

Dr. Kathleen McCartney is Professor of Psychology and Family Studies at the University of New Hampshire, where she also serves as Director of the Child Study and Development Center, a laboratory school for 138 infants, toddlers, and preschoolers. Dr. McCartney received her Ph.D. from Yale University in 1982 and was an assistant professor of psychology at Harvard University for five years before joining the faculty at UNH. She is widely published on the topics of child care, after-school care, and parenting, and is one of the principal investigators of the nationally renowned National Institute of Child Health and Human Development (NICHD) Early Child Care Study, the most comprehensive study of early child care ever undertaken in the United States.



What Do We Know About the Effects of Early Child Care?

Kathleen McCartney

Infants and young children in the United States today spend much of their early lives in child care, in arrangements that vary widely in type, setting, and quality. What are the effects of these child care arrangements? The NICHD Study of Early Child Care, the most comprehensive child care study conducted to date, was designed to address that complex question. More than 1,300 children were enrolled in the study in 1991 and their progress documented for a seven-year period. The major findings of the study to date include the fact that most child care programs (for children at 24 and 36 months) do not meet the recommended guidelines for aspects of care that can be regulated. In addition: (1) the number of hours children spend in child care varies by ethnicity, with white non-Hispanics averaging the fewest hours of care and black non-Hispanics the most; (2) higher quality child care is associated with more positive outcomes whereas lower quality child care is associated with more negative outcomes; (3) infants from poor families are more likely to receive relatively low quality care; (4) children from families at the lowest and highest income levels received higher quality of care than those in the middle income range; (5) families more dependent on a mother's income placed their infants in child care at an earlier age and used more hours of care than families less dependent on a mother's income; and (6) family and home characteristics are stronger predictors of many outcomes than are children's experiences in child care. In addition to describing the NICHD Study of Early Child Care and its findings, this article outlines the characteristics of high quality early child care and explains why quality of care is such an important consideration.

Families are relying in unprecedented numbers on non-maternal care for their infants and children.

The Problem

As increasing numbers of women enter and remain in the work force after pregnancy, including more who are single parents, families are relying in unprecedented numbers on non-maternal care for their infants and children. Consider these facts:

The NICHD Study of Early Child Care (NICHD Study) is the most comprehensive child care study conducted to date to determine how variations in child care are related to children's development.

- In 1975, 39% of mothers with children under six years of age worked outside the home.
- Today, 62% of mothers with young children work outside the home.
- Most mothers return to work in their child's first 3-5 months of life.

Thus, infants and young children today spend much of their early lives in child care, in arrangements that vary widely in type, setting, and quality.

What are the effects of these various child care arrangements? Some child care experts have argued that child care poses risks for infants because healthy development requires caregiving by a single person. In contrast, other experts have said that children may thrive in child care, especially care of high quality. Still other experts contend that child care arrangements do not affect development, unless the care is of very poor quality. Who is right? Answers to these fundamental questions require careful, long-term study of children who, as a group, experience a variety of child care arrangements beginning in infancy.

What Is the NICHD Study of Early Child Care?

The NICHD Study of Early Child Care (NICHD Study) is the most comprehensive child care study conducted to date to determine how variations in child care are related to children's development. Researchers enrolled more than 1,300 children in the Study in 1991 and have followed most of them through the first seven years of their lives. The child care settings children were placed in were selected by their families, based on the availability and affordability of child care in their communities. Children were *not* randomly assigned to different types, amounts, or quality of care [31].

As Figure 1 shows, the children in the NICHD Study are ethnically representative of the U.S. population as a whole. In addition to ensuring that the families reflected racial diversity, the research team included mothers and their partners with a wide variety of educational attainment. At the time of enrollment in the Study, about 10% of the mothers had less than a 12th grade education, slightly over 20% of the mothers had a high school diploma, one-third had some college, 20% had a college degree, and 15% had a graduate or professional degree (compared with 24%, 30%, 27%, 12%, and 6%, respectively, in the U.S. population). Families in the study had a mean income of \$37,781, as compared to a mean income of \$36,875 for families in the U.S. Approximately 20% of the study participants were receiving public assistance at the time of enrollment [31].

