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Background and purpose of the project



Interventions to promote positive early childhood environments and optimal development are not new. Intensive pilot interventions such as the Perry Preschool Project, which ran between 1962 and 1967 (Schweinhart, Barnes and Weikart 1993), and large-scale ongoing interventions such as Head Start (FACES 2003) are explicitly aimed at improving psychosocial conditions linked to child development in the pre-school years. Developmental gains are also expected to carry over into later stages of development, resulting in fewer problems and better functioning into middle childhood, adolescence and beyond.

The advent of a new knowledge base from developmental neuroscience, and growing evidence from longitudinal studies, has strengthened the argument for expenditure on interventions in early childhood.

Early childhood is now understood to be a “sensitive” period for brain development (also sometimes referred to as a “critical period”, but see Bailey (2002) for a critique). There is a proven relationship between the quality of early childhood experiences – that is, the amount of positive stimulation and sensitive, responsive caring by familiar adults – and the developing capabilities of the brain (Shonkoff and Phillips 2000). Negative experiences, such as exposure to a violent home environment, are also linked to sustained, harmful effects on brain function, and, in turn, negative effects on behaviour, cognition and emotional wellbeing (Schorr 1997). Poor environmental circumstances, such as low family income, have particularly negative effects on children’s cognitive development, behaviour and school achievement (Bailey 2002; Brooks-Gunn 2003).

It is generally accepted that experiences in the early years provide a foundation for future development. This of course does not preclude the possibility of change in developmental pathways depending on later experiences (Bailey 2002; Brooks-Gunn 2003; Shonkoff and Phillips 2000). Some commentators have concluded that experiences and circumstances from conception to age six, and particularly in the first three years, affect brain development in a way that “will affect learning, health and behaviour throughout life” (McCain and Mustard 1999 :5).

The promise of diminishing the burden of disease and dysfunction across the lifespan has encouraged governments and other agencies to invest more heavily in children before they enter formal schooling. This has involved a specific focus on targeted early childhood interventions to assist children from disadvantaged backgrounds to enter school on a more equal footing with more advantaged children (Brooks-Gunn 2003).

There has also been a diversification of early childhood interventions in step with theoretical shifts in developmental science. The evolution of comprehensive, holistic or “multilevel” interventions, which employ programs, services and benefits that target outcomes across child, parent and community domains, reflect ecologically based models of child development, wherein the child is viewed in the context of the family, the family in the context of the community, and the community in the context of society at large.

The aims of early childhood interventions have also broadened. A new body of literature emphasises the importance of focusing on non-cognitive skills as a critical component of child success. If early childhood interventions can avoid the need for special education services at school, and help children get along better with peers, then they are deemed successful, despite their lack of long-term improvements in cognitive skills (Currie 2003).

Despite a strong theoretical base for establishing a foundation of optimal early childhood experiences, it is clear that without appropriate interventions at other crucial developmental stages, children will not be safeguarded from problems in the years to come (Bacharach 2002; Zigler and Styfco 1996; Brooks-Gunn 2003). Brooks-Gunn (2003: 1) even suggests: “It is magical thinking to expect that if we intervene in the early years, no further help will be needed by children in the elementary school years and beyond”.

A small collection of systematic reviews provides a central source of information about the effectiveness of early childhood interventions. The RAND report, entitled “Investing in Our Children: What We Know and Don’t Know about the Costs and Benefits of Early Childhood Interventions” (Karoly et al.1998), provides an independent, objective review of the state of knowledge on early childhood interventions at the time the report was produced in 1997. Similarly, the “Invest in Kids” project (Russell 2002) provides a summary of the outcomes of a large number of early childhood interventions, categorised according to the strength of the evaluation design and intervention type. Undertakings such as these show that a significant proportion of well designed early childhood interventions yield positive and substantial short-term outcomes, with cognitive effects typically diminishing over time but positive effects on crime rates and employment being evident.²

