

# The Future of Preschool Prevention, Assessment, and Intervention

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## KEYWORDS

- Preschool • Children • Brain health • Wellness • Mindfulness • Exercise • Music • Nutrition

## KEY POINTS

- Promoting brain health improves the emotional-behavioral health of all children, can prevent problems in children at risk, and can alter the trajectory of children already suffering.
- The environment shapes the structure and function of the developing brain, so promoting brain health requires cultivation of healthy environments at home, school, and in the community.
- Promoting brain health requires assessing and treating the entire family and equipping parents with the principles of parent management training.
- Clinicians should incorporate wellness prescriptions for nutrition, physical activity, mindfulness, and music into work with families.

## INTRODUCTION

This article presents neuroscience that establishes that it is possible to promote brain health as a pathway to

- Improving emotional-behavioral and general medical health in all children.
- Preventing the development of emotional-behavioral problems in those at very high risk.
- Staying and reversing the toll of pre-existing emotional-behavioral problems in children who are already suffering.

Added to the extant neuroscience data, it presents health promotion prescriptions that the authors believe are the future of brain and body health. The goal is to promote the argument that building healthy brains in young children promotes

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healthy bodies, families, and communities. The article provides examples of how these interventions are interrelated and must be integrated into a family-based model.

### ***Early Childhood Brain Development: from Infinity to Beyond***

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Modern neuroscience, genetics, epigenetics, and public health research has presented the tantalizing possibility that it can now be said with relative certainty that much (certainly not all) is understood about why some children struggle and others soar. Although it is an oversimplification, it can now be suggested that it is possible to understand how environmental factors, both negative and positive, influence the genome or epigenome, which in turn influence the structure and function of the brain and thus human thoughts, actions, and behaviors.

Equally important is the supposition that thoughts, actions, and behaviors are responsible for the arc of human development, again in both positive and negative arcs. Why are some children able to calm themselves, smile, play, engage, and learn with ease; whereas others follow paths of pan-dysregulation, expressing impairment in attentional, mood regulatory, and cognitive domains? For much of the past 50 years, clinicians and researchers have been on a hunt for causal influences on why children suffer, with little attention paid to the causal influences on why children succeed.

The relatively simple idea that building healthy brains in young children requires healthy environments (family, school, communities) is difficult to ignore. It is clear that children raised in adversity, particularly those who face multiple adverse events,<sup>1</sup> are probabilistically at greater risk to struggle from all of the negative outcomes of adulthood, including psychopathologic conditions, drug abuse, hypertension, diabetes, obesity, and the cancers. It is also clear that some children are able to rise above the toll of adversity and achieve great things; however, these exceptions do little to dim the light that healthy environments lead to healthy outcomes.

Unlike adults, who have some influence as to what environment they will live in (eg, partners, jobs, lifestyles, food), children, particularly those in the preschool age group, have almost no choice. Keep in mind, little kids do not get to choose their parents, whether or not they have siblings, where they live, what or how much they can eat, whether or not they are loved or neglected, and in whose care they will be entrusted. In many ways, early life is simply a reaction to the environmental influences to which a child is exposed. Understanding the dynamic process in how the environment influences the genome (epigenome), which then influences the structure and function of the developing brain and subsequent cognitive and emotional health, is central to understanding how best to promote healthy brain development in preschool children. A key and obvious starting point is to help the parents of the child present a protective, healthy brain-developing environment for their child. Second, is to collaborate in developing high-quality childcare and preschool settings to build on (and sadly in some cases, undo) the influences of the home environment on the child. Taken together, promoting positive home and preschool environments can be best considered as the targets for assuring that all is being done to help little ones develop to their potential.

### ***Family-Based Health Promotion***

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The lead author has previously published on the importance of seeing families as the unit of health promotion and illness prevention for young children.<sup>2</sup> This article specifically addresses some of the salient issues of early brain development and provides

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