

**From Neurons to Neighborhoods:
The Science of Early Childhood Development**



**Mississippi
Family Impact Seminar
Briefing Report**

January 2003

**MISSISSIPPI
FAMILY IMPACT SEMINAR
BRIEFING REPORT**

**FROM NEURONS TO
NEIGHBORHOODS:
THE SCIENCE OF EARLY
CHILDHOOD DEVELOPMENT**

First Edition

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MISSISSIPPI FAMILY IMPACT SEMINARS

Mississippi is one of 13 states in the United States that offers an educational, nonadvocacy format to connect research and state policymaking. Based at the University of Wisconsin-Madison, the Policy Institute for Family Impact Seminars oversees training for each of the 13 state member organizations.

Mission Statement

The Family Impact Seminars aim to (a) connect research and state policymaking and (b) promote a family perspective in policy development, enactment, and implementation.

Goals

The Family Impact Seminars are a series of seminars, briefing reports, and follow-up activities to inform the decision making of state policymakers and policy implementers on an ongoing basis. Given the growing realization that one effective way to help individuals is by strengthening their families, Family Impact Seminars analyze the effects of policies and programs on families. Rather than lobbying for a particular policy option, the seminars provide objective, nonpartisan information on a range of policy alternatives. The seminars provide policymakers with a neutral, nonpartisan forum for fostering dialogue and seeking common ground. The goals of the Family Impact Seminars are to:

- C provide research and practice-based information that is relevant and useful for developing state-level policies that strengthen and support families across the life cycle
- C increase knowledge of current policy issues by presenting objective, state-of-the-art research
- C identify timely issues of interest to state policymakers and present innovative, politically, and economically feasible policy options for making complex problems more manageable
- C increase understanding of a family perspective in policymaking and encourage policymakers and policy implementers to consider how policies and programs affect family well-being
- C develop innovative delivery methods for disseminating research to state policymakers
- C facilitate communication and establish linkages among researchers, policymakers, and policy implementers

Presenter

Jack P. Shonkoff, M.D.

Dean of the **Heller School for Social Policy and Management** and the **Samuel and Rose B. Gingold Professor of Human Development and Social Policy** at **Brandeis University**.

Dr. Shonkoff served as chair of the Committee on Integrating the Science of Early Childhood Development for the Institute of Medicine and the National Research Council of the National Academy of Sciences. He co-edited its final report, *From Neurons to Neighborhoods: The Science of Early Childhood Development*.

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Executive Summary

The many changes in the world in the past two decades have changed the way we consider early childhood development. Increasingly complex research projects and data collection methods allow us to know more about what children need to grow into healthy citizens.

Dr. Shonkoff shares with us the findings of his work with the Committee on Integrating the Science of Early Childhood Development, established by the Board on Children, Youth, and Families of the National Research Council and the Institute of Medicine. The committee examined research in the field and identified implications for policy, practice, professional development, and research.

The committee identified the core concepts of human development which frame our understanding of young children. It concluded that all children are born wired for feelings and ready to learn. Their early environments matter and nurturing relationships are essential. While society is changing, the needs of young children are not being addressed. The interactions among early childhood science, policy, and practice demand dramatic new thinking.

Their recommendations for policy and practice require a commitment to two complementary agendas:

- How can society use knowledge about early childhood development to maximize the nation's human capital and ensure the ongoing vitality of its democratic institutions?
- How can the nation use knowledge to nurture, protect, and ensure the health and well-being of all young children as an important objective in its own right, regardless of whether measurable returns can be documented in the future?

To this end, the committee addressed the issues of a need for greater attention to mental health needs, the need to protect early brain development, the need to recognize the significance of nonparental caregivers, and the need to enhance support for working families.

The committee concluded its work with the urgent call for a new national dialogue, focused on re-thinking the meaning of both shared responsibility for children and strategic investment in their future.

Drs. Fair and Stanberry bring current statistics on Mississippi children and families. Indicators of child well-being indicate our children are below the national average for every indicator. Our rural and low economic

conditions increase the likelihood that children will have more health and nutrition issues and more developmental disabilities.

Fair and Stanberry raise the issues of inadequate funding with the current Individuals with Disabilities Education Act (IDEA) formula for the number of children in need under the age of 3, the lack of properly trained personnel to meet the needs of young children with special needs, and the lack of adequate access to childcare.

