



Serving Children Prenatally Exposed to Substances

Resources/References

**Kansas Inservice Training System (1999)
Kansas University Center on Developmental Disabilities
2601 Gabriel, Parsons, KS 67357
620-421-6550 ext. 1618 or 1-800-362-0390 ext. 1618
email: kskits@mail.ku.edu
web: kskits.org**



Early Childhood Research Institute on Substance Abuse

A Research Consortium Involving

Juniper Gardens Children's Project

Schiefelbusch Institute for Life Span Studies

University of Kansas

Institute on Community Integration

University of Minnesota

University Affiliated Program

University of South Dakota

PURPOSE

The Early Childhood Research Institute on Substance Abuse, which began in November of 1991, is research and development effort benefiting infants and young children who are developmentally delayed or at risk for developmental delay because of maternal substance abuse during pregnancy.

The Institute's mission is twofold:

- a. To describe the behaviors, caregiving environments, and developmental outcomes of children and their caregivers within home, daycare, early education, and hospital settings.
- b. To develop and validate interventions for children and their caregivers within home, daycare, early education, and hospital settings.

Infants and young children are observed in their natural environments. Detailed information is collected on risk and protective factors influencing their developmental outcomes, including:

- * caregiver/child interaction
- * language development
- * early childhood classroom behavior
- * social development

KEY FEATURES

- A multi-site longitudinal study of 270 infants and young children from diverse populations and backgrounds with and without a history of prenatal substance exposure.
- An examination of environmental influences on children from substance-abusing and substance-free environments
- Validation of new and existing early intervention practices for infants and young children who have been prenatally exposed to alcohol and/or other drugs
- Dissemination of validated early intervention strategies of family members, teachers, day care providers, health care professionals, and other service providers
- Focus groups to enhance the cultural appropriateness and social validity of assessments and interventions
- Cooperation of more than 100 community agencies in Kansas, Missouri, Minnesota, South Dakota, Nebraska, and Iowa
- Provision of multidisciplinary graduate training for students
- Availability of technical assistance and inservice training

Objectives of the Institute

1. To study infants and young children prenatally exposed to illicit drugs and alcohol to provide information on behavioral outcomes, environmental features, and caregiver/child interactions.
2. To identify features of children's environments and caregiver/child interactions that are most predictive of successful outcomes and developmental gains.
3. To develop, field test, and disseminate new intervention strategies that address the behavioral characteristics and environmental interactions of children affected by prenatal exposure to drugs or alcohol.
4. To adapt and evaluate existing intervention practices that are affective for children with behavioral characteristics similar to those associated with prenatal exposure to alcohol and other drugs.
5. To develop and evaluate effective procedures for increasing the continuity, coordination and comprehensiveness of intervention services to children and their families.
6. To identify cultural factors that affect how intervention information should be disseminated across diverse populations.

Summary of Findings

Like most other researchers (e.g., Griffith, Azuma, & Chasnoff, 1994), we have found few significant differences on standardized measures based on prenatal exposure history alone. Children from our exposed and non-exposed groups are performing at approximately the same levels on the Bayley Scales of Infant Development at 20 months, on the Stanford-Binet at 38 months, and on the Battelle Developmental Inventory (BDI) at 3, 21, and 39 months.

Scores for children at 3, 21 and 39 months on the language and cognitive portion of the BDI show that children in both groups are scoring at equivalent levels at each age but both groups appear to be falling progressively lower than the norm on these subscales with increasing age. The mean deviation quotient for children tested at 39 months is approximately 79 which is significantly below the mean deviation quotient of 100 (SD = 100).

Even though the exposed and non-exposed groups were matched on SES, the non-exposed group has shown consistently higher scores across most subscales of the Home Observation Measurement of the Environment (HOME), an observation measure that records several aspects of the quality of the caregiving environment.

Our analysis of the relationship between environmental risk factors and children's overall development level as measured by the BDI shows a stunning relationship between the number of risk factors and developmental quotients. Environmental risk factors considered for this analysis included factors such as annual income below \$10,000, a primary caregiver who did not complete high school, a single caregiver who did not have the support of other adults, and a child who had experienced out-of-home placement at least once. Children who were in the exposed group and experienced fewer than two environmental risk factors had deviation quotients that approached the norm of 100. Significant drops in DQ were evident for children who experienced two or more factors. Thus far, we have not uncovered a similar relationship between the number of risk factors and developmental outcomes for children in the non-exposed group.

