LONGSCAN

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INTRODUCTION

The Consortium of Longitudinal Studies in Child Abuse and Neglect brings together five long-term studies of child maltreatment that utilize common procedures and instrumentation. Each of the sites (Baltimore, Chicago, North Carolina, San Diego, and Seattle) is conducting a separate and unique research project on the etiology and impact of child maltreatment (See Section 6 on LONGSCAN Samples). While each project can stand alone on its own merits, the use of common assessment measures, similar data collection methods and schedules, and pooled analyses make LONGSCAN a collaborative effort that is truly greater than the sum of its parts. In addition to the specific focus of the individual sites, the coordinated LONGSCAN design permits a comprehensive exploration of many critical issues in child abuse and neglect on a combined sample of sufficient size for unprecedented statistical power and flexibility. Built into the LONGSCAN design is also the ability to replicate and extend findings across a variety of ethnic, social and economic subgroups.

Each site is following a sample of children who were identified in the first years of life as being maltreated or at high risk for maltreatment. The findings of LONGSCAN will provide a scientific basis for policy-making, program planning, and targeting service delivery by increasing our understanding of the following:

- *the child, family, and community factors which increase the risk for maltreatment in its different forms;*

- *the differential consequences of maltreatment, depending upon its timing, duration, severity, and nature, and upon the child's age and cultural environment;*

- *the child, family, and community factors (e.g., chronic exposure to violence, parental substance abuse) that increase the harm caused by different forms of maltreatment;*

- *the factors that increase the probability of positive child outcomes despite maltreatment and other adverse life circumstances;*

- *the strengths and weaknesses of various societal interventions such as child welfare programs, foster care, mental health services, parenting classes, etc. Many of the sites are involved in intervention research and evaluation of services, expediting the integration of research findings into policy and practice.*

The goal of LONGSCAN is to follow these children and their families until the children themselves become young adults. Comprehensive assessments of children, their parents, and their teachers are scheduled to occur at child ages 4, 6, 8, 12, 16, and 20. Maltreatment data are collected from multiple sources, including CPS and state central registry record reviews, at least every two years. Yearly telephone interviews allow the sites to track families and assess yearly service utilization and important life events. A more detailed description of the Consortium's conceptual model, methods, and organization can be found in Runyan et al. (1998).

Little prospective data are currently available concerning the long-term effects of maltreatment on child growth and development and the mediating effects of other life experiences including interventions designed to address maltreatment. LONGSCAN should help fill this gap. Under the direction of a group of nationally-known child abuse researchers from the fields of social work, medicine, psychology, sociology, and public health, LONGSCAN has developed a combined sample of over 1,400 high risk children from across the country. The participating families represent a cross-section of society's most intractable problems, including extremes of poverty, unemployment, substance use, and violence. We also are following families who appear to be thriving in the face of adversity. These multi-problem families come from urban, suburban, and rural settings.

Following are some of the findings from LONGSCAN analyses conducted over the past two years accompanied by suggested implications for policy and practice. These research briefs address a number of questions ranging from risk and protective factors for young at-risk children, to system response in identifying children most at risk, to the impact of early intervention. Of note are three separate analyses, independently conducted at different LONGSCAN study sites, that each document the risk to children in homes where there is domestic violence. The consortium has also placed special emphasis on trying to understand the significance of fathers and father-surrogates in the lives of LONGSCAN children. While these early findings are not definitive, it is our hope that in the coming years the accumulation of data across sites and over time will provide crucial information for the development of policies and interventions that will help our most vulnerable children live healthy and rewarding lives.

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RISK AND PROTECTIVE FACTORS FOR YOUNG AT-RISK CHILDREN

At this juncture in the evolution of child abuse and neglect treatment and research, most would agree that unicausal theories are insufficient to explain the etiology and consequences of child maltreatment. Guided by the recommendations of the National Research Council (1993), LONGSCAN's longitudinal design has been guided by ecological-developmental theory. As the following set of briefs reflect, the measurement batteries have been designed to assess risk and protective factors at the child, parent, family, neighborhood, and cultural levels. The longitudinal design of the project requires that measures also take into account the developmental changes in these risk and protective factors as children grow from early childhood to young adulthood.

At the "individual" level, we collect data on child and caregiver characteristics at each major interview. In addition to age, race/ethnicity, and gender, we have early data on perinatal characteristics and infant temperament. Chronic disease, health status, developmental disabilities, and other handicapping conditions are tracked. In our analyses over time, we will be able to examine variables such as health, intelligence, and development as "outcome" measures, and as moderators or predictors of other outcomes such as future maltreatment or social adjustment.

Because child growth and development can be influenced by the problems of the primary caregiver, LONGSCAN routinely collects data on maternal depression, stress, substance use, victimization history, and physical health to investigate the extent to which these variables interact to increase the likelihood of maltreatment or other adverse outcomes.

At the family level, we are examining the extent to which family composition puts a child at increased or reduced risk for child maltreatment. This includes the number of people in a child's household, as well as the relationships of people in the household to the index child (e.g., presence of biological father, presence of non-related adults, multi-generational household, etc.). Parent-child and family relationships are assessed through measures of parenting attitudes, parenting behaviors including discipline techniques, parental supervision, overall family functioning, and social support to caregiver.

Individuals and families exist within a larger social milieu, and so we are attempting to assess the fund of "social capital" that LONGSCAN subjects have to draw upon. Social capital can provide emotional and instrumental support, helpful knowledge or advice, and the security that allows one to venture forth and take risks. It provides community sanctions and norms that can not only protect children, but establish hopeful expectations about the future. Because social capital encompasses the accumulation and interaction of a number of constructs, the Consortium has developed an index from multiple measures (see Brief 2.2) that will be tested and refined over the life of the project. Currently LONGSCAN includes measures of personal social support, social isolation, residential stability, numerous neighborhood variables, and organizational affiliation. We also have 1990 Census geocode data on each family that supplements our knowledge about the communities in which our families live.

Finally, LONGSCAN is attempting to understand the etiology and impact of child maltreatment within the larger context of social class, which can be thought of as the interaction of income, education, and race or ethnicity. Socioeconomic factors encompass complex information about daily life, and future opportunity, thus making it difficult to disentangle the adverse impact of poverty from the impact of other risk factors, such as maltreatment. As LONGSCAN progresses, we will be able to track the life events and adjustment of families who move in and out of poverty as well as those who remain solidly entrenched at lower versus higher income levels. In response to recent legislative changes, the Consortium has also added the objective of assessing the short- and long-term impact of loss of services and income supports for our high-risk samples.

2.1 Risk and Protective Factors for Child Maltreatment Reports

An investigation of factors related to a maltreatment report in the 2nd or 3rd year of life found:

- Previous maltreatment reports and participation in Medicaid were significantly associated with a substantiated maltreatment report.
- The interaction of stressful life events and social support also predicted second or third year reports.
- Risk factors identified at birth (mother's education, maternal depression, number of other children in the home, participation in Medicaid, and mother's separation from her own mother by age 14), which were significant predictors of maltreatment reports in the first year of life, also contributed to the risk of a substantiated report in the second or third years.

IMPLICATIONS

- The fact that first year maltreatment report predicts substantiated maltreatment in the next two years suggests that the same early risk factors remain risk factors for subsequent maltreatment reports.
- Primary prevention of child maltreatment should address family size and child spacing, income supports, maternal education, and maternal mental health intervention.
- Engaging high risk families in programs designed to reduce stress and enhance social support may help reduce the risk of maltreatment in the first three years of a child's life.

