

Brain Development Issue

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A newsletter on children's issues

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Early Brain Development Critical, Researchers Say

Researchers now stress the influence of early experiences on children's mental and emotional development. Children are born with a billion brain cells, and no more are created after birth. However, the way these cells are "wired," or linked together, is controlled by the environment the infant experiences during the first three years of life.

The brain differs from most other body organs in that it has its growth spurt during the prenatal period and the first few years after birth. The brain reaches half its final mature weight as early as six months and 90 percent of its final weight by the age of eight. The body as a whole only reaches half its mature weight by age 10.

Due to new technologies and recent research, scientists have discovered that the development of a child's brain is greatest between birth and three years of age. During these critical years, the majority of a child's hard wiring occurs in the vast network of neurons in the brain. This wiring process sets the stage for future capacity for language, intelligence, and response to the environment.

Brain cells are just waiting to send out signals to other brain cells to connect the wiring to form the person the infant will become. These connections between cells are called synapses. A connection or synapse is made depending on the stimuli or signals the brain gets from the setting. With proper stimulation, the synapses become stronger and more permanent.

At 8 months, a baby may have 1,000 trillion synapses or

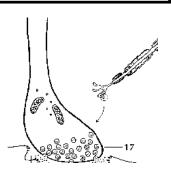
What is the brain?

The brain weighs only about three pounds, looks like a gray, unshelled walnut, and is the most complex structure in the world.

What does a child need in the first three years of life to achieve full potential?

- A child needs to feel safe.
- A child needs to know that he or she is special.
- A child needs to feel confident about what to expect from the environment.
- A child needs discipline.
- A child needs a balanced experience of freedom and limits.
- A child needs to be exposed to a diverse environment filled with books, music, and appropriate toys.

connections, about twice as many as adults have. As a child grows, the brain begins making order by eliminating connections that are rarely used. Connections that are used repeatedly during a child's early years become the foundation for the brain's organization and function for the rest of its life.



Synapses link Brain Cells

In contrast, connections that are not used are discarded, and the development is halted. Basic interventions have a significant impact on a child's development.

Life shapes the brain's development. While adequate nutrition and good health care are crucial to normal brain

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Danger: Tennessee Brains at Risk

The 1999 Kids Count National Data Book estimated that the future for 14 percent of all Tennessee children was endangered by risk factors.

TCCY's 1999 Kids Count report includes information on areas related to brain development.

In 1997, 25.7 percent of all Tennessee births lacked adequate **prenatal care**.

In 1997, 16 percent of all births in Tennessee were to **teen mothers**. Although 30 percent of these mothers were married, Tennessee has one of the higher divorce rates in the nation, and national figures indicate that divorces in women peak during ages 15-19. In 1997, 8.8 percent of all babies born in Tennessee weighed less than 5.5 pounds.

In 1997, **child abuse or neglect** was considered indicated in 10,803 cases. In 2,355 of these cases, the child victim was less than 3 years old. On June 30, 1997, 1,516 children ages 1-4 were in state custody; this group made up 13 percent of the children in custody, according to the Department of Children's Services.

Twenty-nine percent of all Tennessee families with children were headed by a **single parent** in 1996. Not only did the children in these families often lack the caring support of two parents, but they were more likely to be poor. According to a USDA study, parents in single parent households on average spent 16 percent less money per child ages 0-2 than parents in two-parent households. Twenty-two percent of Tennessee's children live in poverty.

As of July 1998, 254,376 **child-care** slots were available in 5,869 facilities or homes throughout the state. Other working parents used unregulated home care or in-home care. On average, parents pay \$150 a week for infant care that meets or exceeds the minimum standards for licensing.

Members of an estimated 14 percent of Tennessee households are **hungry** or at risk of becoming hungry, according to Tufts University. While the number of people receiving food stamps declined, in 1998, more than a half of a million people continued to increase their access to food through the program.

(Unless otherwise noted all statistics are from Kids Count: The State of the Child in Tennessee, 1999.)

Help is on the Way

The TN KIDS program, a cooperative effort of the state departments of Health, Children's Services, Human Services, Education, and Mental Health/Mental Retardation, established early intervention and prevention services as a priority for the state. TN KIDS sponsored a teleconference, "Grow and Learn" on early brain development in January.

The Governor's Prevention Initiative grants funds to community organizations to discourage teen pregnancy, drug use, and school dropout.