Our direct observation measures are recording several interesting differences between exposed and nonexposed groups in the quality of their caregiving environments and the behaviors of the children at various ages:

- * At 3 months, the observation measure has detected that caregivers in the exposed group are less likely to use gentle physical contact and positive vocal responses than the caregivers in the nonexposed group. It may follow that the children in the non-exposed group were much more likely to vocalize than the children in the exposed group at this age.
- * At 18 months, we have noted that children in the exposed group were more likely to be observed with no access to play materials, and less likely to be recorded in situations in which their caregivers were closely involved in their activities and to be prompting and expanding on their verbalizations.
- * At 36 months, caregivers of children in the exposed group were also noted to prompt and expand on the child's communication less frequently than were the caregivers of the non-exposed group.
- * Across almost all observation measures, quality of interactions decreases with the number of risk factors faced by any family.

In summary, our findings show many hypothesized differences on observational measures but far fewer on standardized measures—a finding we share with many other researchers working with drug-exposed children (Griffith, Azuma, & Chasnoff, 1994).

Carta, J. J., McConnell, S. R., McEvoy, M. A., Greenwood, C. R., Atwater, J. B., Baggett, K., & Williams, R. (1997). Developmental outcomes associated with “In Utero” exposure to alcohol and other drugs. In M. Haack (Ed.), Drug dependent mothers and their children: Issues in public policy and public health (pp. 64-90). New York: Springer.

Carta, J. J., Sideridis, G., Rinkel, P., Guimaraes, S., Greenwood, C. R., Baggett, K., Peterson, P., & Atwater, J. (1994). Behavioral characteristics of drug-exposed infants and young children: A review and analysis of the experimental literature. Topics in Early Childhood Special Education, 13, 243-254.

CURRENT RESEARCH

Longitudinal Study of Risk and Protective Factors Affecting the Development of Children Prenatally Exposed to Illicit Drugs and Alcohol

EARLY CHILDHOOD RESEARCH INSTITUTE ON SUBSTANCE ABUSE

ABSTRACT

A growing body of research points to the potentially harmful effects of prenatal drug exposure on young children's development (e.g., Azuma & Chasnoff, 1993; Carta et al., 1994; Griffith & Freier, 1992). While not all children have shown adverse effects on development, some infants and preschoolers exposed to gestational substance abuse have developmental delays making them eligible for early intervention and early childhood special education services. A small body of evidence suggests that postnatal environmental factors (e.g., variations in quality of caregiving) may account for this range in developmental outcomes. Because elementary school personnel have expressed grave concerns about this population of children and, because no longitudinal studies have yet been conducted examining the

effects of these factors on the academic, social, and emotional outcomes of these children in the elementary school, we propose to conduct just such a study. We propose a prospective, longitudinal investigation of the early elementary school experiences (ft-3) and the developmental outcomes of children with documented exposure to illicit drugs during pregnancy. This work is both relevant and timely because the needs, services, and implications of this problem within the elementary school-aged population remains unknown. This work extends ongoing and completed research on infants and young children by the *Early Childhood Research Institute on Substance Abuse* (ECRISA) into the school years.

Using a variant of the cohort sequential design, we propose to follow two cohorts of children (aged 5 to 9 years) each containing two groups (Drug Exposed and Non-Exposed) during their early elementary schooling. For one of these cohorts (Cohort 1: N = 60), the proposed work represents a four year extension of a completed two year developmental study of children between the ages of 3 and 5 years for a total six year study. For Cohort 2 LN = 60), this four year study provides an opportunity to replicate and cross-validate developmental trajectories and findings derived from Cohort 1. When combined with other ECRISA work completed and in progress for other cohorts in the home (birth, 18,, and 36 months - ECRISA; Project 1), the current application extends the entire inquiry to a substantial period of the early life span ranging from birth through age 9.

