant differences in outcome.

As noted earlier, a sub-group of the Florida Head Start participants attended a model Head Start program that used the same curriculum as used in the Perry Preschool project and employed teachers who were trained and supervised in its implementation. Participation in the *model* program was associated with:

- Significantly better grade point averages in elementary, middle, and high school than attained by participants in the regular Head Start program.
- Significantly fewer arrests and significantly fewer convictions.
- A lower incidence of teen pregnancies and unemployment, although the differences between the model and regular Head Start groups were not statistically significant.<sup>26</sup>

These differences between the model and the regular Head Start programs operated in Florida, for the same number of hours per week, and serving the same pool of subjects, indicate the importance of having trained people implement a program that has been deliberately designed to support and enhance children's development.

### **3.3d Discussion**

#### *Summary of the evaluation findings*

Collectively, the Head Start findings discussed above indicate that:

- The provision of health screening and referral, the efforts to ensure that all children are immunized, and the provision of nutritious meals have a beneficial effect on the children's health and nutritional status.
- Participation in Head Start reduces the incidence of grade retention.
- Participation in Head Start can *sometimes* benefit children's school readiness.
- Participation in Head Start can *sometimes* reduce the incidence of placement in special education classes.
- Participation in Head Start can *sometimes* have beneficial effects on standard achievement tests and grade point averages.

The ambiguous nature of these collective findings raises a number of questions, including: (1) Why is there so much variation in the effect of Head Start programs? (2) Why do benefits to academic functioning sometimes fade out during the elementary school years, and (3) Why did some evaluations find no benefit from participation in Head Start?

*Why is there so much variation in the effect of Head Start programs?*

As noted earlier, Head Start centre programs vary considerably in their overall approach and their content. In addition, they vary considerably in terms of their quality.<sup>27</sup> This heterogeneity probably contributes to the variation in outcome evaluation findings.

*What may contribute to fade-out?*

Two studies suggest a possible explanation for the fade-out phenomenon. Both studies examined the quality of the elementary schools attended by children from similar low-income backgrounds who had or had not participated in Head Start. Both found that the elementary schools attended by the Head Start graduates were of much poorer quality in terms of variables such as teacher-student relations, safety, and the academic climate.<sup>28</sup> The researchers speculate that the gains made by children in Head Start are eroded when the subsequent elementary school experience fails to support their further development adequately. A Canadian study has demonstrated the importance for outcomes of the “climate” and expectations of children’s performance in elementary school, even when students’ different family backgrounds are taken into account.<sup>29</sup>

*Why do some Head Start programs fail to benefit their participants?*

The explanations put forward to explain the failure of some Head Start programs to benefit children range from questioning whether it is realistic to expect part-day early childhood programming, usually only for one school year, to make a real difference to children’s development,<sup>30</sup> through observations that the Head Start group in various evaluation studies has been more disadvantaged than the control group,<sup>31</sup> to expression of concern about the level of quality in many Head Start centre programs.<sup>32</sup> As acknowledged by Edward Zigler, one of the architects of Head Start, poor centre quality has been a major problem throughout the program’s existence with low staff wages, high staff turnover and fewer than 50% of the teachers with college credentials.<sup>33</sup>

Writing in 1997, an observer notes that since 1967 the federal agencies administering Head Start have insisted that program quality and employment opportunities for local community residents receive equal emphasis. In some cases, “*It now appears that the goal of providing jobs for the low-income unemployed has grown to be more of a concern to sponsors than the quality of the children’s program.*”<sup>34</sup> A study of 32 Head Start classrooms conducted in

1991 and 1992 using a standard observation tool <sup>35</sup> found only three (9%) that were providing a level of care that would support and stimulate children's development. <sup>36</sup> These researchers report that after controlling for the level of stimulation and parental support in the home using a standard measure <sup>37</sup> the level of quality in the Head Start classroom predicted the children's pre-academic skills at the end of one year (nine months) of participation. <sup>38</sup>

### 3.4 Summary and Conclusions

- Single-site centre-based research projects, with their provision of a high quality experience that supports and stimulates children's development, benefit both the child and society by increasing school readiness, school achievement, and the likelihood of graduating from high school, and reducing grade retention and the use of special education classes. Only two projects have reported data collected when the children were young adults; both found indicators of greater life success such as increased rates of employment.
- Head Start programs *sometimes* produce the same types of beneficial effects on school readiness and school career as found in single-site research projects but the effects are smaller. However, in many studies, including the only study to follow Head Start children into adulthood, there is no evidence of benefit from participation in the Head Start program.

