Preventing Youth Risky Behavior through Early Child Development

Investing in Early Child Development (ECD) – and the parenting skills that necessarily accompany it – may be one of the most effective means for policymakers to reduce youth risk-taking behavior. While research abounds on the positive long term impact of ECD programs on school achievement and other human capital development, more recent longitudinal studies also point to important impacts on reducing the risk of early pregnancy, criminal activity, violence, and substance use as young people move into their adolescent and young adult years. This is particularly evident for those investments which target the poor.
Risky behaviors among youth are a key concern for policymakers. The costs of such behaviors to both the individual and to society can be enormous. While there are many youth development policies and programs that attempt to prevent youth violence, risky sex, school leaving and other such behaviors, relatively little attention has been given to what may be the most effective investment: prevention strategies in early childhood. Science provides clear evidence that early interventions can ensure healthy brain development and foster the cognitive skills in children that have long-lasting effects on their growth and development, ability to learn, and capacity to self-regulate behavior and emotions, all of which protect them from engaging in risky behaviors. In countries as diverse as the U.S., Brazil, and Turkey, investments in young children (birth to 8 years) help prepare them to enter school, perform better in school, and attain more years of education. Longitudinal studies now show that these investments also help to reduce delinquency and crime among boys and men. Among young women, they help to delay first births and to reduce the number of teenage births.

Connecting ECD and Youth Behavior: Brain Development

The first three years of life are of paramount importance. It is the period when most brain development occurs. The brain is the master organ that controls all the functions of a human being: how it develops in the earliest years greatly influences social and physiological behavior later in life. While the billions of neurons in the brain all have the same genetic coding, their differentiation is influenced by the stimulation (experience) to which they are exposed in early life, including in utero. Experience also affects the development of the synapses between neurons. The formation of these connections among neurons establishes pathways that govern our intellectual, emotional, psychological and physical response to stimuli and biological pathways that affect our physical and mental health. This development of the brain, known as “brain wiring”, has an intensive spurt during the first three years of life, and is coupled with a process of pruning away neurons, synapses, and neural pathways that are not being stimulated.

The development of skills that influence learning, behavior and emotional coping in later life seem to be largely affected by the neural pathways established in the brain during development. For example the hypothalamic pituitary adrenal (HPA) pathway (known as the ‘stress’ pathway) plays a key role in emotion and memory, and the endocrine/immune system pathway is associated with competence and coping skills. The better developed these neural pathways are, the lower the likelihood that children will develop anti-social behavior later in life. Children who do not receive proper care, nutrition and attention in the formative years are more at risk of developing major behavioral problems, including conduct disorders, emotional disorders, and attention deficit disorders in later life.

Research Findings: Providing the Evidence Base

The effect of early child interventions on behavioral patterns in later life is well documented, both in developing and developed country contexts. In the U.S., the celebrated High/Scope Perry Preschool – considered the gold standard of evaluations of early child development programs – demonstrates that youth and adults born into poverty who participated in high-quality preschool programs committed fewer crimes, had higher earnings, were more likely to hold a job, and were more likely to have graduated from high school1 (see Figure 1). The Abecedarian Project, a randomized prospective trial of full-time quality child care from infancy through 5 years, also yielded similar positive outcomes to age 21, the end of follow-up (see Figure 2). In addition, the Abecedarian participants were less likely to become teen parents than were children who had not participated in the intervention2. The Chicago Parent–Child Program (the second oldest U.S. Government-funded early child program) offered comprehensive educational center-based early intervention for low income children and family support services. The program evaluation demonstrated that children who did not participate in the program were 70 percent more likely than...
Box 1: Fight Crime - Invest in Kids: A Case Study

The U.S.-based “Fight Crime: Invest in Kids” program illustrates how these research findings can be translated into action. The non-profit is comprised of chiefs of police, sheriffs, officers, prosecutors, youth violence experts, victims of violence, and police associations. Based on the collective experiences of these stakeholders, the group advocates that remedial strategies such as incarceration are insufficient in addressing crime and violence, and are very costly. Governments need to implement an approach that addresses the root causes of crime, focusing more on preventive interventions than corrective ones.

Fight Crime’s operating principle is that in addition to providing adolescents with after school programs, good quality early child interventions that prevent child abuse can make a significant difference in the health of the child as well as his or her community. To this end, Fight Crime’s approach targets not only the individual child or youth, but their families and schools as well. Families – especially those living in poverty or considered at-risk – receive additional support to enhance their parenting skills and to confront the challenges of parenthood. Similarly, schools are encouraged to develop mechanisms that identify children who might be at a higher risk of criminal behavior, such that they can be supported early on.


the participants to be arrested for a violent crime by age 18.

