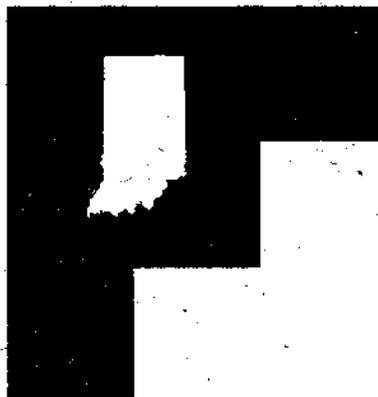


**HEALTHY ENVIRONMENTS  
FOR YOUNG CHILDREN**  
*Briefing Report*

**Family  
Impact  
Seminar**



**February 1999**

# Healthy Environments for Young Children

**Indiana Family Impact Seminars  
Briefing Report**

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## Sponsoring Organizations

**Purdue University Cooperative Extension, Consumer and Family Sciences  
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## **Purpose, Presenters, and Publications**

Family Impact Seminars have been well-received in Washington, DC, by federal policymakers, and Indiana is one of a handful of states to sponsor such seminars for state policymakers. Family Impact Seminars provide state-of-the-art research on current family issues for state legislators and their aides, Governor's Office staff, state agency representatives, educators, and service providers. Based on a growing realization that one of the best ways to help individuals is by strengthening their families, Family Impact Seminars analyze the consequences an issue, policy, or program may have for families.

The seminars provide objective nonpartisan information on current issues and do not lobby for particular policies. Seminar participants discuss policy options and identify common ground where it exists.

"Healthy Environments for Young Children" is the first seminar in what we hope will become a series designed to bring a family focus to policymaking. This seminar featured the following speakers:

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For further information on the seminar, contact coordinator Betty Krejci, Assistant Director for Outreach of The Center for Families at Purdue University, 765-494-8252, [krejcih@cfs.purdue.edu](mailto:krejcih@cfs.purdue.edu).

Each seminar is accompanied by an in-depth briefing report that summarizes the latest research on a topic and identifies policy options from across the political spectrum. Copies may be obtained from The Center for Families at Purdue University, 765-494-9878.

## **Checklist for Assessing The Impact of Policies on Families**

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

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

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

The Family Criteria (Ad Hoc) Task Force<sup>1</sup> developed a checklist to assess the intended and unintended consequences of policies and programs on family stability, family relationships, and family responsibilities. The checklist includes six basic principles about families that serve as the measure of how sensitive to and supportive of families policies and programs are. Each principle is accompanied by a series of family impact questions.

The criteria and questions are not rank ordered (Ooms & Preister, 1988). Sometimes these criteria conflict with each other, requiring trade-offs. Cost effectiveness also must be considered. Some questions are value-neutral. Others incorporate specific values. People may not always agree on these values, so sometimes the questions will require rephrasing. However, this tool reflects a broad, nonpartisan consensus, and it can be useful to people across the political spectrum.

### **Checklist: A Tool for Analysis**

Check all that apply. Record the impact on family well-being.

1. **Family support and responsibilities.** Policies and programs should aim to support and supplement family functioning and provide substitute services only as a last resort.
  - How does the proposal (or existing program) support and supplement parents' and other family members' ability to carry out their responsibilities?
  - Does it provide incentives for other persons to take over family functioning when doing so may not be necessary?
  - What effects does it have on adult children's ties to their elderly parents?
  - To what extent does the policy or program enforce absent parents' obligations to provide financial support for their children?

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<sup>1</sup> Adapted from T. Ooms & S. Preister (Eds.) (1988). In *A strategy for strengthening families: Using family criteria in policymaking and program evaluation*. Washington, DC: Family Impact Seminar.

- Does the policy or program build on informal social support networks (such as community/neighborhood organizations, churches) that are so essential to families' daily lives?

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

- What incentives or disincentives does the policy or program provide to marry, separate, or divorce?
- What incentives or disincentives are provided to give birth to, foster, or adopt children?
- What effects does it have on marital commitment or parental obligations?
- How does the policy or program enhance or diminish parental competence?
- What criteria are used to justify removal of a child or adult from the family?
- What resources are allocated to help keep the family together when this is the appropriate goal?
- How does the policy or program recognize that major changes in family relations such as divorce or adoption are processes that extend over time and require continuing support and attention?

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

- To what extent does the policy or program recognize the influence of the family and family members upon individual needs or problems?
- To what extent does it involve immediate and extended family members in working toward a solution?
- To what extent does it acknowledge the power and persistence of family ties, especially when they are problematic or destructive?
- How does it assess and balance the competing needs, rights, and interests of various members of a family? In these situations, what principles guide decisions (i.e., the best interests of the child)?