There are several plausible explanations for the different outcomes between the single-site research projects and Head Start multi-site programs. First, the research projects usually began when the child was younger. Development is sequential and tasks that need to be accomplished at age four and five are heavily dependent on a scaffold of basic competencies having been established at an earlier age. Second, the research projects were more intense — typically full-day rather than part-day. Third, the research projects were usually of longer duration, two or more years, not the nine months typical of the Head Start programs that have been evaluated. There is a growing body of evidence that programs to enhance the development of children at risk are more effective when started early in the child's life, and that there is an association between the intensity and duration of such programs and outcome. <sup>39</sup> Fourth, the research projects had a higher level of funding. Adequate funding enables programs to: (1) attract adequately trained staff, (2) pay them decent wages which encourage staff to stay and provides continuity of relationship for the children, (3) ensure that child-to-staff ratios are reasonable and enable the provision of individualized attention, and (4) provide a program that is varied and stimulating. These four components are essential for an effective centre-based early childhood program for children at risk for developmental problems.



## Notes

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1. The term 'developmentally-appropriate activities' refers to activities that take into account the child's existing developmental level knowledge and skills.
2. Conger et al., 1992; McLoyd, 1990; Peterson and Peters, 1985; Portes, Dunham and Williams, 1986; Ross, Scott and Kelly, 1996; Zill et al., 1991.
3. Lazar et al., 1982.
4. Gray, Ramsey and Klaus, 1983.
5. Schweinhart, Barnes and Weikart, 1993.
6. Berrueta-Clement et al., 1984; Schweinhart, Barnes and Weikart, 1993; Schweinhart and Weikart, 1980; Weikart, 1967; Weikart, Bond and McNeil, 1978.
7. Campbell et al., 1998; Campbell and Ramey, 1994; 1995; Clarke and Campbell, 1998; Ramey et al., in press; Ramey and Campbell, 1984; 1991; Ramey, Dorval and Baker-Wood, 1983.
8. Ramey et al., 1990; Wasik et al., 1990.
9. Weikart, Kamii and Radin, 1967, p. 76.
10. Clarke and Campbell, 1998, p. 322; Ramey et al., 1982, pp. 163-65.
11. Burchinal, Lee and Ramey, 1989, p. 130.
12. Ramey et al., 1990; Wasik et al., 1990.
13. Ramey et al., 1985.
14. Currie, 2000.
15. Canadian Child Care Federation, 1991, p. 9.
16. National Research Council and Institute of Medicine, 2000, p. 363.
17. Zigler and Styfco, 1994a, p. 129.
18. McKey et al., 1985.
19. Barnett, 1998, Table 1.2. The studies were: Abelson, Zigler, and DeBlasi, 1974; Currie and Thomas, 1995; Evans, 1985; Goodstein, 1975; Hebbeler, 1985; Kanawha Board of Education, 1978; Lee et al., 1990; McDonald and Munroe, 1981; O'Piela, 1976; Pinkleton, 1976; Reedy, 1991; Westinghouse Learning Corporation and Ohio University, 1969.

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20. Ibid., Table 2.
  21. Currie and Thomas, 1995.
  22. Barnett, 1998, Table 2.
  23. McDonald and Munroe, 1981.
  24. Oden, Schweinhart and Weikart, 2000.
  25. Ibid., pp. 143 and 183.
  26. Ibid., p. 177.
  27. Farran, 2000; Zigler and Styfco, 1996.
  28. Currie and Thomas, 1997; Lee and Loeb, 1995.
  29. Willms, 1997, p. 24.
  30. Currie and Thomas, 1995; Hebbeler, 1985; Lee et al., 1990; Zigler, Styfco and Gilman, 1993.
  31. Bryant et al., 1994; Zigler and Styfco, 1994.
  32. Zigler and Styfco, 1996.
  33. Ibid., p. 141.
  34. Omwake, 1997, p. 226.
  35. *The Early Childhood Environment Rating Scale*, Harms and Clifford, 1980.
  36. Bryant et al., 1994, p. 299.
  37. *The Home Observation for Measurement of the Environment (HOME) scale*, Caldwell and Bradley, 1984.
  38. Bryant et al., 1994, p. 301.
  39. National Research Council and Institute of Medicine, 2000.