BACKGROUND

The sample included children who were identified by the North Carolina state health department's infant tracking program as "high-risk" infants due to serious medical complications, low birth weight, or no prenatal care, or to maternal factors such as substance abuse, debilitating physical or mental illness, young age, or single parenthood without family support. The mothers who had been interviewed shortly after the birth of their infants were re-interviewed around the infants' first birthdays, and reports to North Carolina's Central Registry of Child Abuse and Neglect were tracked over the next two years. This analysis used logistic regression to determine whether a maltreatment report in the first year predicted a second or third year report, whether stress increased the risk of a second or third year report, and whether social support modified the risk.

For more information on this study, see:

Kotch, J.B., Browne, D., Ringwalt, C., Dufort, V., Ruina, E., Stewart, P., & Jung, J.-W. (1997) Stress, social support, and substantiated maltreatment in the second and third years of life. Child Abuse and Neglect, 21 (11), 1025-1037.

2.2 Impact of Social Capital on the Development of Young At-Risk Children

An investigation of the relationship between social capital and developmental and behavioral outcomes in high-risk preschool children found:

- Only 13% of the children were classified as doing well.
- Child functioning was best predicted by the most direct measures of social capital - - church affiliation, personal social support, and support within the neighborhood.
- An index combining five social capital indicators was strongly associated with child well-being, more so than any single indicator.
- The presence of any social capital indicator increased the odds of doing well by 29%; adding any two increased the odds of doing well by 66%.

IMPLICATIONS

- To enhance the development of at-risk children, we need to search for ways of supporting interpersonal relationships and strengthening the communities in which families carry out the daily activities of their lives.

BACKGROUND

A total of 667 2-5 year old children (mean age, 4.4 years) and their maternal caregivers from four LONGSCAN sites (Chicago sample was too young for this analysis) served as the study population. Social capital was defined as benefits that accrue from social relationships within communities and families. A social capital index was created by assigning one point to each of the following indicators: (1) two parents or parent-figures in the home, (2) social support of the maternal caregiver, (3) no more than two children in the family, (4) neighborhood support, and (5) regular church attendance. Outcomes were measured by the Child Behavior Checklist and with the Battelle Developmental Screening Inventory Test, a standardized test that screens for developmental deficits. Children were classified as doing well if their scores on these instruments indicated neither behavioral nor developmental problems.

For more information on this study, see:

Runyan, D.K., Hunter, W.M., Socolar, R.S., Amaya-Jackson, L., English, D., Landsverk, J., Dubowitz, H., Browne, D., Bangdiwala, S., & Mathew, R. (1998). Children who prosper in unfavorable environments: The relationship to social capital. Pediatrics, 101, 12-18.

2.3 African-American Fathers in Low-Income, Urban Families: Development, Behavior, and Home Environment of their 3-year-old Children

An investigation of the relationship between father involvement and child development in low-income, urban, African-American families found:

- Children did not benefit from just the presence of a father in the home, but homes that included fathers were more child-centered.
- Fathers who were satisfied with parenting, contributed financially, and were nurturing during play had children with better cognitive and language development.
- Fathers who were satisfied with parenting and were employed had children with fewer behavior problems.

IMPLICATIONS

- There is a need for family-centered social and economic policies that keep fathers involved with their families and to promote their children's development.

BACKGROUND

The 175 3-year-old African-American children and families in this study were recruited from three Baltimore pediatric clinics serving low-income, urban families and are a subset of an ongoing longitudinal investigation of child and family development. Most of the mothers were in their 20s, had limited education, and were not married. Father-figures (non-biological fathers) who had contact with their children at least monthly were also invited to participate in the father evaluation. Fathers completed questionnaires designed to assess demographic information, financial contributions to the child's household, parenting satisfaction, and child care and household responsibilities. Paternal nurturance was measured by the videotaped observation of fathers playing with their child. Child development was measured by standardized tests (Stanford-Binet and Peabody Picture Vocabulary Test-Revised) and the quality of the home environment was assessed through an in-home observation (HOME).

For more information on this study, see:

Black, M.M., Dubowitz, H. & Starr, R. H. (in press). African-American fathers in low income, urban families: Development, behavior, and home environment of their 3-year-old children. Child Development.

2.4 Fathers' Involvement with their 5-Year old Children and Child Neglect in Low-Income, Urban Families

An investigation of the relationship between father involvement and neglect in low-income, urban, African-American families found:

- The presence of a father or father-figure was not associated with neglect of their children at age five.
- Within families where fathers were present, a shorter duration of involvement, less nurturing interaction with their child, a lower sense of being an effective parent, and less involvement with household tasks were all associated with child neglect.
- The association between father's sense of being an effective parent and child neglect was partially mediated via maternal depression.

IMPLICATIONS

- There is a need to better understand why men in this population become involved in their children's lives in order to guide policies and interventions that will encourage fathers to play positive roles.

BACKGROUND

The sample for this study was comprised of 244 5-year-old African-American children and their families from the Baltimore LONGSCAN site. Families were initially recruited from pediatric clinics at the University of Maryland Hospital when the study children were less than two years of age. At the time of the study the children's mothers were, on average, about 30 years old. Most were unemployed, not married, and had an average education of about 11 years. Approximately two-thirds were on AFDC. Father-figures who had contact with their children at least monthly were also invited to participate in the father evaluation. Fathers completed questionnaires designed to assess demographic information, financial contributions to the child's household, parenting satisfaction, and child care and household responsibilities. Paternal nurturance was measured by the videotaped observation of fathers playing with their child. Child neglect was measured eight ways: 1) emotional neglect, 2) environmental neglect, 3) physical neglect, 4) CPS report for neglect, 5) neglectful videotaped interaction with mother, 6) Child Well-being Scales, 7) Home Observation Measurement of the Environment, and 8) a neglect index which was a composite of measures 4-7.

For more information on this study, contact:

Howard Dubowitz, M.D., Growth and Development Project, Western Health Center, 2nd Floor, 700 W. Lombard Street, Baltimore, MD 21201-1091 (hdubowit@umaryland.edu)

2.5 Factors Related to Mothers' Self-Report of Past and Current Victimization

An investigation of factors related to self-report of past and current victimization of mothers of infants found:

- Mothers who reported current victimization had worse histories of childhood abuse, particularly extremes of sexual abuse combined with physical abuse.
- Maternal history of victimization coupled with current victimization was linked to much higher rates of maternal depression, somatic symptoms and risk of alcoholism.
- Both history of victimization and current victimization were significantly linked to use of drugs or alcohol during pregnancy and to receiving less prenatal care.
- The interaction of current maternal victimization and perceiving the child as being in poor health was significantly associated with a substantiated report of maltreatment.

IMPLICATIONS

- CPS training and investigative protocols should incorporate the assessment of both domestic violence and a maternal history of victimization.
- Assessments related to reports of domestic violence should include an evaluation of the risk of maltreatment for any children in the home.
- The negative chain of events that leads from a maternal history of being sexually and physically abused to substantiated reports of child abuse and neglect in the next generation presents professionals with many opportunities for intervention.
- Early assessment, mental health interventions, drug and alcohol treatment, and prenatal care are all avenues of care which may reduce caregiver problems before they impact later generations.

BACKGROUND

These findings are based on an analysis of the baseline data of a longitudinal study of 320 mother-infant dyads living in Chicago. Approximately one half of the families had a substantiated report of abuse or neglect within the family during the target child's first year of life. The other half is comprised of non-reported neighborhood comparison families. The baseline interview, conducted during the target child's first year, gathered data from the mother concerning the child's health, temperament, and development. Other data collected in the face-to-face interview included caregiver's previous and current use of alcohol and drugs, her physical and psychological health, and her history of physical, sexual & emotional abuse.