The authors suggest the need for higher standards for early childhood educators working in child care and Head Start. Many children have special needs and they mostly need the same thing all children need: **A good, healthy start with competent parental and nonparental caregivers.**

If, as a state, Mississippi is to improve its ratings on poverty, education, and business, we must look at the root of the problem. Our human capital, our children, must be nurtured and supported in healthy ways.

Acknowledgements

For their generosity in providing financial support for the Mississippi Family Impact Seminar, “From Neurons to Neighborhoods: The Science of Early Childhood Development”, we extend our sincere appreciation to:

The CREATE Foundation of the Phil Hardin Foundation
The Mississippi Department of Health
The Early Childhood Institute of Mississippi State University
The College of Health and Human Sciences of The University of Southern Mississippi
The School of Family and Consumer Sciences of The University of Southern Mississippi
The Mississippi Early Childhood Association
The Mississippi Association of Family and Consumer Sciences
The Mississippi Coalition for Change: Quality of Life Issues

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Ann P. Blackwell, Ph.D.

Advisory Committee

The Honorable Eloise Scott, the Mississippi House of Representatives
The Honorable Ron Farris, the Mississippi Senate



A Checklist for Assessing the Impact of Policies on Families

The first step in developing family-friendly policies is to ask the right questions:

- What can government and communities do to enhance the family's capacity to help itself and others?
- What effect does (or will) this policy (or proposed program) have for families? Will it help or hurt, strengthen or weaken family life?

These questions sound simple, but they can be difficult to answer.

The Family Criteria (Ad Hoc) Task Force of the Consortium of Family Organizations (COFO) developed a checklist to assess the intended and unintended consequences of policies and programs on family stability, family relationships, and family responsibilities. The checklist includes six basic principles that serve as the criteria of how sensitive to and supportive of families policies and programs are. Each principle is accompanied by a series of family impact questions.

The principles are not rank ordered and sometimes they conflict with each other, requiring trade-offs. Cost effectiveness also must be considered. Some questions are value-neutral and others incorporate specific values. People may not always agree on these values, so sometimes the questions will require rephrasing. This tool, however, reflects a broad nonpartisan consensus, and it can be useful to people across the political spectrum.

This checklist can be used to conduct a family impact analysis of policies and programs.

✓ *For the questions that apply to your policy or program, record the impact on family well-being.*

1

Principle 1. Family support and responsibilities

Policies and programs should aim to support and supplement family functioning and provide substitute services only as a last resort.

Does the proposal or program

- support and supplement parents' and other family members' ability to carry out their responsibilities?
- provide incentives for other persons to take over family functioning when doing so may not be necessary?
- set unrealistic expectations for families to assume financial or caregiving responsibilities for dependent, seriously ill, or disabled family members?
- enforce absent parents' obligations to provide financial support for their children?

2

Principle 2. Family membership and stability

Whenever possible, policies and programs should encourage and reinforce marital, parental, and family commitment and stability, especially when children are involved. Intervention in family membership and living arrangements is usually justified only to protect family members from serious harm or at the request of the family itself.

Does the policy or program

- provide incentives or disincentives to marry, separate, or divorce?
- provide incentives or disincentives to give birth to, foster, or adopt children?
- strengthen marital commitment or parental obligations?
- use appropriate criteria to justify removal of a child or adult from the family?
- allocate resources to help keep the marriage or family together when this is the appropriate goal?
- recognize that major changes in family relationships such as divorce or adoption are processes that extend over time and require continuing support and attention?

3

Principle 3. Family involvement and interdependence

Policies and programs must recognize the interdependence of family relationships, the strength and persistence of family ties and obligations, and the wealth of resources that families can mobilize to help their members.

To what extent does the policy or program

- recognize the reciprocal influence of family needs on individual needs, and the influence of individual needs on family needs?
- recognize the complexity and responsibilities involved in caring for family members with special needs (e.g., physically or mentally disabled, or chronically ill)?
- involve immediate and extended family members in working toward a solution?
- acknowledge the power and persistence of family ties, even when they are problematic or destructive?
- build on informal social support networks (such as community/neighborhood organizations, religious communities) that are essential to families' lives?
- respect family decisions about the division of labor?
- address issues of power inequity in families?
- ensure perspectives of all family members are represented?
- assess and balance the competing needs, rights, and interests of various family members?
- protect the rights and safety of families while respecting parents' rights and family integrity?