The results of this longitudinal work are expected to produce discernible impact on several areas of special education research and practice. First, research knowledge will be produced on the classroom implications of prenatal drug exposure, based on a conceptual framework that includes drug exposure as one of several risk factors for developmental delays and disabilities. Second, the measurement model will reflect both process and outcome constructs defined in terms of “alterable variables” with implications for intervention. Third, differences between exposed and non-exposed trajectories of development in cognitive, social, and emotional domains, as defined by indices of academic achievement, peer relations, and behavior problems will be examined as precursors of potential school failure. Fourth, the special needs and services identified for these children and their families over time will serve as an empirical basis for projecting future service needs, parent and teacher training needs, and research on practices needed to improve the outcomes of this population.

For Additional Information Contact:

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650 Minnesota Ave. 2nd Floor

Kansas City, KS 66101

(913) 321-3143

Source: <http://www.lsi.ukans.edu/jg/ecisbro.htm>

Bibliography

***Carta, J. J. (1997). Caregiving interventions for children affected by prenatal substance exposure. Advances in Early Education and Day Care, 9, 203-222.**

***Cohen, S., & Taharally, C. (1992, Fall). Getting ready for young children with prenatal drug exposure. Childhood Education, 5-9.**

Cole, C., Ferrara, V., Garcia, T., Johnson, D., Jones, M., Schoenhaus, M., Tyler, R., Wallace, V., & Poulsen, M. A. (date unknown). Today's challenge: Teaching strategies for working with young children prenatally exposed to drugs/alcohol. Los Angeles: University Affiliated Program.

Early Childhood Research Institute on Substance Abuse. (date unknown). Kansas City, KS: Juniper Gardens Children's Project.

***Fejes-Mendoza, K. (1991, Fall). Drug-exposed infants: Outlook on education. In Mountain Plains Information Bulletin, 1-14. Des Moines: Mountain Plains Regional Resource Center.**

***Griffith, D. (1992). Prenatal exposure to cocaine and other drugs: Developmental and educational prognoses. Phi Delta Kappan, 74, 30-34.**

***Perinatal addiction research and education update. (1992, June). Chicago: National Association for Perinatal Addiction Research and Education.**

Pinkerton, D. (1991). Substance exposed infants and children. Reston, VA: Council for Exceptional Children.

***Poulsen, M. P. (1994). The development of policy recommendations to address individual and family needs of infants and young children affected by family substance use. Topics in Early Childhood Special Education, 14(2), 275-291.**

***These articles are in the hard copy version of this packet.**

Resource List

Barone, D. (1995). Be very careful not to let the facts get mixed up with the truth: Children prenatally exposed to crack/cocaine. Urban Education, 30(1), 40 -55.

Bassey, M. O. (1996). Teachers for a changing society: Helping neglected children cope with schooling. The Educational Forum, 61, 58 -62.

Brooks, C. S., & Rice, K. R. (1997). Families in recovery. Baltimore, MD: Paul H. Brookes.

Carta, J. J., McConnell, S. R., McEvoy, M. A., Greenwood, C. R., Atwater, J. B., Baggett, K., & Williams, R. (1997). Developmental outcomes associated with in utero exposure to alcohol and other drugs. In Haack, M. R. (Ed), Developmental outcomes associated with in utero exposure to alcohol and other drugs (64- 90). New York: Springer.

Carta, J. J., Sideridis, G., Rinkel, P., Guimaraes, C., Greenwood, K., Baggett, K., Peterson, P., Atwater, J., McEvoy, M., & McConnell, S. (1994). Behavioral outcomes of young children prenatally exposed to drugs: Review and analysis of experimental literature. Topics in Early Childhood Special Education, 14(2), 184-216.

Erwin, E. J. (1996). Putting children first. Baltimore, MD: Paul H. Brookes.

Gottwald, S. R., & Thurman, S. K. (1994). The effects of prenatal cocaine exposure on mother-infant interaction and infant arousal in the newborn period. Topics in Early Childhood Special Education, 14(2), 217-231.

Jaudes, P. K., & Ekwo, E. E. (1997). Outcomes for infants exposed in utero to illicit drugs. Child Welfare League of America, 76(4), 521-534.

Miller, H. (1997). Prenatal cocaine exposure and mother-infant interaction: Implications for occupational therapy intervention. American Journal of Occupational Therapy, 51(2), 119-130.