Businesses are providing classical music tapes and books for every child born in Tennessee in 1999.

Health Care. During 1998, TennCare coverage was expanded to cover all uninsured Tennessee children whose family income is within 200 percent of the federal poverty level. In April 1998, children made up 40 percent of the TennCare enrollment.

Governor Sundquist set a goal of full immunization for 90 percent of the state's 2-year-olds by the year 2000. Corporations and community and professional groups are participating in the effort to raise the level from 84 percent in 1997. The state acheived an 87 percent level in 1998.

The percentage of pregnancies that received adequate prenatal care has increased steadily since 1990.

Developmental Delays. The Tennessee Early Intervention Service (TEIS) evaluates children from birth to age 3 for developmental delays. TEIS then coordinates services with state departments or private providers. The Child Health and Development program assists families whose children are at risk of developmental problems or at risk of abuse/neglect in 44 counties primarily in the Northeast, East, and Upper Cumberland regions. The Healthy Start program provides home visits to improve parenting skills in 26 counties. Child Abuse Prevention grants also fund parent training classes and home visits to new parents.

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Brain

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development, they are not enough. To reach its full potential, the infant brain needs stimulation and support.

Warm touches and caregivers who talk positively to the infant allow the brain to take in his or her environment. On the other hand, severe stress that goes on for many months or years in early childhood can actually affect the development of a child's brain.

Critical periods in development create opportunities to influence how functions such as math, language, music and physical activity are learned. If these opportunities are missed, it is difficult for the brain to rewire itself at a later time. The critical periods of the early years are emotional control, ages 0-2; vision, ages 0-2; social attachment, ages 0-2; vocabulary, ages 0-3; second language, ages 0-10; math/logic, ages 1-4; music, ages 3-10, according to reported research. Between 10 and 18 months, a baby's emotions are developed.

The Carnegie Foundation identified having a family with dependable caregivers and living in a supportive and safe community as protective factors and found that well-functioning familes during the first years are important building blocks for healthy development.

Good early care supports brain development, but experts

What Caregivers Can Do

- Form a close, positive attachment with the child.
- Talk to children.

Use lots of different words.

Use complex sentences.

- Listen to children.
- Expose children to complex stimulation.

Music lessons.

Classical music.

Organize the environment.

Simplify, limit the amount of stuff.

Create predictable routines.

Interact.

Touch and show affection.

Slow down and spend time together.

Have meals together.

Source: Dale Farran, Vanderbilt University

Some Examples of What Parents Can Do

- Avoid pressuring child to achieve early.
 Support curiosity, desire to learn.
 Follow child's lead.
- Limit television.
- Choose child care situation carefully.
 More family-like and less school-like.
- Protect children from trauma.
 Fear and stress act like acid on the brain and affect ability to learn.

Source: Dale Farran, Vanderbilt University

say poor early experiences can cause a normal child to become developmentally delayed or develop serious emotional difficulties.

The Carnegie Foundation identified poor quality child care, more single parent families, more family isolation and violence, and more children in poverty as problems placing early childhood brain development at risk.

Other Research Findings

Language. Parents need to interact with children. Mere exposure to language does not help children, but being spoken to and interacted with does. One-to-one interaction with the caregiver is important to the learning of language. Research reported by the Ounce of Prevention Fund associated with Baylor University found that infants whose mothers frequently spoke to them learned almost 300 more words by age 2 than those whose mothers rarely spoke to them.

Needs. Children whose environment responds to their needs and who learn that they can have an impact on their environment grow up secure and able to explore and learn about their environment.

Understimulation. A Baylor University study found that children who were rarely touched or spoken to and who were not allowed to explore and experiment with toys had brains 20 to 30 percent smaller than most children their age. Half the children's brains appeared to have partially wasted away.

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What can communities do to help families support healthy brain development?

Educate parents about early childhood development and its importance.

Prevent abuse and neglect.

Provide services for parents with depression or other mental illnesses to enable them to respond appropriately to their children.

Assure adequate nutrition prenatally and in the first few years.

(Adapted from 1996 Ounce of Prevention Fund report.)