4

Principle 4. Family partnership and empowerment

Policies and programs must encourage individuals and their close family members to collaborate as partners with program professionals in delivery of services to an individual. In addition, parent and family representatives are an essential resource in policy development, program planning, and evaluation.

In what specific ways does the policy or program

- provide full information and a range of choices to families?
- respect family autonomy and allow families to make their own decisions? On what principles are family autonomy breached and program staff allowed to intervene and make decisions?
- encourage professionals to work in collaboration with the families of their clients, patients, or students?
- take into account a family's need to coordinate the multiple services required? Does it integrate well with other programs and services that the family uses?
- make services easily accessible to families in terms of location, operating hours, and easy-to-use application and intake forms?
- prevent participating families from being devalued, stigmatized, or subjected to humiliating circumstances?
- involve parents and family representatives in policy and program development, implementation, and evaluation?

5

Principle 5. Family diversity

Families come in many forms and configurations, and policies and programs must take into account their varying effects on different types of families. Policies and programs must acknowledge and value the diversity of family life and not discriminate against or penalize families solely for reasons of structure, roles, cultural values, or life stage.

How does the policy or program

- affect various types of families?
- acknowledge intergenerational relationships and responsibilities among family members?
- provide good justification for targeting only certain family types, for example, only employed parents or single parents? Does it discriminate against or penalize other types of families for insufficient reason?
- identify and respect the different values, attitudes, and behavior of families from various racial, ethnic, religious, cultural, and geographic backgrounds that are relevant to program effectiveness?

6

Principle 6. Support of vulnerable families

Families in greatest economic and social need, as well as those determined to be most vulnerable to breakdown, should be included in government policies and programs.

Does the policy or program

- identify and publicly support services for families in the most extreme economic or social need?
- give support to families who are most vulnerable to breakdown and have the fewest resources?
- target efforts and resources toward preventing family problems before they become serious crises or chronic situations?

The Policy Institute for Family Impact Seminars aims to connect research and policymaking and to promote a family perspective in research, policy, and practice. The institute has resources for researchers, policymakers, practitioners, and those who work to connect research and policymaking.

- To assist researchers and policy scholars, the institute is building a network to facilitate cross-state dialogue and resource exchange on strategies for bringing research to bear on policymaking.
- To assist policymakers, the institute disseminates research and policy reports that provide a family impact perspective on a wide variety of topics.
- To assist those who implement policies and programs, the institute has available a number of family impact assessment tools for examining how responsive policies, programs, and institutions are to family well-being.
- To assist states who wish to create better dialogue between researchers and policymakers, the institute provides technical assistance on how to establish your own state's Family Impact Seminars.

The checklist and the papers are available from Director Karen Bogenschneider, and Editor Meg Wall-Wild of the Policy Institute for Family Impact Seminars at the University of Wisconsin-Madison/Extension, 130 Human Ecology, 1300 Linden Drive, Madison, WI, 53706; phone (608)263-2353; FAX (608)262-5335; <http://www.uwex.edu/ces/familyimpact>.

This checklist was adapted by the institute from Ooms, T. (1995). *Taking families seriously as an essential policy tool*. Paper prepared for an expert meeting on Family Impact in Leuven, Belgium. The first version of this checklist was published by Ooms, T., & Preister, S. (Eds., 1988). *A strategy for strengthening families: Using family criteria in policymaking and program evaluation*. Washington DC: Family Impact Seminar.

From Neurons to Neighborhoods: The Science of Early Childhood Development

By Jack P. Shonkoff, MD

This chapter explains the work of the Committee on Integrating the Science of Early Childhood Development that was established by the Board on Children, Youth, and Families of the National Research Council and the Institute of Medicine to evaluate and synthesize the interdisciplinary science of early childhood development and assess the influence of early experiences on children's lives. The committee was asked to separate fact from fiction and examine implications for policy, practice, professional development, and research. They found that early experiences make an important difference in children's lives; nurturing relationships are essential; society is changing and the needs of young children are not being met; and, interactions among early childhood science, policy, and practice are problematic and demand dramatic rethinking.