For more information on this study, contact:

Mary Wood Schneider, Ph.D., Director of Research, Juvenile Protective Association, Chicago, IL 60614 (mwschneider@juvenile.org)

2.6 Factors Related to Spouse/Partner Abuse Reported by LONGSCAN Mothers

A cross-site investigation of factors related to spouse/partner abuse as self-reported by LONGSCAN maternal caregivers found:

- Mothers currently experiencing domestic violence had higher rates of victimization when they were children, current alcohol use, depressive symptomatology, psychosomatic symptoms, poor family functioning, poor social support, and separation from their children during the child's first year of life.

- Preliminary analyses suggest that domestic violence may intensify the relationship between alcohol use and child maltreatment.

IMPLICATIONS

- This multi-site study replicates many of the findings of the single-site Chicago study reported on the previous page.

- Comprehensive child abuse and neglect assessments should include assessments of domestic violence, and its interaction with other risk factors in order to determine the risk of future maltreatment.

BACKGROUND

The effects of domestic violence on family and caregiver functioning were examined using cross-site baseline data for all LONGSCAN sites except San Diego (San Diego did not administer the maternal victimization measure at baseline). Families where the female caregiver reported abuse by an adult other than her husband/partner were excluded from the analysis. Significant bivariate associates were determined, controlling for site differences. Since extensive child maltreatment data were only available for the Seattle cohort, a series of causal path analyses were performed on the Seattle cohort only. These analyses attempted to determine which factors or domains effect change in other factors or domains.

For more information on this study, contact:

Diana English, PhD, Office of Children's Administrative Research, 4045 Delridge Way SW, Suite 400, N17-2, Seattle, WA 98106 (endi300@dshs.wa.gov)

2.7 Child Maltreatment and Children's Report of Domestic Violence

An investigation of the relationship between physical and verbal domestic violence and child maltreatment reports found:

- Physical violence between spouses or partners was significantly associated with maltreatment of children.
- Children who reported "adults in the home hitting each other" were almost twice as likely to be reported for maltreatment than children who did not report this phenomenon.
- Children who reported verbal aggression ("yelling at each other") among adults in the home were not more likely to be reported for maltreatment.
- This analysis suggests that hitting (with or without yelling) between domestic partners is significantly associated with child maltreatment reports (predominantly neglect), but that yelling alone is not.

IMPLICATIONS

- Domestic violence and child maltreatment often co-occur. An investigation of one should include an assessment of the other.
- Interventions directed at reducing domestic violence may also reduce child maltreatment.

BACKGROUND

Repeated logistic regression (SUDAAN) was used to examine the relationship between specific types of domestic violence (yelling between adults versus hitting and yelling between adults) and the risk of a maltreatment report in the North Carolina sample (N=222). Interviews with mothers included questions about their children's exposure to violence in the home. Child interviews included questions about adults yelling and/or hitting in the home. Subjects' maltreatment history from birth to Age 8 was obtained from the North Carolina Central Registry on Child Abuse and Neglect.

For more information on this study, contact:

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3

CONSEQUENCES OF CHILD MALTREATMENT

Clinical experience and research findings have pointed to the enormous individual and societal costs of child maltreatment, including a wide range of physical, psychological, cognitive and behavioral problems. Yet, the complexities of disentangling the multiple causes and pathways leading to these outcomes has led the National Research Council (1993) to describe the scientific study of child abuse and its consequences as in its infancy. The capacity of research findings to describe the consequences, as opposed to the correlates, of child maltreatment has been limited by the inherent difficulties in the measurement of maltreatment itself. What falls under the rubric of "maltreatment" can vary substantially from a one-time incident of a teenager's inappropriate sexual contact with a younger sibling to years of parental neglect, coupled with physical beatings and psychological beratement. These two widely varying experiences can be classified under the same label when maltreatment is measured by a child protective services report. Reports are often characterized by *type* of maltreatment, but in-depth reviews of records show that type is sometimes misclassified or minimized for the sake of simplicity or in order to fit the service plan. Even when recorded type is more or less accurate, our ability to understand what the label really represents is confounded by the absence of many other variables, such as chronicity, frequency, severity, relationship to perpetrator(s), age at occurrence, etc. For example, using the aforementioned maltreatment experiences, measured at the level of CPS report, one could purport to compare the consequences of sexual abuse to those of neglect, but with only the crudest approximation of the actual experiences of the two children.

While LONGSCAN studies have gathered extensive data on the children's development and functioning over time, the Consortium has also been limited in its ability to address questions related to impact because our cross-site maltreatment data in the first years were confined to CPS reports. In these first years of the project, we have strived to develop more sophisticated strategies for operationalizing and measuring maltreatment including in-depth reviews of case records to developing measures for child self-report beginning at Age 12.

LONGSCAN is poised to make substantial contributions to our understanding of the complicated and varied pathways to a wide range of outcomes by utilizing:

- A sample that includes children at *all levels of risk* for maltreatment, from those who have been removed from home because of a history of maltreatment to children with no history of maltreatment. This will allow us to examine both the antecedents and consequences of maltreatment, as well as factors that exacerbate or ameliorate poor outcomes.

- *Longitudinal design with an adequate sample size* to allow the prospective examination of the antecedents, occurrence, and impact of sexual abuse or other maltreatment that first occurs after subject recruitment into the study. This will allow disentanglement of the consequences of different types of abuse from pre-existing conditions.

- *Comprehensive data on maltreatment histories*, including type, frequency, severity, chronicity, child's age and developmental status at occurrence, perpetrator, and

follow-up interventions, allowing analyses that will address the differential impact of the different and combined types of maltreatment and the context in which the maltreatment occurred. Data on maltreatment are collected from caregivers, state records, county CPS records, and from the children themselves. LONGSCAN studies will be among the first longitudinal examinations of neglect and emotional maltreatment, subtypes which may typically occur with greater chronicity than physical and sexual abuse.

- *Comprehensive measures of poverty and social class, parental and family functioning, and characteristics of the communities* in which our children grow up. Understanding other aspects of the child's physical and social environment will allow us to distinguish the effects of these variables from those of maltreatment, as well as examine the ameliorating or exacerbating effects they may have upon the risk and outcome.

- *Tracking of other adverse life events* (e.g., witnessed violence, injury, illness, death, other significant losses, homelessness) that will allow us to untangle the deleterious effects of other life experiences from maltreatment.

- *Comprehensive child outcome measures*, targeted by age to assess achievement of developmental milestones in physical, cognitive, social, emotional, and adaptive spheres. Outcome measures are also chosen to reflect the symptoms or behavior problems that are thought to best reflect maladaptive functioning at a particular developmental stage (e.g. risk-taking behavior in early adolescence). Extensive age-specific face-to-face interviews with children and primary caregivers are administered at ages 4, 6, 8, 12, 16 and 20, thus enabling examination of both the short- and long-term effects of maltreatment over time.

3.1 Child Maltreatment and School Functioning

An investigation of the impact of maltreatment on school functioning found:

- Reported children had poorer academic performance and adaptive functioning.
- However, no relationship was found between maltreatment and child's social status among peers.

IMPLICATIONS

- Child maltreatment status should be known to selected public school personnel in order to adequately plan compensatory educational services for maltreated children.
- School-based interventions for maltreated children may reduce the risk of school failure, defined as falling behind in either academic performance or classroom behavior.