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

- In what specific ways does the proposed or existing program provide full information and a range of choices to families?
- In what ways do program professionals work in collaboration with the families of their clients, patients, or students?
- In what ways does the policy or program involve parents and family representatives in policy and program development, implementation, and evaluation?
- In what ways is the policy or program sensitive to the family's need to coordinate the multiple services they may require?

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

- How does the proposal or program affect various types of families?
- If the proposed or existing program targets only certain families, for example, only employed parents or single parents, what is the justification? Does it discriminate against or penalize other types of families for insufficient reason?
- How does it identify and respect the different values, attitudes, and behavior of families from various racial, ethnic, religious, cultural, and geographic backgrounds that are relevant to program effectiveness?

6. **Targeting vulnerable families.** Families in greatest economic and social need, as well as those determined to be most vulnerable to breakdown, should have first priority in government policies and programs.

- Does the proposed or existing program identify and target publicly supported services for families in the most extreme economic or social need?
- Does it give priority to families who are most vulnerable to breakdown and have the fewest supports?
- Are efforts and resources targeted on preventing family problems before they become serious crises or chronic situations?

# Threats to the Quality of Children's Environments

Daniel T. Lichter

A growing threat to healthy environments for children in America today is poverty.

According to income-based measures childhood poverty decreased substantially during the 1960s, leveled off during the 1970s, and increased in the 1980s and early 1990s. In 1994, 15.3 million or 21.8 percent of all American children lived in poor families, accounting for 40.1 percent of all poor although they only comprised 26.7 percent of the population. (US Bureau of the Census 1996). Currently over 14 million, or 19.9 % of all US children (US Bureau of the Census 1998) are still held in the grip of poverty.

What does it mean to "grow up poor" in America? This paper discusses the definition and measurement of children's economic well-being and poverty beginning with a comparative look at historical, international and demographic data. This comparative perspective then turns to the changing economic circumstances of poor children today—focusing in particular on the changing family, parental employment, and levels of social provision for poor families.

## **Short-term effects and long-term implications of childhood poverty**

Short- and long-term negative consequences of poverty for children and for society are substantial and well documented (McLeod & Shanahan 1993, 1996, Hao 1995). Physical growth, cognitive development (including reading ability) and socioemotional (behavioral) functioning all may be impaired by childhood poverty. (Hill & Sandfort 1995, Korenman et al 1995). Effective parenting suffers in economically stressful environments (McLanahan & Sandefur 1994, Kruttschnitt et al 1994), and poor children are more likely to be physically abused.

The incidence, duration and persistence of childhood poverty exert large negative effects on children's IQ, educational achievement, and later adult productivity (as measured by wage rates and hours worked), increasing their adult welfare dependency (Zill 1993, Duncan et al 1994, McLanahan & Sandefur 1994).

High rates of economic deprivation among children today are long-term in nature, and may only be fully realized by tomorrow's adults.

## MEASURING ECONOMIC WELL-BEING AND POVERTY

### **Imperfect measurements confound policy discussions**

Limitations of the income-based measures used to assess economic deprivation have the potential to distort group comparisons in increasingly diverse populations (Haveman et al 1988, Ruggles 1990, Cirto & Michael 1995), and can confound policy discussions.

Standard income-based measures are adjusted for inflation but not for increases in real family income and children's consumption. They don't correct for geographic differences in the cost of feeding, clothing and sheltering children. No adjustment is made for costs that render income "unavailable," such as child care, child support payments by noncustodial parents at the expense of coresidential children, or taxes. Established poverty thresholds make no provision for economies of scale in family size or adult-child composition. Nor do these calculations consider income generated by cohabiting partners of single parents with children (Manning & Lichter 1996). Finally, income-based measures of official child poverty implicitly assume that parental resources are invested in children—biological, step- and noncustodial—in equitable fashion.

Given these limitations how can we be sure that economic deprivation, as measured by the official poverty rate, has really increased by one-third over the last two decades?

### **Other indicators enhance our perspective**

A recent study (Federman et al 1996) revealed that 55.1% of poor families experienced at least one of the following deprivations during 1992: eviction; utility or telephone disconnection; housing upkeep problems; crowded housing; no refrigerator; no stove; or no telephone. Only 13% of nonpoor families experienced the same deprivations.