Shriver, M. D., & Piersel, W. (1994). The long-term effects of intrauterine drug exposure: Review of recent research and implications for early childhood special education. Topics in Early Childhood Special Education, 14(2), 161-183.

Simeonsson, R. J. (1994). Risk, resilience and prevention: Promoting the well-being of all children. Baltimore, MD: Paul H. Brookes.

Smith, G. H., Coles, C. D., Poulson, M. K., Cole, C. K. (1995). Children, families & substance abuse. Baltimore, MD: Paul H. Brookes.

Streissguth, A. (1997). Fetal alcohol syndrome. Baltimore, MD: Paul H. Brookes.

Tyler, R. (1992, May). Prenatal drug exposure: An overview of associated problems and intervention strategies. Phi Delta Kappan, 705 -708.



Additional Resources

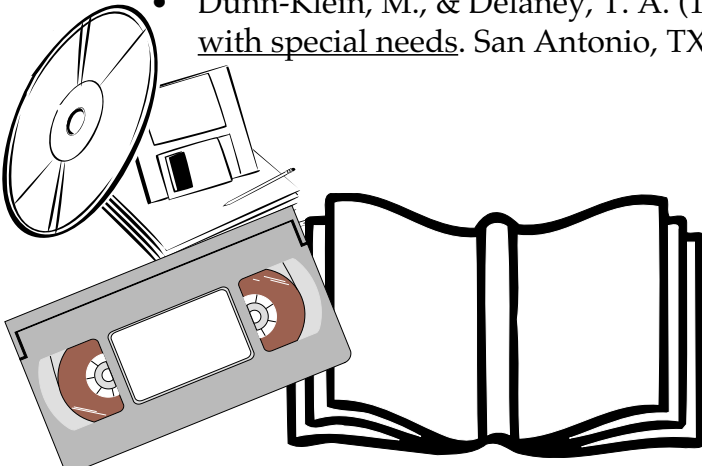
For more information about local resources regarding substance abuse contact your local prevention agency or the Make A Difference Information Network at 1-800-332-6262.

The following videos are available for check out through the Kansas Public Health and environment Information Library Catalog:

- Generational Curse: Snow babies by people who know first-hand about the devastating effects of drugs and alcohol on babies. (1993), 70 min.
- Drugs, Alcohol and Pregnancy: What you should know. (1993), 25 min.
- Influences: Innocence betrayed. (1995), 25 min.
- Fetal Abuse: The effects of drugs and alcohol. (1998). 30 min.

A limited number of these catalogs are available. Mail your catalog request to Community Health Library Services-KPHEIL, Kansas State University, 10D Umberger Hall, Manhattan, KS 66506-3407, email KPHEIL@oz.oznet.ksu.edu or fax 785-532-5121. The catalog can be accessed through the KDHE web site at <http://www.kdhe.state.ks.us/library/listing.html>. Questions can be directed to Chris Ponte at 785-532-5120.

The following resources are can be checked out from the Early Childhood Resource Center, 2601 Gabriel, Parsons, KS 67357, 620-421-6550 ext. 1651 or 1-800-362-0390 ext. 1651, kskits.org/ecrc

- Blackman, J. A. (1997). Medical Aspects of Developmental Disabilities in Children Birth to Three (3rd ed.), Gaithersburg, MD: Aspen.
 - Buehler, B. A. (1991). Who are the children being born today? Impact on the future, [Video].
 - Davis, D. (1994). Reaching out to children with FAS/FAE: A handbook for teachers, counselors, and parents who work with children affected by fetal alcohol syndrome & fetal alcohol effects. West Nyack, NY: The Center for Applied Research in Education.
 - Dunn-Klein, M., & Delaney, T. A. (1994). Feeding and nutrition for the child with special needs. San Antonio, TX: Therapy Skill Builders.
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Selected National Resource List

Early Childhood Research Institute on Substance Abuse

Juniper Gardens Children's Project
Schieffelbusch Institute for Life Span Studies
650 Minnesota Ave. 2nd floor
Kansas City, KS 66101
913-321-3143
WWW: <http://www.lsi.ukans.edu/jg>

American Council for Drug Education

164 West 74th
New York, NY 10023
1-800-488-3784
Referral Helpline: 1-800-378-4435
The ACDE is a private non-profit organization founded in 1977. The council has been educating the nation about health hazards associated with the use of drugs. A free catalog of materials is available on request.