BACKGROUND

This prospective cohort study from North Carolina assesses the maltreatment status of their sample (N=245) by semi-annual review of the State's Central Registry of Child Abuse and Neglect. At Ages 6 and 8, the children's teachers were surveyed using the Achenbach Teacher Report Form (TRF) and project-developed measures on social status among peers. Maltreatment status was entered, along with demographic variables gathered from maternal interviews (age, race, sex, socio-economic status), into a logistic regression model (N=221) to determine the impact of maltreatment on academic performance, peer status, and adaptive functioning. The generalized estimating equations (GEE) method was used to take advantage of multiple observations of subjects across two points in time.

For more information on this study, contact:

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4

INTERVENTIONS AND TREATMENT

In 1993 the National Research Council recognized the need for empirical evidence to guide legal and organizational decisions pertaining to child maltreatment. Little is known about the character and effects of existing interventions in treating different forms of child maltreatment, and there is no coherent base of research information on the effectiveness of treatment to guide the decisions of case workers, clinicians and other professionals working with maltreated children (National Research Council, 1993). LONGSCAN is addressing this need by focusing on key points in the continuum of services provided to maltreated children, including the evaluation of risk assessment in CPS decision making, pathways into services, and the impact of treatment variables, including foster care.

Assessment of maltreatment and Child Protective Services delivery. A focus of the Seattle study site has been an examination of risk assessment in Child Protective Services (CPS) decision making, with the goal of improving service delivery in child welfare agencies. A number of child welfare agencies have developed risk assessment models to use in prioritizing CPS response to increasing caseloads, but there has been little rigorous research on the validity and reliability of these models (English, Aubin, Fine, & Pecora, 1993). Many children investigated and substantiated as maltreated may not receive services, or the services they receive may not be appropriate. In 1988, Sabovitz and Keys reported that 56% of all substantiated cases were closed the same day they were officially substantiated (Sabovitz & Keys, 1988). Of the 23 jurisdictions reporting data to National Child Abuse and Neglect Data System for 1993, about 73% of the children who were substantiated received some type of additional service, post investigation, but little information regarding the actual services provided is available. The impact of diminishing resources and service delivery to children is not yet known. LONGSCAN is tracking child and family service needs and delivery, as well as the loss of services, in yearly assessments.

Out-of-home placement. The National Research Council (1993) recommends that research on the circumstances under which foster care appears to be beneficial or detrimental is urgently needed. Questions about the appropriateness of removing children from their parents and the types of substitute care provided remain unanswered. Prospective studies, such as those that make up LONGSCAN can begin to inform us about pathways from foster care to permanent placement and the impact of these interventions on child functioning. The San Diego study, focused on children who experienced placement in the early years of life, is especially well positioned to answer questions related to placement experiences. For example, while it is assumed that multiple placements damage children, there has been no strong empirical support for the claim that multiple placements contribute to behavior problems prior to the data now coming out of LONGSCAN (see Brief 4.5). Longitudinal studies can begin to separate the effects of problem behaviors on subsequent placements (i.e., child behavior problems can lead to placement failures and thus to multiple placements) and placement failures on subsequent behavior problems (i.e., multiple placements can lead to increased behavior problems).

Mental health services. It is well known that victims of abuse may experience impaired psychosocial, cognitive, and behavioral functioning. Inequities in access to mental health services results in only a small percentage of victims receiving needed services (McCurdy &

Daro, 1992). For example, while children in foster care are more likely to receive services, children who remain with their biological caregivers may also need comparable services. Further research on child, family and case characteristics is needed to examine allocation and receipt of services to maltreated children and their families, and the impact of these services over time.

4.1 Home Intervention Among Children with Failure-to-Thrive: Follow-Up at Age 4

An investigation of the effectiveness of a home intervention program for failure-to-thrive children found:

- At age 4, more than two years after the intervention had ended, children who received the intervention had better motor development than those who did not receive the intervention.
- Children of mothers who were not depressed benefited from the intervention, showing better cognitive development and behavior during play than children whose mothers were depressed or children whose families did not receive the intervention.

IMPLICATIONS

- Early in-home intervention among low-income children with failure-to-thrive results in improvements in children's behavior and development, up to two years after the end of the intervention.
- This type of early in-home intervention is most useful to infants and toddlers of mothers who are not depressed.
- Screening and intervention for maternal depression may help maximize the effectiveness of early in-home intervention programs.

BACKGROUND

77 children diagnosed as failure-to-thrive (FTT) were recruited from a Baltimore pediatric clinic prior to age two years along with a matched comparison group of children who were growing adequately. All children had been born at term (>36 weeks) with birth weight appropriate for gestational age and had no congenital or medical problems that would explain their growth deficiency. Most children were African-American and were being raised by single mothers who received public assistance. All children and families received intervention in a multidisciplinary Growth and Nutrition Clinic. The families of the FTT group were randomized into clinic plus home intervention or clinic only protocols. The home intervention group families received weekly home visits for one year from trained lay home visitors. Both groups were followed at annual intervals.

For more information on this study, see:

Hutcheson, J., Black, M., Talley, M., Dubowitz, H., Berenson-Howard, J., Starr, R.H., & Thompson, B.S. (1997). Risk status and home intervention among children with failure to thrive: Follow-up at age 4. Journal of Pediatric Psychology, 22, 651-668.

4.2 CPS Prediction Of Re-Occurrence Of Maltreatment

An investigation of the re-referral status of children who were classified by Washington State CPS workers as moderate or high risk for re-referral found:

- The 250 children from the Seattle LONGSCAN sample were re-referred 1,039 times from birth through the Age 4 interview. These 1,039 referrals contained 1,634 allegations of maltreatment.
- Forty-two percent of the children had four or more referrals to CPS by the time they were four years old.
- The majority of the referrals were for neglect allegations.

IMPLICATIONS

- Despite a CPS program designed to focus on risk to children, the risk to this cohort of children does not appear to have been adequately addressed.
- Policies and practices associated with the investigation, substantiation and intervention for neglect cases should be re-examined.

BACKGROUND

The Seattle cohort of LONGSCAN children were recruited as an at-risk population that had already been referred to Child Protective Services with an allegation of child abuse/neglect. To be eligible for the study, the child had to have been assessed by a CPS intake worker as moderately or highly likely to be abused/neglected in the future, absent intervention. The initial risk rating is based on the Washington State Risk Assessment Model. This analysis examined the rate of re-referral for 250 LONGSCAN children from birth through April, 1995. CPS records were examined for each child to determine the number of times referred to CPS. Based on child age, referral "opportunity" periods ranged from 2.5 to 7.5 years.

For more information on this study, contact:

Diana English, PhD, Office of Children's Administrative Research, 4045 Delridge Way SW, Suite 400, N17-2, Seattle, WA 98106 (endi300@dshs.wa.gov)

4.3 The Validity of CPS Ratings of Risk Assessment

An investigation comparing Washington State CPS risk assessment data to caregiver reports of family and child functioning found:

- CPS workers' assessments of caregiver problems associated with substance abuse and depression were consistent with LONGSCAN self-report measures of similar constructs.
- There was no correspondence between workers' assessments of child factors and independent measures of child behavior problems and developmental status. Children had significant problems that were not identified by CPS workers as part of their investigation.
- Workers' assessments of adult and childhood history of victimization were not consistent with caregiver self-reports, except for a history of child sexual abuse.
- Workers' ratings of stress and social support were not consistent with caregiver's self-report.
- Workers did not identify parental deficits associated with unrealistic expectations or appropriate empathy toward their child.