Putting the Study in Context

Two important changes over the past several decades have coincided to produce a dramatically altered landscape for early childhood policy, service delivery, and childrearing in the United States.

1. There has been an explosion of knowledge in neurobiology and the behavioral and social sciences.
2. There have been marked transformations in the social and economic circumstances under which families are raising young children.

Nevertheless, at a time when scientific advances could be used to strengthen early childhood policies and practices, knowledge is frequently dismissed or ignored and our children are paying the price.

Society is changing. Needs of young children are not being met.

Core Concepts of Development

Framing our understanding of human development are a number of core concepts:

1. Human development is shaped by a dynamic and continuous interaction between biology and experience.
2. Culture influences every aspect of human development and is reflected in childrearing beliefs and practices designed to promote healthy adaptation.
3. The growth of self-regulation is a cornerstone of early childhood development that cuts across all domains of behavior.
4. Children are active participants in their own development, reflecting the intrinsic human drive to explore and master one's environment.
5. Human relationships, and the effects of relationships on relationships, are the building blocks of healthy development.
6. The broad range of individual differences among young children often

makes it difficult to distinguish normal variations and maturational delays from transient disorders and persistent impairments.

7. The development of children unfolds along individual pathways whose trajectories are characterized by continuities and discontinuities, as well as by a series of significant transitions.
8. Human development is shaped by the ongoing interplay among sources of vulnerability and sources of resilience.
9. The timing of early experiences can matter but, more often than not, the developing child remains vulnerable to risks and open to protective influences throughout the early years of life and into adulthood.
10. The course of development can be altered in early childhood by effective interventions that change the balance between risk and protection, thereby shifting the odds in favor of more adaptive outcomes.

Human relationships and the effects of relationships on relationships, are the building blocks of healthy development.

CONCLUSIONS

All Children Are Born Wired For Feelings and Ready to Learn

Young children make dramatic and intertwined gains in cognitive, linguistic, emotional, social, regulatory, and moral development during the early childhood years, and each requires focused attention. Striking developmental disparities associated with social and economic disadvantages are apparent well before kindergarten and are predictive of later academic performance. Social, emotional, and regulatory impairments can seriously compromise early childhood development. Indeed, young children can suffer sadness, grief, and disorganization in response to trauma, loss, or personal rejection. Many early childhood programs do not have the capacity to address these concerns and the severe shortage of early childhood professionals with mental health expertise is an urgent problem.

Children's early development depends on the health and well-being of their parents, who along with other regular caregivers, are the active ingredients of environmental influence during early childhood.

Early Environments Matter and Nurturing Relationships Are Essential

The traditional *nature versus nurture* debate is simplistic and scientifically obsolete. Genetic and environmental influences are completely intertwined and work together in dynamic ways over the course of development. Children's early development depends on the health and well-being of their parents who, along with other regular caregivers, are the "active ingredients" of environmental influence during the early childhood period.

- Young children who lack at least one loving and consistent adult often suffer severe and long-lasting developmental difficulties.
- Significant parental mental health problems—particularly maternal depression, substance abuse, and family violence—impose heavy developmental burdens.
- The need for greater respect for child care providers is long overdue.

Poverty may be more damaging during the early childhood period than at later ages—especially in its subsequent impact on a child's school performance and ultimate academic achievement.

- Early brain development is designed to recruit and incorporate early experiences, but the window of influence does not slam shut at age 3 or 5.
- There is little evidence that special "enrichment" experiences promote "advanced" development in infancy, beyond the benefits of a supportive environment that provides a variety of opportunities for learning.
- Poor nutrition, specific infections, environmental neurotoxins, drug exposures and chronic stress can harm the developing brain.
- Early intervention programs can improve the odds for vulnerable young children, but those that work are rarely simple, inexpensive, or easy to implement.
- Culture influences every aspect of human development, and is reflected in a wide variety of child-rearing beliefs and practices

Society Is Changing and the Needs of Young Children Are Not Being Addressed

Significant social and economic transformations are posing serious challenges to the efforts of parents and others to strike a healthy balance between spending time with their children, securing their economic needs, and protecting them from the many risks that could have an adverse impact on their health and development.