Similar findings have emerged in developing and middle income countries. In Brazil, a study of the impact of preschool showed a benefit–cost ratio of 2 to 1 for children who attended 1 year of preschool, as well as a delayed age of first pregnancy for the female participants. In Turkey, a mother–child education program, which provided early enrichment for young children and training and support for mothers, yielded positive effects for children and mothers in both the short term (e.g., cognitive gains for children) and the long term (e.g., greater educational attainment, reduced delinquency, empowerment of mothers with improved status within families).

Lessons Learned: Translating Research into Action

Experience and research in the early child development field are showing that there are important lessons to be learned in the options policymakers should consider when addressing youth risky behaviors. In some countries, law enforcement officers and child development specialists alike are using these findings to call for crime prevention efforts to support investments in children (see Box 1). These lessons underscore the evidence that it is not sufficient to simply mitigate and control risky behaviors. These efforts must be complemented by interventions to prevent the root causes of such behaviors. Doing so will not only build human capital, but will also save considerable expenditures later on in remedial actions. The three preventive measures outlined below have been demonstrated to have a positive effect over the long term in reducing youth risky behavior.

1. Provide quality early childhood right from the start.

There are two approaches for delivering direct ECD services to young children: center-based programs and home-based programs. Regardless of the modality, most effective interventions combine a series of activities including basic nutrition and health care services with activities designed to stimulate children’s mental, verbal, physical, and psychosocial skills. These interventions also promote parental involvement and community outreach in order to foster a stronger sense of connectedness between new parents and the environment in which their children will grow. Programs targeted to children in their very early years (0 to 3) focus primarily on the parent, offering parental education and support activities. For older children, quality preschool or community center-based programs are run by trained teachers who follow an early childhood curriculum approach that is developmentally appropriate and participatory. It has been shown that the intensity and duration of programs matter; the earlier and longer the child is enrolled in an ECD program, the larger the effect of the program on the child.

2. Provide Parenting Skills Support to Prevent Child Abuse.

Childhood abuse occurs during the critical formative years when the brain is being physically sculpted by daily life experiences. The impact of severe stress can leave an
indelible imprint on the brain’s structure and functions. Harsh punishment, unwanted sexual advances, belittling, and neglect are thought to release a cascade of chemicals, which produces an enduring effect on the signals that brain cells send and receive from each other. The effects of such abuse can manifest themselves in a variety of ways, internally through depression and outwardly through substance abuse and delinquency to name a few. To prevent these negative pathways, it is important to work with at-risk parents and provide regular coaching in parenting and other skills, combined with support services by a paraprofessional. Through coaching classes parents learn how to manage stress, understand the child’s health and nutrition needs and identify signs of problems, among other skills. Coaching classes are particularly effective for expectant mothers, with the possibility of continued support throughout the child infancy. Findings on this type of coaching or home-visitation programs in the United States show that as many as four out of five cases of abuse and neglect in high-risk families can be prevented.

3. Identify Problem Behaviors Early on in Schools.

Examples of such an approach include programs that help teachers identify troubled kids at an early age and provide adequate support before they turn into troubled or dysfunctional adolescents. There are several ways for teachers and schools to identify troubled kids ranging from using psychosocial screening instruments or simply by monitoring children’s school performance and observing how they interact with their peers. For example, there is evidence that bullies or victims of bullies have a higher probability of committing a violent crime. Bullying prevention programs are relatively inexpensive and produce measurable results. The evaluation of the Montreal Preventive Treatment Program aimed at kindergarten children who were assessed as having high levels of disruptive behavior, which had a school-based component and a parent-training component, shows that intervening with dysfunctional first and second grade boys nearly cut in half the odds that they would later be rated highly disruptive by a teacher or by peers. This in turn reduces the consequent costs of special education, repetition, and drop out which dysfunctional children generate.

Concluding Remarks

Early child development interventions should be a central policy option to consider when addressing the difficult challenge of preventing youth risky behaviors. Such investments can have a direct impact on reducing crime, violence and generate many other positive externalities, including higher educational attainments and delayed age at first birth. Moreover, they are more cost effective in the long run than focusing on remedial interventions. These arguments are supported by a vast literature of research testifying to the results of ECD interventions. Given the particular success rate in areas affected by poverty, it is increasingly evident that ECD interventions need to be at the center of public sector strategies for investing in human and social development.

Recommended reading

7. Ibid.

Children & Youth Unit, Human Development Network, The World Bank

This note was prepared by Fraser Mustard (Founding President of the Canadian Institute for Advanced Research); Mary Eming Young (Lead Specialist in Early Child Development, HDN CY); and Erika Dunkelberg (Early Child Development Specialist, HDNCY). The authors wish to thank Linda McGinnis (Lead Economist, HDNCY) and Peter Holland (Economist, HDNCY) for their valuable comments. Photo credit: Shehzad Noorani. The views expressed in these notes are those of the authors and do not necessarily reflect the view of the World Bank.