IMPLICATIONS

- Washington State CPS workers are not validly assessing many risk factors that have been found to be associated with the likelihood of reoccurrence of child maltreatment.
- The findings from this study indicate the need to re-examine CPS policies and practice regarding the assessment of risk in child abuse/neglect investigations.

BACKGROUND

This study examined the correspondence of CPS ratings of risk on 10 of 32 risk factors on the Washington State Risk Assessment Model (WRM) with independent measures of the same constructs using the LONGSCAN protocol. Each of the CPS risk variables are rated on a 0-6 point Likert scale. From the LONGSCAN data, both child variables (developmental status and behavior problems) and caregiver variables (mental/physical/emotional impairment of caregiver, substance abuse, history of domestic violence or childhood maltreatment, parenting skills and knowledge, stress, and social support) were examined. LONGSCAN measures included the Battelle Developmental Screening Test for child developmental problems, the Child Behavior Checklist for child behavioral problems, the CES-D for caregiver depression, the CAGE for substance abuse, the Adolescent and Adult Parenting Inventory and the Conflict Tactics Scale for parenting skills, the Life Experiences Survey and Functional Social Support Scale to assess stress and social support, and a LONGSCAN-developed caregiver history of victimization instrument. A Spearman correlation coefficient was used for this comparison of non-normally distributed numerical and ordinal data.

For more information on this study, contact:

Diana English, PhD, Office of Children's Administrative Research, 4045 Delridge Way SW, Suite 400, N17-2, Seattle, WA 98106 (endi300@dshs.wa.gov)

4.4 Kinship vs. Non-Kinship Care and Child Functioning

A prospective examination of the behavior problems of maltreated children placed in kinship versus non-kinship care found that:

- Children who were placed with relatives were less likely to evidence behavior problems in their current setting than children who were placed with non-relatives.
- Biological parent reports of behavior problems prior to removal indicated that older children (9- to 16-years of age) who were placed with non-relatives had more problems.
- No differences in prior problem behaviors for younger children (2- to 8-years of age) were found between those placed in kinship versus non-kinship care.

IMPLICATIONS

- There is some initial support for the belief that it is better to place children with relatives than non-relatives. Thus, efforts to place children with relatives should continue to be given priority.
- For older children it may not be the case that relatives provide a better family setting, but rather those with more problems are less likely to be accepted by relatives, less likely to have relatives available, and/or social workers are less likely to ask relatives to take them.
- If we want to place more children in relative care then we need to identify those who have behavior problems, convince social workers and relatives that they can be managed, and guarantee that appropriate support will be provided (e.g., in-home training, respite care).

BACKGROUND

These findings are based on information obtained from the larger cohort of children and youth in San Diego County who had been removed from their homes. Data included caregiver reports of child and adolescent performance on the CBCL (ages 2 to 16) at an interview approximately five months after they had been removed. At this time 273 (32%) of the children were in kinship care while 592 (68%) were in non-kinship care. In addition, a subset of biological parents (n = 130) were located and asked to rate their child's behavior on the CBCL for the 2-month period prior to their removal.

For more information on this study, contact:

Alan Litrownik, PhD, Child & Family Research Group, 9245 Skypark Court, Suite 228, San Diego, CA 92123. (ajlit@sunstroke.sdsu.edu)

4.5 Stability of Out-of-Home Placements and Child Functioning

A prospective study of children placed in out-of-home care found:

- Children who scored above borderline clinical cutpoints for behavior problems at the first out-of-home interview experienced significantly more placements than children who did not score above these cutpoints.
- After controlling for initial level of problem behaviors at the first interview, problem behaviors one year later were predicted by the number of placements that the child or youth experienced.

IMPLICATIONS

- Efforts to minimize the number of out-of-home placements need to be continued. These should include preparing relative and non-relative foster care providers to handle problem children.

BACKGROUND

A total of 415 children from the larger San Diego cohort were included in these analyses. Criteria for inclusion were: (1) completion of the Child Behavior Checklist by a primary caregiver at the 5-month and 17-month post removal interviews and (2) information about the number of placements experienced was available (i.e., CPS record was reviewed for period between first removal and subsequent 18 months). Cases were included only when the interval between the two assessment periods was approximately 12 months.

For more information on this study, contact:

Alan Litrownik, PhD, Child & Family Research Group, 9245 Skypark Court, Suite 228, San Diego, CA 92123. (ajlit@sunstroke.sdsu.edu)

4.6 Pathways of Care for Maltreated Children Removed From Home at an Early Age

In San Diego County, Child Protective Service's goal for out-of-home placements is to have a permanent plan in place no later than 18 months after initial removal. Additional goals include reunifying children, if appropriate, and in all cases, finding a stable family-like permanent placement. A follow-up study of children who were removed from their home at a very young age (between birth and 3.5 years) revealed:

- Eighteen months following placement two-thirds of the children were still in foster care.
- By the Age 4 LONGSCAN interview, an average of 3.3 years after initial removal, a little more than one-third of this cohort remained in foster care.
- More than 80% of the children who had been reunified prior to the 18-month window were still reunified at the Age 4 interview.
- Children who were in foster care (relative and non-relative placements) 18 months after their initial placement were more likely to be in a different placement at the LONGSCAN Age 4 interview than those who were adopted, reunified, or in a guardianship placement.
- While a more or less equal number of children from both (relative and non-relative) initial foster care groups moved to a guardianship arrangement at the Age 4 interview, twice as many children in non-relative placements were adopted (40% versus 20%), and almost twice as many children in relative placements were reunified (17.9% and 8.7%).

IMPLICATIONS

- San Diego's goals related to permanency planning are not being met.
- Care needs to be taken by protective agencies when determining initial placements as they may predetermine placement outcomes.

BACKGROUND

These results are based on examination of the LONGSCAN San Diego cohort (n = 319) at the Age 4 assessment. Information about their prior placement history (i.e., placement at 18-months post-removal) was obtained through a review of CPS case records. During the Age 4 interview the caregiver's relationship to the child was determined (i.e., biological: parent, relative, or not related; and legal: reunified, adopt, guardian, or foster parent

For more information on this study, contact:

Alan Litrownik, PhD, Child & Family Research Group, 9245 Skypark Court, Suite 228, San Diego, CA 92123. (ajlit@sunstroke.sdsu.edu)

4.7 Resource Availability and the Functioning of Young Children in Out-of-Home Care

A prospective examination of the outcomes of young maltreated children who have been placed in foster care found that:

- Children placed with non-relatives (especially those in foster care) evidenced significantly more problems than children who were reunified or in the care of relatives.

- Children placed with non-relatives (foster care, adopted, or guardianship) had more resources and support available (e.g., family income, social support, caretaker health) than those who were reunified or placed with relatives.

IMPLICATIONS

- The finding that reunified children and those placed with relatives have fewer behavior problems suggests that (1) reunification can be a most appropriate placement outcome; (2) workers appear to be doing a good job of identifying when reunification is appropriate; and (3) when reunification is not appropriate, placement with relatives may be desirable.

- At the same time, it appears that biological parents and relatives could have an even more positive impact on the children if they had additional resources available (i.e., if Social Service agencies provided them with additional support).

BACKGROUND

These results are based on examination of the LONGSCAN San Diego cohort (n = 319) at the Age 4 assessment. During the Age 4 interview the caregiver's relationship to the child was determined (i.e., biological: parent, relative, or not related; and legal: reunified, adopt, guardian, or foster parent). In addition, characteristics of the children's caregiving environment (SES, health, attitudes, support, etc.) were obtained. Finally, behavior problems for each child were rated by caregivers on the Child Behavior Checklist.