Family Empowerment Network: Support for Families Affected by FAS/FAE

610 Langdon Street, Room 521
Madison, WI 53703-1195
608-262-6590
1-800-452-5242 (families only)
Fax: 608-265-2329
This national support network for families affected by Fetal Alcohol Syndrome and its effects seeks to empower families through education and support. It sponsors a variety of activities, including an annual family retreat; an annual national family conference; a toll-free family advocate line; educational opportunities for parents and professionals; free resource materials; and a quarterly newsletter, the *FEN Pen*. Contact the Network for membership information.

Fetal Alcohol Syndrome Family Resource Institute (FAS)

P.O. Box 2525
Lynnwood, WA 98036
253-531-2878
206-640-9155
This grassroots partnership of parents and professionals supports families raising children with Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE). It publishes a quarterly newsletter, *FAS Times*, devoted to topics related to fetal alcohol disabilities, and distributes information packets to provide research data and experience-based information about FAS and FAE.

Head Start Bureau

U.S. Department of Health and Human Services
330 C Street SW, Room 2050
Washington, DC 20201
202-619-0257 (information)
Fax: 202-554-4346
WWW: <http://www.acf.dhhs.gov>

Maternal & Child Health

Policy Research Center

1747 Pennsylvania Avenue NW, Suite 1200

Washington, DC 20006

202-223-1500

Fax: 202-785-6687

The maternal & Child Health Policy Research Center provides comprehensive national-level research on issues relevant to maternal and child health. Of particular note is the Research Center's 1992 report, *Federal Funding Sources for Programs Providing Home Care to HIV-Infected and Drug-Exposed Infants*, which provides an overview of funding sources for the pediatric HIV-infected population.

National Association for Families and Addiction Research and Education

(NAFARE)

NAFARE's activities include sponsoring national conferences and training workshops and conducting research. NAFARE addresses perinatal addiction and the long-term outcomes for prenatal drug exposure in children. Information packets and resource materials about the problems of perinatal substance abuse are available for professionals and the public.

National Center on Addiction and Substance Abuse

152 West 57th Street

New York, NY 10019

212-305-2500

WWW: <http://www.casacolumbia.org>

The National Center on Addiction and Substance Abuse at Columbia University (CASA) is a resource for research on addiction and substance abuse. It provides access to information, research, and commentary on tobacco, alcohol, and drug abuse issues including prevention, treatment, and cost data.

National Clearinghouse for Alcohol and Drug Information (NCADI)

P.O. Box 2345

Rockville, MD 20847-2345

800-729-6686

WWW: <http://www.health.org>

NACDI, sponsored by the Center for Substance Abuse Prevention, provides information about the effects of using drugs and alcohol during pregnancy; maintains and provides access to the Prevention Materials Database; and publishes *Prevention Pipeline*, a bimonthly periodical that presents the latest information about research, resources, and activities in the alcohol and other drug abuse prevention field.

National Institute on Drug Abuse (NIDA)

5600 Fishers Lane

Rockville, MD 20857

301-443-1124

Fax: 301-443-7397

WWW: <http://www.nida.nih.gov>

NIDA is a federal agency that conducts research on drug treatment, on the incidence and prevalence of substance abuse, and on improved approaches to prevention and treatment. NIDA disseminates Research findings through NCADI (see above entry) and through the NIDA site on the World Wide Web.

The following national organizations offer information and drug abuse prevention assistance to ethnic minorities:

African-American Family Services
2616 Nicollet Avenue S
Minneapolis, MN 55408
612-871-7878

National Association for Native American Children of Alcoholics (NANACoA)
1402 3rd Avenue, Suite 1110
Seattle, WA 98101
206-467-7686
800-322-5601
Fax: 206-467-7689

National Coalition of Hispanic Health & Human Services Organizations (COSSMHO)
1501 16th Street NW
Washington, DC 20036
202-387-5000
Fax: 202-797-4353
WWW: <http://www.cossmho.org/>