The NICHD Study assesses children's development using multiple methods:

- Trained observers
- Interviews
- Questionnaires
- Videotaped interactions
- Developmental assessment tests

Figure 1. Ethnicity of Children Enrolled

What Questions Is the NICHD Study of Early Child Care Designed to Answer?

The goal of the study is to investigate the complex relationships between child care characteristics and children’s developmental outcomes. A major way this study contributes to understanding these relationships is by moving beyond the global question of whether child care is good or bad for children. Instead, the study focuses on how the different aspects of care—such as quantity and quality—are related to various aspects of children’s development [31]. Figure 2 provides a list of the characteristics and outcomes under investigation.

Figure 3 lists the questions the NICHD Study is designed to answer.

Most infants in the NICHD Study were placed in non-maternal care prior to 4 months of age.

What Are the Major Findings from the NICHD Study of Early Child Care?

The number of hours spent in child care varies by ethnicity

Most infants in the NICHD Study were placed in non-maternal care prior to 4 months of age. On average, each child in care received 33 hours of care per week during the first year, but time spent in care varied with ethnicity of the child and the family. White non-Hispanics averaged the fewest hours of care, whereas black non-Hispanics averaged the most; other ethnic groups fell between these two points [31].

Child Care Characteristics	Family Characteristics	Child Outcomes
Age of entry into care	Economic situation	Intellectual development
Quantity of care	Structure (single parent vs. partnered parent)	Language development
Stability of care	Maternal vocabulary	Social development
Quality of care	Mother’s education	Emotional development
Type of care	Mother’s psychological adjustment	Behavioral adjustment
Provider’s education	Mother’s child rearing attitudes	Physical health
Provider’s training	Quality of mother-child interaction	
Adult-to-child ratio	Home environment	
Group size		
Safety and health issues		

Figure 2. Child Care Characteristics, Family Characteristics, and Child Development Outcomes Studied

Infants from poor and near-poor families were more likely to receive relatively low quality care.

The type of child care selected varies by age of child

Parents placed their children in a wide variety of child care settings, including care provided by fathers or other relatives, by in-home caregivers, by child care home providers, and by center-based staff. As Figure 4 shows, nearly half the infants were cared for by a relative (father/partner or grandparent) when they first entered non-maternal care. However, as Figure 5 illustrates, there was a discernible shift toward