For more information on this study, contact:

Alan Litrownik, PhD, Child & Family Research Group, 9245 Skypark Court, Suite 228, San Diego, CA 92123. (ajlit@sunstroke.sdsu.edu)

4.8 Perceived Need and Receipt of Mental Health Services in a Child Welfare Population

An examination of maternal report of perceived need and receipt of mental health services for young children, previously reported to CPS for maltreatment, found:

- Perceived need for mental health services was greater if the child exhibited more behavioral problems, more physical health needs, or seriously delayed communication skills.
- Receipt of mental health services was greater if the child exhibited more behavioral problems, more physical health needs, or seriously delayed communication skills.
- Older caregivers were more likely than younger ones to perceive need of mental health services for the reference child.
- The presence of a biological father reduced the likelihood of perception of need and receipt of mental health services.
- Children were more likely to receive mental health services if they were with a foster mother as opposed to a biological mother and if the service plan included out-of-home day care.
- Caucasian caregivers were more likely to perceive a need for mental health services
- The oldest child in the family was more likely to be considered as needing services.

IMPLICATIONS

- Further investigation is required to understand factors that precipitate service referral and service usage among high-risk populations
- Examination of the relationship between primary caregiver's perception of need and actual receipt of services needs to be examined, especially for minority families.

BACKGROUND

This study compared children who received mental health services and those who did not in the Seattle and San Diego cohorts of the LONGSCAN study. Both cohorts are children who were known to and receiving services from CPS at the time they were recruited into the study. This analysis included an examination of child developmental status; child behavior problems; child health; caregiver parenting skills; caregiver substance abuse, mental and physical health status; family functioning; and socio-economic factors associated with life events, income, social support and neighborhood characteristics.

For more information on this study, contact:

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5

PRIORITIES AND NEXT STEPS FOR LONGSCAN

LONGSCAN is currently in its eighth year of data collection. In the first eight years of the proposed 20-year project, extensive common data have been collected across the five sites. These data begin to address both short- and long-term objectives of the Consortium, as is exemplified by these research briefs.

Continued data collection guided by ecological-developmental theory remains a high priority for the Consortium, including efforts to gather complete and accurate data on our subjects' maltreatment histories. LONGSCAN has adopted a multiple method, multiple source approach to collecting maltreatment data, including CPS narrative case record review, state central registry review, parental report, and, beginning with the Age 12 Child Interview, child self-report. This year, the North Carolina site initiates data collection with new child self-report measures of maltreatment history, using an audio computer-assisted self-interview (A-CASI) format designed to provide subjects with the highest possible level of privacy. Not only should these measures enhance our ability to describe child maltreatment and its impact, they will also benefit the field by exploring the risks and benefits of this approach. An adjunct study is currently in progress that will allow us to assess the risks and benefits of using the A-CASI format when collecting sensitive data from in-patient adolescents.

The objectives of the Consortium for the next few years include:

- Determine the impact of maltreatment and witnessed violence on latency-age and early adolescent psychological well-being, including an examination of risk-taking behavior such as smoking, drug abuse, aggressive and violent behavior, and inappropriate sexual activity.

- Develop longitudinal models comparing the psychological and developmental impact for different types of maltreatment and witnessed violence at different ages while controlling for SES, parent functioning, family functioning, and extrafamilial factors.

- Describe the patterns and impact of CPS assessment and intervention, foster care, mental health and other services provided to at-risk or maltreated children by child, family, community and agency characteristics.

- Identify the child, family, community and intervention factors that appear to foster resiliency in maltreated and at-risk children.

- Examine the relationship between the extrafamilial environment and maltreatment, including the mediating or exacerbating effect extrafamilial factors may have on the behavioral and developmental outcomes of maltreated children.

- Develop further recommendations for the field that address the ethical, legal and methodological barriers to successful child maltreatment research.

- Publish a LONGSCAN Measures Manual which will share knowledge about the usefulness, reliability, and validity of the wide range of psychosocial measures that have been used during the first eight years of LONGSCAN.

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APPENDIX 1

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The LONGSCAN Samples

OVERVIEW OF LONGSCAN SAMPLES

The LONGSCAN Consortium consists of five independent prospective longitudinal studies that are using shared methodology to explore the antecedents and consequences of child maltreatment. The studies are being conducted in four urban sites (Baltimore, Chicago, San Diego, and Seattle) and one statewide site (North Carolina) that includes urban (53%), suburban (24%), and rural (23%) areas. They are linked through the LONGSCAN Coordinating Center at the University of North Carolina at Chapel Hill and an agreement to share measures, procedures, and data systems.

The LONGSCAN samples were chosen to represent varying levels of risk and exposure to maltreatment. At the most extreme level, the San Diego site focuses exclusively on children who, at a very young age, were removed from their homes and placed into foster care. Three sites recruited children into LONGSCAN based on CPS referral status. In the Seattle site, all the children were reported to CPS at some time prior to age five. In the Chicago site, about two-thirds of the sample of mother-infant dyads were recruited from reported families, half receiving comprehensive services and half receiving only CPS intervention. The other one-third of the sample is non-reported neighborhood controls. The North Carolina sample was selected by matching non-reported to reported children on a 2:1 ratio; thus at the beginning of follow-up, only one-third of this sample had been reported. Finally the Baltimore sample includes low-income children recruited from primary health-care clinics, independent of their involvement with CPS. Of course, regardless of initial maltreatment status, LONGSCAN also provides the opportunity for a prospective look at maltreatment, identifying new maltreatment or recurring maltreatment as it occurs during the lifespan.

The studies that make up LONGSCAN are led by investigators from multiple disciplines (social work, psychology, pediatrics, public health, sociology, biostatistics) who bring unique perspectives and expertise to the joint venture (see Appendix 2 for a complete list of investigators). In addition to the overarching objectives of LONGSCAN to examine the antecedents and consequences of child maltreatment, and to determine which factors in the child's social ecology ameliorate or exacerbate outcomes, each of the studies has site-specific objectives that address particular problems related to child maltreatment prevention or intervention.

Three of the LONGSCAN sites (Baltimore, North Carolina, and San Diego) recruited their samples from among pre-existing samples of high risk children who had been followed since a timepoint between birth and 18 months of age. The Chicago sample was newly recruited for LONGSCAN from among 3-18 month old infants who met selection criteria (see Capella Project, page 30). The Seattle sample, also newly recruited for LONGSCAN, was drawn from among reported children ranging in age from infancy to four years old. Thus all LONGSCAN children are being followed forward into adulthood, beginning with the first years of life.

The following pages offer one-page descriptions of each LONGSCAN site, including site-specific objectives, recruitment criteria and strategies, data collection progress, and sample characteristics. These are followed by tables that compare the demographic characteristics of the children and their primary caregivers at the time of the first ("baseline") LONSCAN interview. More details about the organization and coordination of the Consortium can be found in Runyan et al. (1998).

BALTIMORE

A Longitudinal Study of Child Neglect

In 1991, the Baltimore site brought to the Consortium an on-going study of child neglect that began in 1988. The primary goal of the Baltimore study has been to examine the antecedents and long-term outcomes of child neglect, including the risk and protective factors that influence the occurrence of neglect. Other objectives include examining the role of fathers in the lives of their children and the impact these roles have on child outcomes and studying the factors associated with CPS reports and substantiation of child neglect.