Conclusions of this study:

- Parents are working harder, and for longer (and often nonstandard) hours.
- Economic needs often require return to work soon after a baby's birth.
- Access to good quality child care is beyond the reach of many working families.
- The burden of poor quality and limited choice of care rests most heavily on low-income working families above the poverty level.
- Young children are the poorest members of society and are more likely to be poor today than 25 years ago.
- Poverty may be more damaging during the early childhood period than at later ages—especially in its subsequent impact on a child's school performance and ultimate academic achievement.
- The double burden of family poverty and an impoverished neighborhood is a particularly significant threat, which affects minority children to a disproportionate extent.

Interactions Among Early Childhood Science, Policy, and Practice Demand Dramatic Rethinking

Knowledge about intervention effectiveness is constrained by the limited availability of rigorous evaluations of program implementation and infrequent assessments of financial costs and benefits. The politicized context of program evaluation research results in a high stakes environment that undermines honest attempts to identify shortcomings in order to improve quality.

There is an increasing need to reconcile traditional program formats and strategies—which emphasize active parent involvement and home-based services—with the economic and social realities of current family life and the growing cultural diversity of the population. Rapid advances in the science of early childhood present formidable challenges for professional continuing education.

RECOMMENDATIONS FOR POLICY AND PRACTICE

Commitment to Two Complementary Agendas

A Question for the Future

How can society use knowledge about early childhood development to maximize the nation's human capital and ensure the ongoing vitality of its democratic institutions?

A Question for the Present

How can the nation use knowledge to nurture, protect, and ensure the health and well-being of all young children as an important objective in its own right, regardless of whether measurable returns can be documented in the future?

Need for Greater Attention to Mental Health Needs

Early childhood programs must balance their focus on literacy and numeracy skills with comparable attention to the emotional, regulatory, and social development of all children, including those with special needs.

New investments must be made to address serious mental health needs in young children:

- Strong linkages must be built among welfare, protective services, early intervention, and mental health agencies.
- A comprehensive analysis of professional development challenges is needed, followed by significant investments in training.

To protect children's early brain development, the nation should mount an attack on harmful prenatal and early postnatal neurotoxic exposures and violence in families.

Need to Protect Early Brain Development

In order to protect children's early brain development, the nation should mount an attack on harmful prenatal and early postnatal neurotoxic exposures and violence in families on a magnitude comparable to other public health campaigns such as smoking cessation and teen pregnancy reduction.

All infants should have access to early screening and treatment of auditory, visual, or physical impairments that interfere with the brain's need for sensory and motor inputs

Need to Recognize the Significance of Nonparental Caregivers

We must develop a blueprint to ensure that public investments in child care

- promote sustained relationships between preschoolers and qualified caregivers.
- address the special needs of children with developmental disabilities or chronic health conditions.
- ensure that all early care and education settings are safe, stimulating, and compatible with the values and priorities of their families.
- make serious investments in training and compensation for child-care professionals

Need to Enhance Support for Working Families

In order to strengthen supports for working families:

- Congress and the President's Council on Economic Advisors should scrutinize the nation's tax, wage, and income-support policies to assure that no child supported by a working adult lives in poverty, and that no children suffer from deep and persistent poverty, regardless of their parents' employment status.
- The Family and Medical Leave Act should be expanded to cover all working parents, and strategies should be explored to provide income replacement.
- The exemption period should be lengthened before states require parents of infants to work as part of welfare reform.
- Early intervention programs must accommodate changing family circumstances and needs.

We must make serious investments in training and compensation for child-care professionals.

CONCLUDING THOUGHTS

Take-Home Messages

- Early experiences matter and healthy development depends on nurturing and stable relationships.
- How young children feel is as important as how they think, and how they are treated is as important as what they are taught, particularly with regard to school readiness.
- Early childhood interventions can shift the odds toward more favorable outcomes, but programs that work are rarely simple, inexpensive, or easy to implement.
- Society is changing and the needs of young children are not being met.

Early experiences matter; healthy development depends on nurturing and stable relationships.

Urgent Need for a New National Dialogue

In a highly pluralistic society that is experiencing dramatic economic and social change, the development of children must be viewed as a matter of intense concern for both their parents and for the nation as a whole. In this context, and based on the evidence gleaned from a rich and rapidly growing knowledge base, we feel an urgent need to call for a new national dialogue focused on rethinking the meaning of both shared responsibility for children and strategic investment in their future.