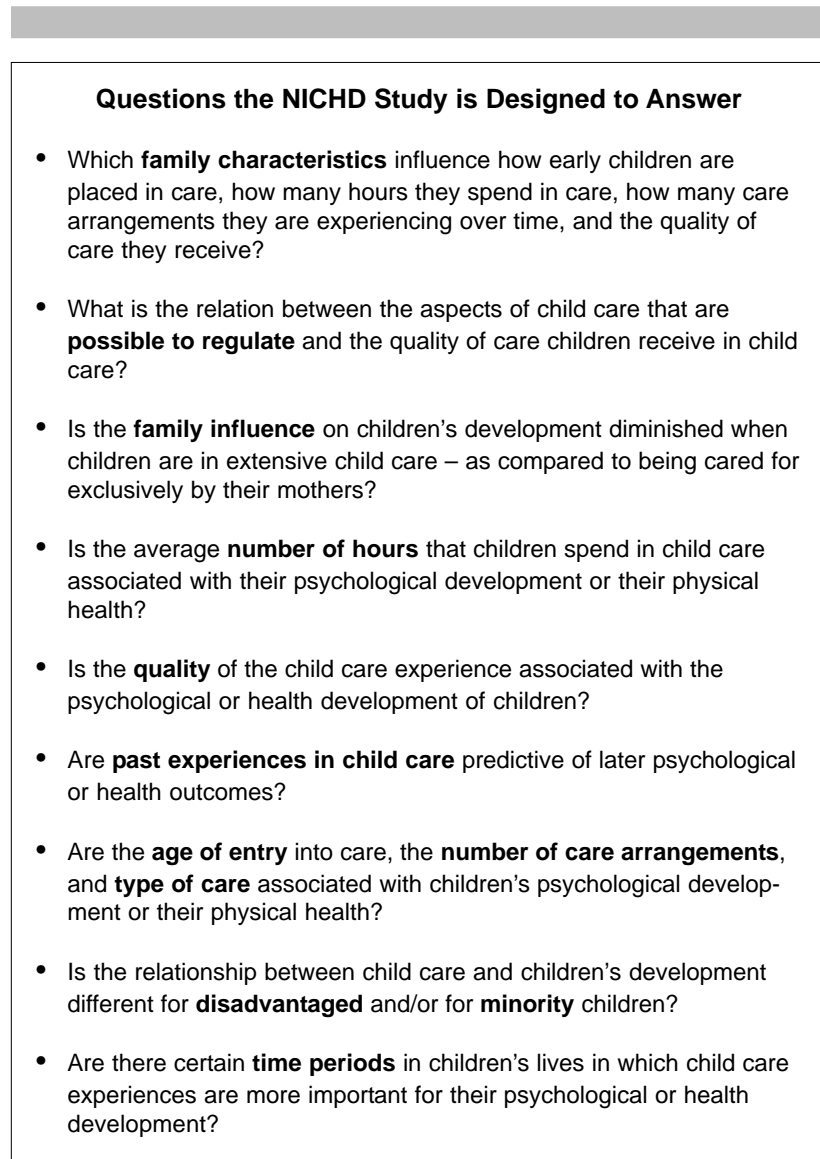


Figure 3. Questions the NICHD Study is Designed to Answer

*Poverty was defined using the income-to-needs ratio, a standard measure of a family's economic situation (U.S. Department of Commerce). Poverty level is computed by dividing the family income (exclusive of federal aid) by the federal poverty threshold for that family. In 1991, the federal poverty line for a family of four was \$13,924. Of the families in the NICHD Study, 16.7% lived in **poverty** (i.e., income-to-needs ratio < 1.0), and 18.4% lived **near-poverty** (i.e., income-to-needs ratio = 1.00-1.99).

reliance on child care centers and family child care homes as children matured [35].

Poverty predicts the child care experience

Nearly 35% of the families and children included in the study were living in poverty or near-poverty.* Infants from poor and near-poor families were more likely to receive relatively low quality care [31]. Specifically:

- Families who moved in and out of poverty—known as transitory poverty—were most likely to place their infants in child care very early (before 3 months of age)
- Infants from families who were consistently poor and who had been receiving public assistance for at least a 15-month period were less likely to enter care early or to be in non-maternal care arrangements at 15 months of age
- Children who were not in care by 15 months of age had mothers with the lowest level of education and were from the largest families
- In general, children from families in poverty who were cared for in home settings (by a child care home provider or family member) received relatively low-quality care
- Children in near-poverty received lower quality of center care than children in poverty, presumably because those in near-poverty do not qualify for the subsidized care that those in poverty do.

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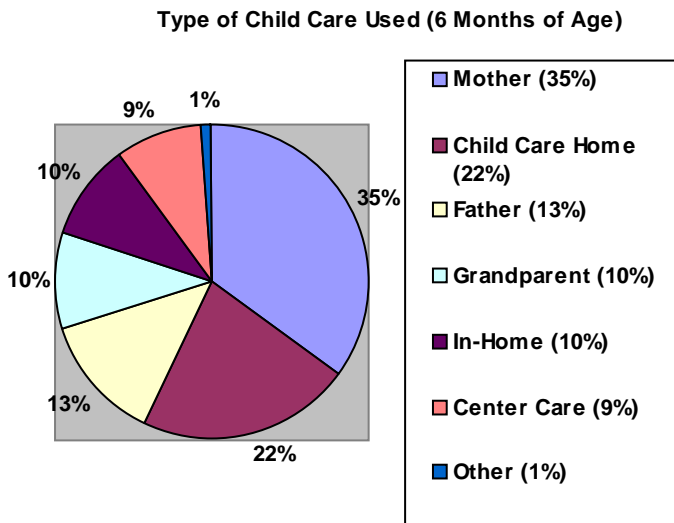