The Baltimore sample is drawn from a pre-existing sample of 282 children recruited from inner-city pediatric clinics serving low-income families. The children in this sample were not recruited because of maltreatment status, but because of other risk factors. The initial sample (N=333) consisted of 129 children diagnosed as non-organic failure-to-thrive. Eligibility criteria were: age under 25 months, weight-for-age below the 5th percentile using the National Center for Health Statistics growth charts, gestational age of at least 37 weeks, birth weight appropriate for gestational age, no history of perinatal complications, and the absence of congenital disorders or chronic illnesses that could impede growth. Two additional samples were later recruited, group matched on age, gender, and race. All the families were from the inner city and of low socio-economic status. The second group of 83 families was recruited from a clinic serving children of women who were either HIV-infected or at high risk for HIV. The 121 families in the third, comparison, group were recruited from a primary care clinic and were without overt risk factors other than poverty. In the course of the initial neglect study, the sample was assessed for neglect using the Child Well-being Scales (Magura & Moses, 1986), CPS reports, and other measures.

Baltimore's participation in LONGSCAN began at Age 4 with 237 of the original subjects successfully recruited for interview. At Age 5, Baltimore's original grant called for a home visit with extensive data collection from both mothers (N=199) and father-figures (N=122). This differed from the LONGSCAN protocol that required only a brief telephone interview at this data point. At Age 6, another 45 subjects from the original sample were interviewed bringing the total number of subjects to be followed on the common LONGSCAN protocols to 282. Currently Age 4, 5, and 6 datasets are closed. The Baltimore site continues to collect Age 8 data. These child and maternal interviews are being supplemented with site-specific father interviews.

As seen in Tables 1 and 2, the Baltimore sample differs most from those at the other sites in that it includes a larger proportion of African-American families. Few of the mothers were married at the time of the baseline interview and more than two-thirds of the mothers had never been married. The vast majority of the families participating in this study are poor, with about 75% receiving AFDC and Medicaid benefits at the time of the Age 4 interview.

CHICAGO

The Capella Project

The Capella Project, based in the Juvenile Protective Association (JPA) in Chicago, is a longitudinal study of child maltreatment that began collecting data in 1991. The primary goals of the Capella Project are:

- To isolate the developmental consequences of child abuse and neglect from the impact of other risk factors such as extreme poverty and parental substance abuse.

- To identify factors that appear to protect children from the adverse impact of child maltreatment and other traumatic events.

- To determine what impact societal interventions, such as the provision of social services, have on the developmental consequences of child abuse and neglect and on the prevention of subsequent child maltreatment.

The Chicago sample consists of 320 mother-infant dyads, with infants averaging 10 months of age at the time of the LONGSCAN baseline interview. In order to control for geography and SES, all household units were located within the State Child Protective Services (CPS) Northern District boundaries for Chicago and had household incomes below the federal poverty threshold. Dyads were recruited from maltreating and non-maltreating households. In the maltreating households, families had at least one report of substantiated child abuse or neglect within twelve months of the target child's recruitment. In the non-maltreating households, families had no substantiated reports of maltreatment within twelve months of the target child's recruitment.

In the maltreating sample, 82 dyads were identified for the study by social service agencies after the family had been referred for long-term (3 to 18 months), relational-based clinical interventions such as supportive counseling or psychotherapy. One hundred additional dyads in the maltreating sample were identified for the study by State CPS workers from the Northern District Office. Non-maltreating neighborhood comparison dyads were identified for study by local, community-based health and social service agencies.

At this writing, the Chicago site is involved in major data collection efforts following the LONGSCAN Age 4 and Age 6 protocols, as well as conducting the off-year tracking interviews for 3- and 5-year olds. Because of difficulties in locating families by telephone, the Capella Project schedules face-to-face interviews for the yearly tracking visits as well as the major data collection points.

Sample descriptions in Tables 1 and 2 reflect the comparatively young age of the Chicago sample at the time of the initial (baseline) interview. As would be expected, the mothers were also very young and almost all the children were still residing with their biological mothers. The Chicago sample is a racially mixed group, about half African-American, with the rest divided across other racial groups. The Capella Project supplies one of two samples with significant Hispanic representation (15%); the other is San Diego with 17%. At baseline, the families were very poor, with 80% receiving AFDC and Medicaid benefits.

NORTH CAROLINA

The Stress & Social Support (SSS) Study

This sample, comprised of the oldest children in LONGSCAN, presents an opportunity to examine the life-course of children who were not originally selected because of maltreatment. The focus of this study is the examination of the extent to which family stress and social support predict child maltreatment and the behavioral development of at-risk children. Between 1985 and 1987, 788 newborns, 85% of whom were identified as "high risk" by the state public health department's infant tracking program (HPIP), were recruited into a prospective study of stress and social support. Mothers of the newborns were recruited for the study from hospitals and health departments in 37 geographically diverse North Carolina counties with high numbers of HPIP births. These children constituted a birth cohort that was not selected for abuse or neglect, but for reasons of poverty, single parenthood, young maternal age, low birth weight, and other medical and psychosocial risk factors. The mothers were first interviewed in their homes on the average of seven weeks after the birth of the index children.

A continuation of the original Maternal and Child Health Bureau research grant provided funding to interview 432 of the subject-mothers again when their children were one year of age. With funding from other sources, including the March of Dimes Birth Defects Foundation and the State of North Carolina Division of Social Services (DSS), sub-samples of the original population were interviewed annually thereafter: 172 mothers were interviewed when the subject-children were two years of age; 60 mothers were interviewed when the children were three years of age.

After the Age 3 interviews, the study joined the LONGSCAN consortium. Of the 788 subjects in the original SSS population, 751 were eligible for inclusion in the LONGSCAN study. (Those excluded as potential subjects included children born in 1985, those known to have died, those whose race was other than African-American or Caucasian, and those who were reported to CPS prior to six months of age and were not reported again prior to recruitment).

At the time the LONGSCAN Consortium was formed in 1991, at least 172 of the children in the NC cohort had been reported to the state DSS for maltreatment. With support from LONGSCAN, 74 of the reported children were recruited into this prospective study along with a "control" group of 147 unreported children from the original cohort. Computer-generated randomized lists of maltreated and non-maltreated subjects were used to match one reported subject with two non-reported subjects in list order matching on sex, income, race, and age. At the Age 6 interview, the same procedures were used to recruit an additional 22 children into the study for a total sample size of 243.

To date, extensive data on the NC cohort have been gathered at birth, ages 1, 2, and 3 years (MCH-funded studies) and at ages 4, 6, and 8 years (LONGSCAN). Telephone interviews at 5, 7, 9, 10, and 11 years have tracked the families to assess yearly life events and service utilization for the child. These annual contacts also minimize attrition. In the fall of 1998, the NC site will inaugurate the fielding of the LONGSCAN Age 12 protocol, which will include for the first time audio computer-assisted self-interview (A-CASI) questionnaires asking for child self-report on all types of maltreatment.

As shown in Table 1, the North Carolina cohort was older than the other samples at the time of the initial baseline interview. This resulted from an unanticipated delay in the project start date. Because the children in this sample are older than those at the other sites, their caregivers (mostly biological mothers) are also older (Table 2). This sample is about 60% African-American and 40% Caucasian. More than 40% of the caregivers did not finish high school, and most are poor (70% on Medicaid, and 50% on AFDC at baseline).

SAN DIEGO

Longitudinal Study of Maltreated Children Placed in Out-of-Home Care

The San Diego LONGSCAN sample was drawn from a larger cohort of children (birth to 16 years of age) residing in the central and southern regions of San Diego County who were removed from their homes between April 1990 and October 1991. Of the 5331 children who entered an emergency shelter care facility during this period of time, 1352 were subsequently determined to be dependents of the juvenile court and were placed in out-of-home care. A short term (18-month) longitudinal follow-up of these 1352 children and youth was conducted with the support of federal funds from the National Institute of Mental Health and the National Center on Child Abuse and Neglect.