- Families are clearly the best vehicle for providing loving and caring relationships.
- Communities are ideally situated to provide support through informal networks and voluntary associations.
- Businesses can create work environments that both promote productivity and enhance family well-being by offering flexible work schedules and important benefit packages.
- Government at all levels can make a significant difference through tax policies that alleviate economic hardship, minimum wage laws that help low-income workers, child care standards that ensure safe and stimulating environments for young children, sufficient funding for early intervention services for all children with special needs, and paid family-leave benefits and child-care subsidies that give parents a real choice about whether and when to go back to work.

How young children feel, think and treated are as important as what they are taught.

Early Childhood interventions can shift the odds toward more favorable outcomes, but programs that work are rarely simple, inexpensive, or easy to implement.

Mississippi's Human Capital: Today's Children----Tomorrow's Workforce

Stella Fair, Ph.D. and Anne M. Stanberry, Ph.D., CFLE, CFCS

The University of Southern Mississippi

This chapter discusses the state of Mississippi's children. The universal concern is children, who are the future workers of Mississippi, needing a healthy start. They need nurturing and support, education and time, with competent parents and caregivers.

Children, Mississippi's human capital, live in families. We cannot improve our human capital unless we consider both children and families. So, who are today's children and families in Mississippi? According to Kids Count (2002):

Children, Mississippi's human capital, live in families. We cannot improve our human capital unless we consider both children and families.

- the median income of families with children in 1999 was \$36,800
- 32 percent of female-headed families received child support or alimony in 1999
- In 1999, 9 percent of children lived in extreme poverty; their family income was 50 percent below the poverty level
- 22 percent of children under 18 were in working-poor families in 1999

Of the children in Mississippi in 2000:

- 52 percent were white
- 45 percent were black
- 1 percent were Asian/Pacific Islander
- 2 percent were Hispanic
- less than .5 percent were American Indian

In 1998:

- 52 percent of 4th graders and 39 percent of 8th graders scored below basic reading levels
- 26 percent of 8th graders scored below basic writing levels

In 1999:

- 15 percent of our children did not have health insurance
- 21 percent of those in working-poor families lacked health insurance

In 2001:

- 10 percent of our children did not have health insurance (Urban Institute, 2002 report on SCHIP)

Child Well-being

On every indicator of child well-being, Mississippi children scored worse than the national average.

- 26 percent of our children live with parents who do not work full time
- 24 percent of our children live in poverty
- 35 percent of Mississippi's children live in homes headed by single parents
- 12 percent of our children are high school drop outs
- 10.3 percent are low birth-weight babies
- 10.1 per 1,000 live births result in death
- 40 per 100,000 children ages 1-14 die
- 83 per 100,000 teens 15-19 years old die by accident, homicide, and suicide
- 45 per 1,000 teens 15-17 give birth
- 12 percent of teens do not attend school or work

These figures are for all children in Mississippi (Kids Count, 2002). Many of our children have developmental disabilities. Developmental disabilities are a diverse group of physical, cognitive, psychological, sensory, and speech impairments that begin anytime during development up to age 18 years. In most instances, the cause of the disability is not known. What we do know are factors that increase the chance that a child will have a developmental disability and what can be done to prevent or improve the condition. Nationally, 17 percent of children under age 18 have a developmental disability. Approximately 2 percent of school-aged children in the United States have a serious developmental disability, such as mental retardation or cerebral palsy, and need special education services or supportive care. Some of the most common known causes of mental retardation are Down syndrome, fetal alcohol syndrome, and fragile X syndrome, all of which occur before birth.

Developmental disabilities are a diverse group of physical, cognitive, psychological, sensory, and speech impairments that begin anytime during development up to age 18 years.

Table 1.