Help

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Child Care. Financial assistance for child care is available to Families First and low-income families who are in need of child care through a Department of Human Services (DHS) program. This program funds child care for nearly 50,000 children each month. The Tennessee Early Childhood Training Alliance (TECTA) is a child-care provider training



system provided throughout the state by Tennessee State University in cooperation with DHS. DHS regulates and licenses child care centers and homes and works with 12 local agencies to register homes caring for four or fewer children. It offers assistance in finding day care to all parents through the free statewide Child Care Resource and Referral Services [(800) 462-8261].

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Trauma. Children who have unpredictable, chaotic, or traumatic experiences live life on high alert. This protective mechanism leaves children prey to learning, emotional, and behavioral problems and at risk for medical problems.

State policy makers across the nation have focused on child care, school readiness, family support and home visits, maternal and child health and early childhood coordination.

Ten Things Every Child Needs

- 1. Interaction
- 2. Touch
- 3. Stable Relationships
- 4. Safe, Healthy Environments
- 5. Self-Esteem
- 6. Quality Care
- 7. Play
- 8. Communication
- 9. Music
- 10. Reading

Resources

Internet Resources

Information on State Government Activities:

TN KIDS Initiative

http://www.state.tn.us/governor/tnkids.htm

Information on Child Care:

National Association for Young Children

http://www.naeyc.org

National Child Care Information Center

http://nccic.org.

Information on Brain Development and Parenting:

I Am Your Child

http://www.iamyourchild.org

Zero to Three

www.zerotothree.org

Connect for Kids

www.connectforkids.org

Frank Porter Graham Child Development Center www.fpg.unc.edu

Ounce of Prevention Fund

www.bcm.tmc.edu/civitas/links/ounce1.html

Carnegie Corporation's Starting Points

www.carnegie.org/starting points

Policy Initiatives in Other States:

National Conference of State Legislatures www.ncsl.org/programs/cyf/ccslr.htm

Books

Your Child at Play series, Marilyn Segal
The Complete Resource Book: An Early Childhood
Curriculum with over 2,000 Activities and Ideas! Pam
Byrne Schiller and Kay Hastings, 1998

C-PORT Report Reveals 1998 a Difficult Year for DCS

The Children's Program Outcome Review Team annually reviews children in state custody to evaluate service system performance and outcomes by examining relevant aspects of the cases of children and families being served. C-PORT reviews are conducted in the state's 12 regions on a random sample of children in state custody large enough to reflect the total population of children in custody at the 95 percent level of validity statewide and the 85 percent level regionally.

In 1998, the Department of Children's Services (DCS) experienced major changes as the Assessment and Care Coordination Teams (ACCTs) of the Community Service Agencies (CSAs) no longer performed the assessment and plan development functions but continued to do a variety of other tasks.

Implementation of the DCS program model, which split responsibilities between home-county case managers and

residential case managers, was completed in 1998. In some instances, this separation worked well, but in a great many cases, it resulted in fragmented information about the child and family, lack of coordinated planning and service delivery, and a lack of clear understanding regarding who was responsible for what.

In addition, the August 1998 elections produced the largest turnover in juvenile court judges in recent history.

The implementation in the non-custodial Continuum of Care integrated social-services delivery system contract in the East and Middle East grand regions also precipitated changes in the delivery of prevention and reunification services.

All these changes mean that 1998 was essentially a new baseline year for the Children's Program Outcome

C-PORT, Continued on Page 6.

DCS Budget Increase to Improve Services to Children in Custody

During a year of budget restraint, the Tennessee General Assembly added \$15.3 million in state funds to the Department of Children's Services budget for fiscal year 1999-2000. The funding will be used to improve services to Tennessee's children in state custody. More attorneys will be hired to help speed the process of finding permanent homes for children, more case managers and front-line supervisors will be hired, and contract service providers, especially residential service providers, will receive the first rate increase in six years.

"This is not the answer to all problems," Commissioner George Hattaway told TCCY members at the July Commission meeting, "This is the first step."

Not only did the department get funding for the improvements it requested, it received money to fund changes recommended by the Child Welfare League (CWLA) in its recent evaluation, many of which had been recommended by TCCY's C-PORT evaluation for years.

Funding was received to hire 36 additional lawyers. These attorneys will handle terminations, adoptions, and other cases to help children get settled in new homes or returned to their families faster. This should help address the TCCY C-PORT finding that children were in custody too long.

Adoption services received \$3.2 million dollars to help the

more than 1,000 children in state custody waiting to be adopted and to expand the Center for Adoption concept to all regions. Money (\$1.5 million) was also added to help reunite children with their families.

