

The benefits of early *intervention*

An article in the previous *Stronger Families Bulletin* outlined the importance of early intervention into children's and families' lives and put this into the context of the Commonwealth Government's *Stronger Families and Communities Strategy*. It also provided an introduction to the evidence base underpinning an early intervention approach. In this article, **ELLEN FISH** further explores evidence for the effectiveness of early intervention.

Part of the brief of the Stronger Families Learning Exchange at the Australian Institute of Family Studies is to provide support to early intervention projects, funded under the Commonwealth's Stronger Families Fund.

The primary objective of the Stronger Families Training and Support Team is to assist project teams to evaluate their work using an action research approach.

A second objective is to gather information from the projects in order to develop a picture as to which projects and approaches work, and which do not. It is hoped that this information will form a valuable contribution to the evidence base and assist in the process of developing more effective early intervention projects.

There is the further potential to gather information on what approaches (and in what circumstances) early intervention projects may produce psychological, social and economic benefits for families and the wider community.

The early intervention approach

Growing evidence has emerged from a wide research base in health, developmental psychology, neuroscience,

education and criminology, of the importance of promoting positive family and community experiences for young children during the earliest years of childhood (for example, McCain and Mustard 1999). The importance of early childhood prevention and early intervention programs is based on the premise that the first few years of life of a child's development are crucial in setting the foundation for life-long learning, behaviour and health outcomes (McCain and Mustard 1999; Gauntlett, Hugman, Kenyon and Logan 2000).

Effective early intervention approaches are those that prevent or arrest problems early in a child's life, or at early stages in the development of problem situations. As Oberklaid notes: "Social ills such as crime, unemployment and illiteracy could be countered by early intervention therapies designed to root out problems before they flourished" (cited in Szego and Nader 2002: 4).

Early intervention activities may be carried out at the individual, family, and/or community levels, and can be tailored to meet the needs

of different cultural groups. Early intervention services that may have a positive impact on children and families include: home visiting services for pregnant women and families with new babies; parenting skills training; family relationship education; family counselling; and support services for families with very young children, such as play groups, all of which help stimulate brain development.

What is the evidence for the effectiveness of early intervention approaches?

Brain development

Underpinning the resurgence of interest in early intervention is a growing body of evidence that environmental factors throughout pregnancy and in the postnatal period have a great influence on children's brain development. It has been found "that early experiences and stimulating, positive





“The better the care and stimulation a child receives, the greater the benefit – for the national economy as well as the child. The world is finally recognising that children’s rights to education, growth and development – physical, cognitive, social, emotional and moral – cannot be met without a comprehensive approach to serving their needs from birth.”

– “The State of the World’s Children 1999”
Carol Bellamy, Executive Director
United Nations Children’s Fund
(from McCain and Mustard 1999: 4).

interactions with adults and other children are far more important for brain development than previously realised” (McCain and Mustard 1999: 9).

The quality of children’s experience in the first three years of their lives can have an impact on the wiring and sculpting of the brain’s billions of neurons that lasts a lifetime (McCain and Mustard 1999). Early experiences affect physical and social development, the ability to learn, and the capacity to regulate emotions through the stimulation of the sensing pathways. Thus, nurturing and a good quality of care at the early stages of a child’s life, such as a mother breastfeeding her baby, or a father reading to his toddler while the child sits on his lap, positively affect brain development.

According to McCain and Mustard (1999: 5): “When a mother breastfeeds her baby, the child is both receiving good nutrition and experiencing

stimulation of touch, sight, sound, taste, warmth and smell through the sensing pathways. The experience, like others in early life, drives the wiring of the billions of neurons of the brain that influences or builds the basic capabilities of the brain.”

Because the brain will continue to develop, initiatives for early child development and learning should also continue. McCain and Mustard (1999: 7) argue that therefore the learning in the early years must contain good quality, and “developmentally attuned interactions” with parents or caregivers in addition to play-based problem solving with other children that stimulates brain development.

Conversely, as noted in the last *Stronger Families Bulletin* by Stern (2002: 5): “A lack of stimulation, or negative stresses [in extremes] can result in poor brain development so that babies who have been neglected

or abused are more likely to grow up experiencing poor physical and mental health, drug and alcohol dependence, a lower standard of education, unemployment and crime.”

Negative early experiences “can have a detrimental effect on brain development and subsequently compromise development, learning and regulation of emotion” (Shore 1997, cited in McLoughlin and Nagorcka 1999: 7). A child lacking positive stimulation or exposed to chronic stress in the early years of life may find difficulty overcoming a bad early start (McCain and Mustard 1999).

Such evidence has given rise to a number of programs designed to intervene to assist families to create a positive environment for their children – so-called early intervention programs.

Are early intervention programs effective?

A focus on early intervention and prevention, rather than on treatment after a problem has developed, is both socially and economically more effective in the long term. Put simply, prevention is better than cure.

Early intervention programs have been found to provide psychological and social benefits to children, families and communities. These include: higher rates of employment and skill



levels in mothers; decreased welfare expenditure; increased school performance; a lower rate of criminality within families; a reduction of child abuse and neglect notifications and some decrease in health service (emergency room) attendance rates (NIFTeY online 2002). Evidence has emerged that an investment in the health and development of young children while producing social benefits will also produce economic benefits, particularly associated with a decreased need for services (for example, Barnett 2000; Karoly et al. 1998). The ability to demonstrate cost-effectiveness is vital for policy makers who must weigh up the benefits of providing services against the costs of providing programs (Barnett 2000).

The following are examples from the United States of successful early intervention projects which demonstrate not only psychological and social benefits but also tangible economic benefits to children, families and the broader community.