Examples of current DD prevalence estimates (www.cdc.gov/ncbddd)	
.6%	Autism spectrum disorder (6 in 1,000*)
.125%	Down syndrome (1 in 800)
.1%	neural tube defect (1 in 1,000)
.22%	fetal alcohol syndrome (2.2 in 1,000)
.4%	cerebral palsy (1 in 230)
* personal communication, National Center for Birth Defects, Dec. 2002	

8.92% US children 6-21 received special education in schools (23rd Annual Report to Congress, 1998-99) 8.32% US children 3-21 (23rd Annual Report to Congress, 1998-99)

13.2% (6,195,113) children 0-21 received special education, 1999-2000 (Digest of Education Statistics, 2001)

State and federal education departments spend about \$36 billion each year on special education programs for individuals with developmental disabilities who are 3-21 years old (National Center for Birth Defects, October 1999, NCEH Pub. No. 99-0443)

The Numbers and Mississippi

It is challenging to obtain reliable and clear estimates of the prevalence of disabilities among children, no matter which state is in question. This is due to differences in the definition of disability and differences in how data are gathered and combined across ages, locations, services, and so forth. For example, children may have multiple disabilities that influence development in different ways. We know there is a high rate of identified and potential disabilities among children in Mississippi. The rural and low economic conditions of the state increase the likelihood that children will have more health and nutrition issues and more developmental disabilities. A February 2000 study on the Status of Mississippi Medicaid Children indicated our children have a high level of chronic health problems that include:

- asthma
- speech/language delays
- vision problems
- otitis media
- hearing impairments
- mental retardation
- respiratory disorders
- epilepsy
- other conditions.

The rural and low economic conditions of the state increase the likelihood that children will have more health and nutrition issues and more developmental disabilities.

A 2001 independent study conducted by the Civitan International Research Center indicated 80 percent of children under 3 in five delta counties had at least one risk factor for future special education placement (MSDH, 2002). Also, the Center on Emergent Disability has reported an expected, and increasing, 11 percent disability rate for children living below the poverty level (Fujiura & Yamaki, 2000). An underlying dynamic was suggested in economic status and disability: single-parent households. The authors concluded that there is a growing relationship between poverty status and risk for disability.

80 percent of children under 3 in five MS delta counties had at least one risk factor for future special education placement.

Using the 2000 U.S. Census statistic of 27 percent of children (206,450) under 18 living below poverty in Mississippi, and assuming the 11 percent rate of disabilities for children under 5, **approximately 3 percent of children under 5 in Mississippi** can be expected to have some type of developmental disability by virtue of their poverty status. This translates to 6,001 of Mississippi's poor children who can be expected to have some type of developmental disability.

It is clear that unless we do something about our human capital, we will continue along the same road of having the worst scores on many, if not all indicators.

Research on crime, costs and early childhood

Research clearly shows the value of prevention and early intervention efforts through quality child care/early childhood and family support programs. An important outcome is positive social behavior. Recently, the Mississippi Department of Corrections announced for fiscal year 2002,

- cost per day per inmate for a 1,000-bed facility totaled \$45.45. (Miss. Business Journal, 1/8/03)

The research is very clear in indicating prevention and early intervention programs reduce juvenile delinquency. The High/Scope Perry Preschool Project in Ypsilanti, MI, the Yale Child Welfare Project, the Houston Parent Child Development Center and the Syracuse Family Development Research Program all found a high quality early childhood program, and family support reduced the number of juvenile delinquents among program participants (Juvenile Justice Bulletin, October, 2000). The High/Scope Perry Preschool Project found that at age 27, program participants had fewer arrests (5 percent vs 35 percent), including crimes of drug making or dealing (7 percent vs 25 percent) (Schweinhart, Barnes, & Weikert, 1993).

The research is very clear in indicating prevention and early intervention programs reduce juvenile delinquency.

How many young children is Mississippi serving through early intervention and special education?

Special education in the United States has grown tremendously in the last decade, increasing from 4.6 million to 6.2 million. In Mississippi, approximately 4.45 percent of students are identified with a specific learning disability in 1999 and 5.58 percent in 2001, a category that has increased by 45 percent in the United States in the last decade.

According to the most recently available report to Congress, Mississippi schools served 8.01 percent of children 6-21 and 7.65 percent of children 3-21 through a variety of special education services (23rd Annual Report to Congress, 1998-

The number of children under 3 receiving early intervention services is increasing.

1999). In 1999-2000, 6,812 (3.33 percent) children 0-5 were reportedly receiving special services (Digest of Educational Statistics, April 2001; US Census 2000). This number was up slightly in the December 2001 count, i.e. 6,894.

