

# Impact and effectiveness of early childhood intervention: a cost–benefit analysis based on representative snapshot case studies

## Research report

Vienna, January 2017

Commissioned by the Austrian Federal Health Agency

### Abstract

Since the start of 2015 regional early childhood intervention networks, based on a uniform underlying model, have been rolled out across all the Austrian provinces. They provide needs based support for families in stressful situations during the early childhood phase (pregnancy and the first years of a child's life). These efforts centre on regional networks that act as multidisciplinary support systems, providing well co-ordinated, varied service offerings for parents and children. Network managements see to the establishment and ongoing maintenance of the inter-agency coordination concerned. Family supporters provide continuous and comprehensive support (mostly as home visits) over an extended period, which lays the foundations for relationships and trust, and arranges the delivery of needs based services by the network.

The preventive nature of these services and the very early start to them permits the **timely recognition and reduction of burdens and stresses**. Due to the proactive and tailor-made support offered, families' **resources can be pinpointed and mobilised**, and **parent–child bonding** strengthened. Proactive and systematic efforts to reach disadvantaged families promote **equity of health and social opportunities**. Intensive networking contributes to the **efficiency of the deployment** of the support services required.

Early childhood intervention has the following objectives, among others:

- » Promotion of strong parent–child bonding, and strengthening of parent–child interaction, resilience and development of protective factors;
- » Improvements in parenting skills;
- » Strengthening of family relationships and social networks;
- » Greater health literacy.

**International evidence** demonstrates that early childhood intervention in the form of early–life health promotion and prevention is particularly efficient and has a positive long-term effect on children's development, their health, and equal health and social opportunities for them.

In particular, studies attest to the following **positive impacts**:

- » Improved prospects for both children and parents;
- » Reduced behavioural problems;
- » Better physical and mental health, especially with regard to depression, obesity, cardiovascular disease, alcohol abuse, drug abuse and addiction;

- » Improved educational attainment, and resultant better qualifications and higher labour force participation;
- » Improved quality of life.

An analysis based on four summarised case studies was carried out to illustrate the **above effects and their potential financial impact on Austria**. The snapshot case studies were designed to show the benefits of early childhood intervention and early initiation of support services (e.g. those provided by a multidisciplinary network) in terms of the avoided cost of typical subsequent support services.

Each case study compares the new programme with an alternative scenario without early childhood intervention, and assumes that the initiation of some kind of support is called on at a later juncture.

The cases were discussed with experts to ensure that the **scenarios were as realistic as possible**. A conservative approach was taken to the assumptions, and extreme consequences such as imprisonment or disablement due to violence were excluded, so the actual benefits could be still greater.

Table 0.1:  
Summary of the results of the snapshot case studies

Case study	Cost-benefit ratio up to school leaving age (18-20 years)	Life-long cost-benefit ratio (up to the age of 65)	Life-long cost-benefit ratio (up to the age of 65) excluding benefits from higher productivity
Family F	1:1.5	1:16	1:7
Family H	1:1.7	1:23	1:8
Family S	1:10.6	1:25	1:13
Family Y	1:5	1:19	1:4

Source: Austrian Public Health Institute

In these case studies, the medium-term **cost-benefit ratio** (up to school leaving age) of early childhood intervention ranges from 1:1.5 to 1:10.6.

The long-term cost-benefit ratio taking account of the benefits yielded by higher productivity is between 1:16 and 1:25 due to both longer/greater labour force participation and improved vocational skills.

Excluding the indirect benefits of higher productivity, the long-term cost-benefit ratio still ranges from 1:4 to 1:13.

All the case studies show that the **overall benefits of early childhood intervention and support services provided by a multidisciplinary network exceed the related costs**. At the same time it is apparent that the benefits exceed the costs incurred in every single area (health, social welfare, education, etc.).

A truly representative picture of the benefits cannot be given because of inadequate data and the impossibility of long-term observation due to the short lifetime of the regional networks.