Perry Preschool Project

The Perry Preschool Project was a small experimental program begun in the early 1960s. It was designed to examine whether high quality early childhood education would help improve the lives of low-income children and their families (Berrueta-Clement et al.

1984). Children participated in an active approach to learning, facilitated by well-trained teachers. The emphasis throughout the program was on problem-solving, choice and decision making, taking responsibility, and maintaining consistent daily routines.

Although the focus of the program was preschool education, there was a home visiting component to enable parents to reinforce the curriculum in the home. Unique in the field, the graduates of the project have been followed until the age of 27 years. It was found that over half of the 58 predominantly African-American, three to four year-old children who participated in the project subsequently had better life outcomes as adults compared with a matched group of non-participants. Further, by the time the preschool graduates had reached 27 years of age, for every dollar taxpayers spent on the project there was a saving of more than seven dollars (Barnett 1993, cited in Tomison and Wise 1999).

Head Start

The Head Start program was one of the earliest and largest early intervention programs, developed before there was an established knowledge base that could indicate the positive effects that early intervention could have on children's development (Zigler and Styfco 1996).

Another preschool project, it was designed to give children aged three to five years experiencing poverty, a "head start" that would put them on par with their middle-class peers. Head Start's aim was to improve child developmental outcomes, in particular their IQ scores and social competence (Zigler and Styfco 1996; Ochiltree 1999, cited in Tomison and Wise 1999).

Each Head Start preschool centre was designed to improve children's mental and physical health, enhance their cognitive skills, encourage their social and emotional development, self-confidence, healthy relationships and social responsibility, and foster a sense of dignity and self-worth for both the child and family. Parents were involved as teacher aides and, although the major focus was on improving the educational outcomes for children, there were also parent education and other classes for parents, and access to family support services was provided through referrals (Condry 1983, cited in Tomison and Wise 1999).

Initial evaluations of the program focused predominantly on changes to IQ scores and, like the Perry Preschool Project, immediate increases in participants' IQ test scores were identified, and these also dissipated over time. There were other lasting program effects, such as being less likely to fail a grade or to require special education classes – benefits that lasted until many children had reached the age of 12 years or more (Zigler and Styfco 1996). There was also strong parental approval for the program and the effects it had had on their children (Ochiltree 1999, cited in Tomison and Wise 1999).

Over time, the Head Start program has taken a two-generational approach to enhancing competence, in that many of the adults from low-income families that have been involved with the program have subsequently become project staff, and/or received training and qualifications through the program, thus improving their own level of competence and subsequent ability to achieve better-paying employment (Ochiltree 1999, cited in Tomison and Wise 1999).

DO YOU KNOW ABOUT

The Database of Good Practice Projects

The *Good Practice Projects Database* is a database of Australian projects which adopt a primary prevention or early intervention approach in their work with families or communities. It aims to keep service providers in touch with what others across the country are doing to help strengthen families and communities.

Particular emphasis is given to those projects that use action research methodology in their work with families with young children.

Primary prevention activities aim to prevent the development of problems or risk factors.

Early intervention activities target individuals or groups who may be at risk of developing problems or who are exposed to potentially harmful environments.

Action research involves a repeated cycle of planning, implementation of change, evaluation and further planning.

Contributions are invited

If your work has a primary prevention or early intervention approach to helping families and/or communities, and if it includes evaluation as part of its methodology, you are invited to submit details to the Stronger Families Learning Exchange. Such work might include: home visiting; parent education; counselling; family support; training; community education; advocacy; research; or community development.

There is a database form which can be downloaded in PDF format (from www.aifs.gov.au/sf/database/form.pdf) and printed out, or contact Ellen Fish on phone (03) 9214 7828, or by Email at strongerfamilies@aifs.gov.au



Elmira Prenatal/Early Infancy Project

The Elmira Prenatal/Early Infancy Project, developed by David Olds and colleagues (1997), provides an excellent example of the socio-economic benefits of early intervention. The Elmira project aimed to prevent ill-health and child abuse through a program of home visitation by professionally trained nurses provided to expectant mothers and their families in Elmira, a rural area of New York State.

The nurses provided parent education and attempted to enhance parents' links to both formal and informal social supports (Olds et al. 1986a). The major finding was that the home-visiting nurses significantly reduced the number of subsequent child abuse reports in comparison with a control group (no services provided). The service was also found to significantly affect prenatal health behaviours such as improving maternal diet, less smoking by mothers, and greater social support. In addition, there were increases in the length of gestation and infant birth weight, including a 75 per cent reduction in pre-term deliveries (Olds et al. 1988, cited in Tomison and Wise 1999).

In addition, at a 15-year follow-up it was found that the program had had a significant impact on behavioural and developmental outcomes. There was also a reduction in subsequent pregnancies, the use of welfare, child maltreatment rates and criminal behaviour on the part of low-income,

unmarried mothers. Economically, the project was estimated to have saved more than \$24,000 per child/family, at a cost of \$6,000 per child.

Conclusion

The Perry Preschool project, the Head Start and Elmira programs are all testimony to the psychological, social and economic benefits of intervening early into families' lives at the early childhood phase. These projects have become the "classic" studies that are used to demonstrate the benefits of adopting an early intervention approach. However, the evidence base continues to be strengthened by new research findings, particularly those produced in Canada and the United States.

In Australia, the Stronger Families and Communities Strategy has adopted early intervention as part of its approach to enhance family and community wellbeing. In this context, the Stronger Families Learning Exchange at the Australian Institute of Family Studies has been developed as a vehicle for improving knowledge about how early intervention projects may be adapted for a range of Australian environments and the benefits that may result.

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