The number of children under 3 receiving early intervention services varies as children move in and out of the program. During the last two years, numbers have been increasing and currently there are approximately 2,000 children receiving service coordination and 1,500 are usually being tracked because of concerns. The majority of these children are Medicaid eligible (MSDH, personal communication, 2002). How many children a state program serves derives from the interaction of the state's prevalence rates, the capacity to find the children, its eligibility criteria, and its ability to provide services. Mississippi's criteria, i.e. 25 percent delay in one area of development or a diagnosed condition known to lead to a delay, is typical of most states' definitions (Shackelford, 2002). Most referrals to the program come from health care professionals or the child's family (MSDH, 2002).

In the last report available (reporting figures for 1998-99), 28.42 percent of the children exiting the early intervention program entered public school special education services (MDE, 2002). Mississippi currently provides services to about 1.8 percent of children under 3 with developmental delays or risks. The United States Department of Education sets the minimum standard for required services at 1.6 percent. The recent agency self-assessment conducted by the First Steps Early Intervention Program for Infants and Toddlers in Mississippi reported the following statistics for services (MSDH, Oct, 2002):

As of October 2002:

- 1,539 children under 3 with delays or conditions known to cause delays were served
- 1,016 under 3, although classified as "at-risk" received tracking services only

Issue:

Inadequate funding with current Individuals with Disabilities Education Act (IDEA) formula for the number of children in need under age 3.

The Mississippi Department of Health is spearheading an effort to access other funding sources. A new system of reimbursement for targeted case management using Medicaid dollars for children under 3 with special needs is being implemented. This is expected to generate new revenue to offset some costs. Efforts are being made through the State Interagency Coordinating Council to coordinate the funds more effectively and better utilize TANF and preschool IDEA monies. (R. Hart, personal communication, December 2002).

Issues:

Lack of Properly Trained Personnel to Meet the Needs of Young Children with Special Needs

Lack of Adequate Access to Child Care

Although the right to services in "natural environments" or the "least restrictive environment" and the right to services that are centered around the family have been supported as best practices and legislated, the actual practice has lagged behind in most states and these opportunities have remained elusive for many children (Berres & Knoblock, 1987; Rose & Smith, 1994; U.S. Department of Education, 2000).

There is a need for an emphasis on inclusion in child care quality improvement efforts. It is important to offer services that minimize stress for families and maximize developmentally appropriate, normalized experiences for children at-risk, such as those who are exposed to violence, drug abuse, and maternal depression (Knitzer, 1999). A number of seminal studies (e.g., Bricker & Bricker, 1971; Bricker, Bruder & Bailey, 1982; Cooke, Ruskus, Apolloni, & Pack, 1981; Hoyson, Jamieson & Strain, 1984; Guralnick, 1984) have shown that children with disabilities show positive developmental and social gains as a result of participating in a mainstreamed or inclusive setting. Others (e.g., DeKlyen & Odom, 1989; Diamond, Hestenes, & O'Connor, 1994; Peck, Carlson, & Helmstetter, 1992; Twardosz, Nordquist, Simon, & Botkin, 1983; Smith & Rapport, 1999) have shown that inclusion benefits children without disabilities as well. Studies have examined the effects of varying levels of quality on children's development. Each reached the same conclusion: *a significant correlation exists between program quality and outcomes for children* (Frede, 1995).

There is a need for an emphasis on inclusion in child care quality improvement efforts.

Mississippi Services and Training Data: Despite the prevalence of literature supporting the practice of bringing services into typical settings for young children; lack of knowledge, experience, and fears on the part of administrators, staff, and parents has discouraged many early childhood programs from accepting or including children with disabilities, particularly if those disabilities were severe, or required special equipment. The awareness of the need for training was evident from responses to the Institute for Disability Studies' (IDS) spring 2000 surveys of Mississippi training needs.

- Ninety-two percent (92%) of the early childhood educators who responded stated a desire to learn more about early intervention and children with disabilities.

Furthermore, other survey results and experiences from previous IDS project interviews indicated that private child care and preschool programs will gladly accept children with even severe disabilities if provided professional support and training. *In one survey conducted in the local area by IDS, only one child care center out of more than 40 was unwilling to accept children with special needs if given support.* These findings are in keeping with those reported by demonstration projects in other parts of the country (Mulligan-Gordon et al., 1992; Sullivan, Shuster, & Sheriff, 1987).

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