More than \$10 million was added to fund residential placements and address the CWLA and C-PORT finding that a lack of placements was causing children to remain in temporary placements too long. This problem, which was reported in *The Advocate* in June, was also a factor in the deinstitutionalization of status offender violations found by TCCY monitoring.

Money was added to fund an additional 133 case managers and 21 supervisory positions. This should reduce caseloads and help workers serve children better. Other funding increased training for workers.

DCS also was given \$2.8 million to implement its new management information system. In addition, Children's Services case manager positions were upgraded as part of a Department of Personnel reclassification.

"It is a great tribute to the governor and the legislature that they did what was right for children," Hattaway said.

Now, he said, the pressure is on the Department of Children's Services. **™**

C-PORT

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Review Team results. The original baseline was 1994, and for four years C-PORT results indicated steady improvements in all essential system functions. Due to the changes discussed above, the results were less positive in 1998.

To represent the population of approximately 11,500 to 12,000 children in custody, a random sample of 350 cases was reviewed.

Critical Issues: Children and family conditions that placed children at risk of custody included:

- Fifty-seven percent of the children reviewed had parents who were or had been incarcerated.
- Two out of three children had parents with substance abuse issues (65 percent).
- Sixty-one percent of the children had little or no relationship with their fathers.
- Forty-one percent of the children were from homes below the poverty level.
- More than one in four children had allegedly been sexually abused (27 percent).
- More than one in four children had allegedly been physically abused (27 percent).

TennCare/TennCare Partners/MCO/BHO/EPSDT Issues

- EPSDT not completed or inadequate.
- Refusals or delays to replace glasses or contact lenses.
- Denials or delays of special services, i.e., durable medical equipment, specialized formula, medically specific requests.
- Delays in securing necessary medical appointments.
- Problems securing primary care providers.
- Inadequate provider network for dental services.
- Denials or delays of approval for needed medications.
- Delays and difficulties in receiving or obtaining TennCare cards or no cards.
- Difficulty getting needed psychological evaluations.

Strengths Identified Statewide

- Most children were appropriate for custody at the time of custody.
- The number of unruly children in custody was down.
- Overwhelmingly, children in custody were in a positive status.
- Improvements had been made in addressing the

- emotional and mental health needs of children in custody.
- Most children were in appropriate placements to meet their needs.
- More children were in placements closer to home.
- The great majority of foster homes were high quality and very committed to children.

Weaknesses Identified Statewide

- Separation and confusion regarding the roles and responsibilities of the Home County Case Manager and the Residential Case Manager.
- Substantial staff turnover and vacancies.
- Insufficient Plans of Care/Permanency Plans.
- Children remained in custody too long.
- General lack of or inadequate legal representation provided for children and families.
- Families not receiving needed services to facilitate reunification.

Summary of CAFAS Findings

A complimentary assessment tool used in the C-PORT process, the Child and Adolescent Functional Assessment Scale (CAFAS), measured the child's level of psychosocial impairment. Overall, the CAFAS total scores indicated the following treatment needs for the sample population of children and youth in state care: 39 percent needed supportive intervention; 19 percent,

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The Advocate is published by the Tennessee Commission on Children and Youth as an information forum on children's issues. The Tennessee Commission on Children and Youth, an independent state agency, serves as an advocacy agency and information resource for planning and coordination of policies, programs, and services on behalf of the state's children and youth. The 21-member Commission, appointed by the governor, works with other agencies and with regional councils on children and youth in each development district to collect information and solve problems in children's services. To receive The Advocate, contact Fay L. Delk, Publications Editor, Tennessee Commission on Children and Youth, 710 James Robertson Parkway, 9th Floor, Nashville, TN 37243-0800. Phone: (615) 741-2633. Fax No.: (615) 741-5956.

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C-PORT

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short-term treatment (up to six months); 18 percent, perodic treatment over a six to 24-month period; and 24 percent, long-term treatment (one to five years). This indicates a significant proportion of children needing specialized and long-term care.