This follow-up included face-to-face interviews with 911 children, youth and their caregivers at approximately 5-months following the initial removal, 814 at 11-months post removal, and, and 690 at 17-months following initial removal. Child protective service records for the 18-month period following initial removal were reviewed and charted on a project-developed abstract form for 1078 of the children and youth. And finally, retrospective reports of child and family functioning were obtained from 536 biological parents shortly after their children had been removed.

In 1991, the San Diego site joined the LONGSCAN Consortium. The LONGSCAN cohort was recruited from among the group of children who had been removed from their homes when they were younger than 3.5 years of age (n=532). A total of 330 children were successfully recruited, i.e., completed LONGSCAN baseline assessment at age 4 (n=319) or age 6 (n=11). The demographics of the successfully recruited subjects have remained consistent with those of the 532 children eligible for recruitment. As seen in Table 1, African-American children comprise the largest race/ethnicity group (37%), followed by White (29%), and Hispanic (16%). Socio-economic status of these families is higher than that at other sites (e.g., fewer than 30% did not graduate high school compared to 40% and higher at other sites; only 19% of the caregivers have never been married compared to double or more that amount at the other sites). Percentages receiving AFDC and Medicaid are lower than the other sites, but still relatively high (47% and 63%, respectively) perhaps reflecting benefits to foster families.

A major goal of the San Diego study is to improve treatment services available for children who have been placed in out-of-home care at an early age by identifying which variables ameliorate or exacerbate the psychological impact of child maltreatment. Moderating variables of particular interest have been stability of caretaker and health and development during the first year of life; type, severity, and duration of maltreatment; intellect and temperament of the child; and type and quality of social support available to the child. Tracking pathways of care after entry into the child welfare system has also been a special focus of this study which is able to compare children who have reunified with their original families to those who remain in foster care and to those who experience adoption.

At this writing, San Diego site data are complete for the Age 4 interview, more than 95% complete for the Age 6 interview, and more than 35% complete for the Age 8 interview.

SEATTLE

The Long-Term Family Study

The Seattle project was initiated, as part of the LONGSCAN consortium, in April, 1991.This site proposed the recruitment of a cohort of children referred to child protective services with an allegation of maltreatment and assessed as moderately likely to be re-referred to child protective services (CPS) absent intervention. The assessment of likely future maltreatment is based on guidelines developed in the Washington Risk Assessment Model (WRM). The WRM includes screening criteria, guidelines for assigning risk at intake (for response prioritization), and a 32-item ecological risk model for assessing risk after investigation. A special focus of the Seattle site has been to utilize data gathered from the LONGSCAN interview and from the WRM to aid child welfare agencies in their efforts to improve guidelines for assessment and service delivery. A long-term objective of this site is to assess the impact of CPS referral and services on children and their families.

The Seattle cohort of children provides a sample of children at the high end of the maltreatment risk continuum, second only to San Diego where every child in the sample had not only been reported, but also removed from home because of maltreatment. Seattle children were recruited after a report to CPS, but may or may not have been substantiated for abuse. Access to the potential pool of subjects was negotiated with King County Child Protective Services offices. However, since the pool of subjects was being recruited from open, active child protective services cases, it was unknown what the refusal rate would be. A pilot recruitment project was conducted from June to September, 1991. Recruitment procedures based on the pilot were developed and project recruitment began in November, 1991. Subjects were recruited by caseworker referral, or by LONGSCAN staff reading case files and identifying potential subjects. Once potential subjects were identified, introductory letters describing the study and inviting participation were sent and followed by telephone contact with child caregivers. Protocols for in-person review of consent procedures were developed prior to the administration of the LONGSCAN protocols for child and caregiver. By April, 1994, over 1,000 families had been invited to participate in LONGSCAN, with a final recruitment of 261 LONGSCAN families.

Demographically, the Seattle sample reflects its geographic location (a higher proportion of Caucasian, Asian, and mixed race children than at other sites) and the study eligibility criteria (recruitment upon report to CPS is likely related to the higher proportion of children being cared for by someone other than their biological mothers) (see Tables 1 and 2). Out-of-home placement may have increased the overall SES of the caregivers (more education, fewer single mothers) who were interviewed at baseline. Like the other samples, a high proportion of this sample was receiving income support services (63% AFDC and 70% Medicaid) due to poverty and foster care placement.

As indicated in Table 1, the Seattle site interviewed 261 families at LONGSCAN baseline (infants-four-year-olds). Data collection for the Age 4 (250 face-to-face interviews) and Age 5 (252 telephone interviews) protocols is now complete. Age 6 data at Seattle are more than 97% complete and interviewers are currently in the field with protocols for data collection at Ages 7, 8, 9, and 10.

Table 1. Child Characteristics by Sample at LONGSCAN Baseline *

	Baltimore (N = 232)	Chicago (N = 317)	North Carolina (N = 221)	San Diego (N = 318)	Seattle (N = 261)
Age	4 yrs old	infants	5 yrs old	4 yrs old	0-4 yrs old
Birth Year	1987-1991	1990-1995	1986-1987	1987-1991	1988-1992
Sex					
Male	54%	49%	45%	45%	51%
Female	46%	51%	55%	55%	49%
Race					
African-American	93%	49%	62%	37%	21%
Caucasian	5%	14%	37%	29%	52%
Hispanic	<1%	15%	- -	16%	2%
Mixed	1%	20%	1%	15%	21%
Asian/Other	1%	2%	- -	3%	4%
Low Birth Weight	19%	19%	31%	7%	14%

Notes. * Based on data collected through July 1996.
Does not include subjects added to samples at the Age 6 interview.

Table 2. Primary Caregiver Characteristics at LONGSCAN Baseline*

	Baltimore (N = 232)	Chicago (N = 317)	North Carolina (N = 221)	San Diego (N = 318)	Seattle (N = 261)
Relationship to Child					
Biological Mother	91%	99%	89%	31%	73%
Adoptive Mother	- -	- -	.5%	16%	1%
Grandmother	4%	- -	6%	11%	7%
Other Female Kinship	2%	.3%	2%	9%	4%
Foster Mother	1%	.3%	1%	19%	7%
Non-kinship Female	.4%	- -	- -	6%	.4%
Male Caregiver	2%	.6%	1%	8%	7%
Race					
African-American	93%	53%	61%	36%	22%
Caucasian	5%	23%	38%	36%	63%
Hispanic	.4%	15%	.5%	17%	2%
Mixed	.4%	7%	.5%	4%	8%
Asian/Other	1%	3%	.5%	7%	5%
Education					
$\leq$ 11 years	44%	61%	43%	29%	39%
12 years	42%	26%	39%	30%	30%
$>$ 12 years	14%	14%	18%	41%	31%
Marital Status					
Married	16%	19%	38%	50%	31%
Single/Never Mar	69%	69%	45%	19%	38%
Separated/Divorced	13%	11%	17%	27%	31%
Widowed	2%	1%	.5%	4%	.4%
Welfare Support					
AFDC	77%	80%	48%	47%	63%
Medicaid	72%	80%	69%	63%	70%

Notes. * Based on data collected through July 1996.
Does not include subjects added to samples at the Age 6 interview.

APPENDIX 2

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LONGSCAN Projects and Investigators

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A Longitudinal Study of Child Neglect

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The Stress and Social Support Study

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