The Perry Preschool Project is one of only a handful of interventions with a longitudinal evaluation component, following children to the age of 27 years. It found that short-term improvements in cognitive outcomes weakened over time. However, the intervention did show a reduction in crime rates and better employment outcomes during late adolescence and early adulthood (Schweinhart, Barnes, and Weikart 1993). Barnett’s (1995: 43) renowned review of the long-term effects of early childhood interventions also concluded that they can produce “sizable persistent effects on achievement, grade retention, special education, high school graduation and socialization” Further, there is considerable research suggesting that the effects of interventions in early childhood can be sustained over time if subsequent schooling is of high quality (for example, Currie and Thomas 2000).³

In sum, many early childhood interventions have demonstrated positive, and often quite strong, short-term effects, but further longitudinal research is needed to confirm mid- to long-term effects (Emde 2003; Reynolds 1994). Further, program evaluations are limited mainly to measuring the effects the intervention has had on characteristics of the sample, or outcomes (such as parent employment or child literacy and numeracy), without taking the extra steps associated with cost-benefit analyses.

Despite this, the long-term benefits (including cost-savings) of interventions in early childhood are continually communicated in broad public debates, with the “seven dollar return to every dollar spent” finding of the Perry Preschool Project (Barnett 1993b; Weikart 1996) receiving a regular airing. Just how generalisable the Perry finding is to other interventions in early childhood is actually a matter for debate, as very few interventions have collected the data needed to perform cost-savings estimations.

The Australian Government Department of Family and Community Services approached the Australian Institute of Family Studies (Institute or AIFS) and the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute) to conduct the *Effectiveness of Early Childhood Interventions* (EECI) project. Broadly, the goal was to conduct a review of select early childhood interventions and provide further information about cost-benefit evaluations. This includes an

2 See also two recent Australian reviews of early childhood interventions. First, Bowes (2000) provides a review of parent education and support programs in the United States. Second, the report titled “A Head Start for Australia: An early years framework” (NSW and QLD Commissions for Children and Young People) provides an examination of the research findings on early intervention programs and their application to the Australian context. Recent commentaries by Brooks-Gunn (2003) and Anderson, Shinn, Fullilove, Scrimshaw, Fielding, Normand, Carande-Kulis and the Task Force on Community Preventive Services (2003) are also relevant.

3 It bears noting that the positive effects of targeted early childhood interventions, while substantial, have not raised outcomes among children from disadvantaged backgrounds to the same level as their more advantaged peers (see Zigler 2003).

attempt to model likely savings from early childhood interventions in a way that is relevant to Australian policy makers.

Specifically, the EECI project aims to report objectively on the cost savings potential of early childhood interventions, and what further information is required to assemble an evidence base on cost-benefits of early childhood interventions in Australia. This should assist future judgements about investments in early childhood interventions in Australia.

The key objectives of the project are to: evaluate methodologies for producing cost-benefit analyses of early childhood interventions; describe the appropriateness of existing evaluation data for conducting cost-benefit analyses of early childhood interventions; and evaluate the extent to which Australian evaluations provide the necessary parameters for cost-benefit analyses.

To meet these goals, national and international early childhood interventions were identified through a systematic search of the available literature. Characteristics of the interventions, including the type of intervention, the intervention received, the subject population, the evaluation methodology, program costs, and anticipated and actual benefits, were documented. Programs meeting predetermined criteria were then selected for a more detailed assessment.

A select subset of the initial sample of interventions was then classified into one of five “clusters” according to key program components. This enabled easy interpretation of the adequacy of the design, implementation and evaluation of interventions included in the review and provided a background for the review of the rigour of cost-benefit studies that follows.

Discussion of the parameters necessary to perform cost-benefit analyses, including ways of quantifying the benefits of interventions that do not have a “price”, such as child behaviours, mother’s social support and parenting, precedes an evaluation of the cost-benefit methodologies undertaken on interventions in this review. Finally, recommendations are made as to the appropriate model to determine the cost-benefits of early childhood interventions in Australia.