Figure 4. Type of Child Care Used by Parents when Infants were 6 Months Old



Demographics and family characteristics predict the type of care selected

The research team examined three sets of variables to determine their relation to the age of entry into care and to the type, quantity, and quality of care selected: (1) demographic characteristics (e.g., ethnicity, maternal education, and family structure), (2) economic characteristics (e.g., maternal and non-maternal income), and (3) family quality characteristics (e.g., maternal attitudes and beliefs and the quality of the home environment).

The researchers found that:

- Families more dependent on a mother's income placed their infants in child care at an earlier age, and used more hours of care than families less dependent on a mother's income
- Employed mothers who earned the highest incomes were most likely to place their infants in early care at 3-5 months, and were most likely to use in-home care for the first 15 months
- Children from families at the lowest and highest income levels received higher quality of care than those in the middle income range.

Lower quality child care predicted more negative outcomes.

Higher quality child care is associated with more positive outcomes

Researchers found that some child care characteristics do contribute to children's development, although the effects generally were modest in size. Small to moderate gains were noted in the following areas when children participated in higher quality child care:

- Better mother-child relationships
- Lower probability of insecure attachment in infants of mothers who were low in sensitivity

Type of Child Care Used (36 Months of Age)

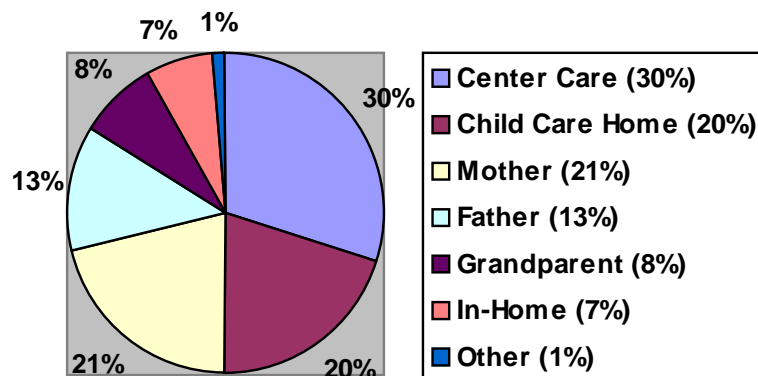


Figure 5. Type of Child Care Used (36 Months of Age)

- Fewer reports of problem behaviors
- Higher cognitive performance
- Higher language skill
- Higher levels of school readiness.

Lower quality child care is associated with more negative outcomes

Conversely, lower quality child care predicted more negative outcomes:

- Less harmonious mother-child relationships
- A higher probability of insecure mother-child attachment for children whose mothers were low in sensitivity to children
- More problem behaviors
- Lower cognitive performance
- Lower language skill
- Lower school readiness scores.

Family and home characteristics are stronger predictors of many outcomes than are children's experiences in child care

Family and home characteristics include such factors as income, maternal education, family structure, maternal separation anxiety, and maternal depression [27]. Researchers found that a combination of these factors served as better predictors of outcomes than did children's experiences in child care. For example, family and home characteristics were stronger indicators of the quality of mother-child interaction and of children's behavior [33].

