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Birth to Three: Extension's Role in the Early Years

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PREVIOUS ARTICLE | ISSUE CONTENTS | NEXT ARTICLE

Birth to Three: Extension's Role in the Early Years

Abstract
Recent research about brain development in infants and young children has raised public awareness about the importance of the early years, but there is little consensus about what those findings mean for policy and practice. Extension's community-based network, well-trained staff, strong community ties, and links to campus-based resources make it uniquely positioned to help families, communities, and states develop sound research-based responses to ensure a strong start for their youngest citizens.

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If you've been working in the area of early childhood or concerned about young children or just plain alive and listening to the news in recent years, you've probably gathered that there's important new news about the first 3 years of life. Though psychologists have known for some time that brains are important to babies' experiences, recent years of research show that babies' experiences are also important for their brains.

While infants come into the world with plenty of brain cells, those cells need to get connected to each other to function effectively. Cells do this by building synapses between each other, resulting in a rich interconnected neural network. It is the experience of everyday life that prompts this critical developmental process.

And when does this all happen? The most intense period of development for humans is between birth and 3 years of age. By age 2, toddler synaptic networks are as rich as those of adults. At 3 years, they're twice as dense as those of adults and stay that way until 9-10 years of age. Synaptic development in the prefrontal cortex, the site of higher-level cognition, takes place over a longer period, peaking at one year, but continuing strong through much of adolescence. Over the teenage years, unused synapses are "pruned," i.e., eliminated, to result in a leaner organizational structure--cerebral downsizing, if you will. (Shaklee & Fletcher, 2002; Shonkoff & Phillips, 2000).

From Research to Policy

Armed with this new information about how early experiences shape the physical structure of the brain, early childhood professionals joined concerned parents and citizens in calling for public policies and practices to support these developmental trends. Expenditures for children's development are currently focused on children from 5-18 years of age, through the extensive system of public education developed over the past 200 years. However, current brain research suggests that similar concern should be directed to the infant and preschool years.

While there is clear consensus among early childhood professionals about the importance of the early years to children's development, there is less agreement about what to do about it. The body of research on early development is growing at a rapid pace, but the meaning of the findings for programs and policies is less clear. Who, ultimately, is responsible for how we care for infants and toddlers, and how should we move from research to practice in the early childhood years? (Caring for Infants and Toddlers, 2001).

In many cases, policy implications have been sufficiently confusing that communities and states have made no response. The Map and Track project of the National Center for Children in Poverty

reports that, by the end of the year 2000, 19 states still had no funded programs that specifically target infants and toddlers. The effect of the early years research is seen in the seven states that took their first step in early childhood funding in 2000 (National Center for Children in Poverty, 2002).

In other cases, policy makers have initiated programs for infants and young children, but not always on sound research grounds. For example, the states of Georgia and Tennessee launched a program to give a classical music CD to every new mother, based on news that listening to classical music could enhance cognitive performance for children. Similarly, a new law in Florida requires that children in state-run child care centers listen to classical music daily. Such programs may be good for the classical music industry, but a look at the research raises doubts about their utility.

These programs and policies were initiated in response to a study in which college students showed increased spatial reasoning skill immediately after listening to Mozart. No long-term effects were measured, and more recent studies show that even the short-term effect is inconsistent. There have been no studies with infants or toddlers showing any cognitive impact of classical music (Shonkoff & Phillips, 2000). Policy makers in these states could have used more direction in using research to inform policy for young children.

These cases point to the difficulty of moving from research to practice in the public arena. Research is clear that the experiences of the early years shape infants' and children's brain development, but what should be done about it?

- Do we need educational programs for parents?
- Better adult-child ratios in childcare settings?
- More effective intervention when young children are abused and neglected?
- Support to help young parents develop positive home environments?
- Flex time at work so parents have more time with their children?

These are all promising options for parents and their young children, but which would best promote a strong start for children? Which are affordable within family, business, community, and state budgets? And which approaches fit with public ideology about appropriate roles for parents, community, and the state? (Gopnik, Meltzoff, & Kuhl, 1999; Shonkoff & Phillips, 2000)

Roles for Extension

The Cooperative Extension System is uniquely positioned to help families and communities sort out these questions as they explore the implications of early childhood research for their children. Problems in research application such as these are ideally suited to the structure and resources of the Extension System. Figure 1 below shows how the core features of the Extension System work together in developing sound research-based policy for young children.

Figure 1.
Extension supports development of research-based programs and policies for young children.

- **From research to practice:** The function of the Cooperative Extension System is to bring the latest research out of the confines of the library and into communities where people can put it to good use. Research in early childhood and neurodevelopment is moving ahead at a rapid pace and communities will need current updates to make informed decisions about programs and policies.

- **Training:** Extension faculty in Family and Consumer Sciences are well trained in issues relevant to family life and child development. Their educational backgrounds prepare them to

keep abreast of the latest developments in this lively research area, and to help the public articulate the implications of the research for how they care for children.

- **Links to policy makers:** Extension staff have established track records in research-based problem solving with policy makers at the community and state level. Extension faculty can build on this successful history as they work with policy makers on their concerns about their youngest citizens.

- **Community connections:** Extension faculty have a long record of success in working with parents, childcare providers, child-relevant organizations, and others concerned about children. They are well positioned to draw together community-based coalitions in the area of early childhood.

- **Campus-based resources:** With its strong university ties, Extension is able to draw on campus-based resources and expertise to help communities address their concerns about young children. Campus faculty in Family and Consumer Sciences, Education, Psychology, Physiology, and Neuroscience Departments can keep county-based faculty apprised of the latest developments in early childhood, ensuring that communities work from a sound research base.

- **Grantsmanship:** County faculty and state Extension personnel can help community-based and state-level coalitions as they search for resources to expand programming to the early years. Campus-based research offices facilitate this process as well.

- **Evaluation:** As communities move forward in the area of early childhood, well-designed evaluations are necessary to assess program impact. Extension professionals, with the support of university resources, can help develop and conduct comprehensive evaluation schemes for programs launched in response to the early brain development research.

- **Best practice:** As early childhood programs and policies are initiated in early childhood, program outcome information allows communities to assess the likelihood the programs will meet their needs. Extension personnel can stay up-to-date on "best practice" programs for a strong start for young children and their families.

Recent findings about early brain development challenge parents, citizens, communities, and policy makers at state and local levels to provide their infants and young children with a strong start in life. But the path from research to practice can be unclear as communities search for the best ways to put those findings in practice. Extension can serve a key role in guiding the process toward the sound, research-based programs most likely to meet the needs of young children and their families.

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