Demographic Information on Cases Reviewed

- Annual household income for 64 percent of the families of children in custody ranged from less than \$5,000 to \$14,999.
- Fifty-four percent of the parents of children in custody had less than a high school education.
- Greatest number of petitions was filed by the Department of Children's Services (57 percent).
- The majority of children were adjudicated Dependent/ Neglect (68 percent).
- Children exhibiting behavior problems (33 percent), including delinquent and unruly behavior, and neglect by caretaker (31 percent) were the main reasons for children to enter custody.
- A substantial number of children were in foster placements (43 percent).
- The age of children in care was primarily 13 and over (57 percent).
- The majority of children in custody were male (59 percent).
- Almost a third of the children (31 percent) had a formal mental health diagnosis, a considerable decrease from previous years.

TCCY C-PORT Recommendations

- Increase prevention and early intervention services to reduce the risk of custody.
- Improve the adequacy of assessment, which declined in 1998 and had been one of the system's greatest strengths.
- Create a mechanism to overcome barriers to needed mental health evaluations and treatment services.
- Improve the development of Permanency Plans and Plans of Care to address all treatment needs (not limited just to barriers and issues that brought the child into custody).
- Provide a single case manager for each child.
- Provide more family-focused services to facilitate reunification.
- Provide the Department of Children's Services with additional attorneys and paralegals.
- Reduce and redistribute caseloads to a manageable size.
- Provide substance abuse treatment services for parents and older children.
- Address the inadequacy in TennCare and TennCare Partners networks of specialized therapists to address critical issues of sexual and physical abuse and grief, separation, and loss issues.
- Provide sufficient placement options to eliminate excessive stays in temporary shelters.
- Provide sufficient training to DCS staff.
- Continue the C-PORT evaluation process and use results for continuous improvement efforts.

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Meetings and Events

Council Activities

Northeast

Sept. 24, Juvenile Justice Conference, "Planning for the Unimaginable," tba

East Tennessee

Sept. 1, Council Meeting, tba Oct. 6, Council Meeting, tba Nov. 3, Council Meeting, tba

Southeast Tennessee

Sept. 22, Council Meeting, "Success by Six," 11:30 a.m. to 1 p.m.

South Central

Oct. 1, Conference, Motlow College, Tullahoma

Southwest

Nov. 5, Fall Conference, tba

Commission Meeting

Oct. 6-8, Montgomery Bell State Park.

Children's Program Outcome Review Team (C-PORT)

Aug. 30-Sept. 3, Memphis/Shelby County Region. Exit Conference: Sept. 10, 10 a.m. Sept. 27-Oct. 1, Northeast Region. Exit

Conference: Oct 22, 10:30 a.m. Oct. 25-29, Knox County Region. Exit Conference: Nov. 5, 10:30 a.m.

Nov. 15-19, South Central Region. Exit Conference: Nov. 30, 10:30

Dec. 6-10, Davidson County Region. Exit Conference: Jan. 7, 2000, 10 a.m.

Contact Pat Wade at (615) 741-2633 for more information.

Special Events

Sept. 8, TCCY Children's Rights Conference, Willis Conference Center, 8 a.m.-4:30 p.m., (615) 741-2633

Sept. 14-17, SEARCH Institute Asset-**Building Communities**, Radison Hotel Airport, Atlanta, Fax: 612-376-7553

Sept. 16-18, OJJDP, Law-Related Education for Juvenile Justice Settings, Columbia, MD, (202) 293-0088

Sept. 20-24, Center for Violence Intervention (CVI) Training, Regal Maxwell House, Nashville, (312) 573-8217

Sept. 24, Koch Crime Institute Seminar: Juvenile Deviant Behavior & Youth

Violence, Nashville, (800) 863-5726 Sept. 24, Tennessee Conference on Social Welfare, Middle East, (423) 549-5230

Sept. 24-26, Juvenile Justice Southern Coalition Regional Conference, Holiday Inn Crowne Plaza, Biloxi, MS, (202) 467-0864

Oct. 7-9 Association for the Education of Young Children Annual Conference, Convention Center/Crowne Plaza, Memphis, (615) 279-0111

Oct. 15, 12:30-3:30 p.m., Partnership for Preventing Violence – Broadcast #4, (877) 778-4774

Oct 21. Tennessee Conference on Social Welfare, Middle Region, 532-1574

Oct 26, Tennessee Conference on Social Welfare, South East Region, (423) 757-

Nov. 2, Tennessee Conference on Social Welfare, North East Region, (423) 279-

Nov. 10. Tennessee Conference on Social Welfare West & Middle West regions, (901) 785-6790, (901) 423-5850



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