Still, it is important to note that the quality and quantity of child care were not inconsequential factors. For example, although family and home characteristics were stronger predictors of outcome in the areas described below, researchers nonetheless found that:

- Low-income mothers using full-time higher quality care had higher positive involvement at 6 months than did low-income mothers not using care or than those using lower-quality full-time care.
- Children who spent more time in group arrangements with more than three other children had fewer behavior problems (as reported by the caregiver) and were observed to be more cooperative in child care.
- The higher the quality of child care (more positive language stimulation and interaction between the child and provider), the greater the child's language abilities at 15, 24, and 36 months, the better the child's cognitive development at age two, and the more school readiness the child showed at age three.
- Exclusive care by mother provided no benefit in terms of the cognitive development of the child. Higher quality child care provided an advantage, whereas lower quality child care was disadvantageous, in comparison to exclusive maternal care [31].

The higher the quality of child care, the greater the child's language abilities at 15, 24, and 36 months, the better the child's cognitive development at age two, and the more school readiness the child showed at age three.

Most child care programs do not meet the recommended guidelines for aspects of care that can be regulated.

Most child care programs do not meet the recommended guidelines for aspects of care that can be regulated

The NICHD Study investigated four aspects of child care that could be regulated: (1) child-to-staff ratio (2) group size, (3) teacher training, and (4) teacher education. The research team found that most child care programs (for children ages 24 and 36 months) did not meet all four recommended guidelines [34]. Importantly, children in centers that met more guidelines had better language comprehension and school readiness at 36 months of age. They also had fewer behavior problems at 24 and 36 months of age [33].

What Are the Characteristics of High Quality Early Child Care?

The research team studied the different child care settings to determine those characteristics that contributed to positive caregiving and high quality care. Positive caregiving was measured by observing and documenting the frequency of interaction, and then rating the quality of the interaction between caregivers and children in care. The child care settings also were measured both in terms of (1) characteristics that could be regulated or that were governed by guidelines (e.g., group size, child-to-adult ratio, and physical environment) and (2) caregiver's characteristics (e.g., formal education, specialized training, child care experience, and beliefs about childrearing).

The research team found that the following characteristics are associated with high quality care and positive caregiving:

- Safe, clean environments
- Cognitively stimulating environments and programming
- Smaller group sizes
- Lower child-to-adult ratios
- More sensitive, responsive caregivers
- Caregivers who allowed children to express their feelings and took their views into account.

Quality of care is the most consistent child care predictor of child development outcomes.

Why is Quality of Care So Important?

The NICHD Study of Early Child Care is producing a wealth of information on the effects of early child care on children's development. Overall, what the study has found so far is that, in the area of social and emotional development during the first three years of life, what transpires in the family appears to be more important in explaining children's development than whether children are cared for by someone other than their mothers on a routine basis [35]—or than the quality, quantity, stability, and type of care, or the age of entry into such care. Still, in the area of social and emotional development, the research suggests that child care characteristics do exert some influence on outcome. Of the child care measures, **quality of care was found to be the most consistent predictor of outcomes**, with higher quality of care relating to greater social competence and cooperation and less problem behavior at both two and three years of age [33].

In the areas of children's cognitive and language development as well, the quality of child care over the first three years of life was found to be

consistently, albeit modestly, associated with children's development. The higher the quality of child care (more positive language stimulation and interaction between the child and provider), the greater the child's language abilities, the better the child's cognitive development, and the more school readiness the child demonstrated during the preschool years.

Most young children in the U.S. today participate in child care. The NICHD Study of Early Child Care is demonstrating that **quality of care is the most consistent child care predictor of child development outcomes** [31].

- Higher quality care is associated with more positive social, emotional, cognitive, language, and behavioral outcomes.
- Lower quality care is associated with more negative outcomes.

For these reasons, it is important for policymakers to support the establishment and successful operation of high quality early child care programs.

Kathleen McCartney, Ph.D.
Department of Psychology
University of New Hampshire
Conant Hall
Durham, NH 03824-3567
(603) 862-3168 (phone)
(603) 862-4986 (fax)
kathleen.mccartney@unh.edu