### ***Declining earnings***

Median real income of the poorest families with children declined by 12% between 1970 and 1986 (Duncan 1992, Haveman et al 1988, Karoly 1994). The proportion of children in "deep poverty"—below 50% of the poverty threshold—has increased (Eggebeen & Lichter 1991). Since 1969 the median family income-to-poverty ratio among children in the bottom 20% of the family income distribution declined from .85 to .68 in 1989 (Eggebeen & Lichter 1993). Family income has both declined among the poorest children and increased (by nearly 20%) among the richest (Eggebeen & Lichter 1993).

### ***Changing income mix***

Significant declines in earnings from work among the poor contribute to a changing income mix for families of poor children. Poor families are now more likely to rely on welfare income and other public assistance programs (Jensen et al 1993, Jensen & Eggebeen 1994). An unprecedented 10 million US children received AFDC in the early 1990s, and over 13.5

resided in households receiving means-tested assistance (US Bureau of the Census 1996). The percentage of children's family income from welfare increased from 18.2% to 35.5% between 1969 and 1989 (Jensen et al 1993), with one quarter of all poor children in 1988 fully welfare-dependent (Hernandez 1993). Meanwhile poor families receiving assistance saw declines in average welfare benefits and an erosion in the effectiveness of cash and near-cash transfers (US Department of Health and Human Services 1996).

***Behavioral and cultural adjustments prompt concern***

Poor children today are socially and spatially isolated from the nonpoor in schools, neighborhoods and communities to a greater degree in both urban and rural areas (Massey & Denton 1993, Garrett et al 1994, O'Hare 1995). Growing policy concerns exist about whether this increasing geographic concentration of poverty promotes maladaptive behavioral or cultural adjustments (such as juvenile delinquency, school drop-out rates and non-marital childbearing) that will perpetuate poverty into adulthood (Lichter 1993).

The relative economic deprivation of American children in poor families is different from past measures of poverty on many dimensions. It is different from poverty in other rich countries and it is increasingly heterogeneous in etiology and consequences across different US population segments.

**Poor children today are absolutely poorer**

Poverty among children today must be judged against the living conditions and consumption levels of the rest of society—both current and past—in order to devise policy solutions that match the reality of poverty for children, and the implications that follow as America's poor children enter adulthood. Rising age inequality, real declines in income among poor children, a growing gap between rich and poor children, increasing dependence on welfare income, a changing family and spatial ecology of poverty, and the growing incidence of chronic or persistent poverty have occurred simultaneously. The poorest age segment in American society, children are also the most vulnerable and innocent.

**International perspective sheds light on government's role**

US children compare unfavorably with children in seven other Western industrialized societies (Rainwater 1995), even when poverty comparisons are based on equivalent currencies (Smeeding & Torrey 1988). The limited safety net for women and coresidential children in the United States makes the adverse income effects of family disruption and unmarried childbearing especially large (Smock 1993, Casper et al 1994).

Governments have a role to play, and the striking differences in child poverty rates among female-headed families with children in the United

States compared with other countries surveyed imply that the stance governments take in ameliorating economic deprivation is critical.

***Changing family ecology suggests policy considerations***

High rates of marital disruption (Schoen & Weinick 1993) and out-of-wedlock childbearing (nearly one-third of all births today) have contributed to a changing family ecology that contributes to children experiencing chronic poverty. Today 57% of poor children live with a single parent compared with one-third in the mid-60s (Rodgers 1996). Poor children today are more likely to suffer persistent bouts of poverty or recurrent poverty (Duncan & Rodgers 1989, Duncan & Rodgers 1991, Devine et al 1992). Long-term poverty implies consideration of long-term policy solutions such as training, remedial education and job growth, rather than the short-term relief (e.g. food stamps) required at a time of need (Duncan 1992).

***TANF workfare legislation***

Ground-breaking legislation that replaced AFDC with Temporary Assistance for Needy Families (TANF) in 1996 yielded, in its first year, a slight decline in measured childhood poverty rates. But concerns persist that children's economic well-being will deteriorate as welfare eligibility is exhausted or the economy experiences a downturn.

Debate continues over whether key provisions of the bill—especially time-limits and stringent work requirements—will achieve the stated goals of reducing welfare dependency and promoting self-sufficiency, or whether they will ultimately hurt socially and economically disadvantaged children.

Interestingly, research has revealed that increases in poverty rates have been most dramatic among the children of working parents rather than among the children of single parents (Annie Casey Foundation 1996). A larger share of single mothers work today and they, in fact, have higher labor force participation rates than married mothers (Bianchi 1990, Hernandez 1993). But the ameliorative effects of work—and work-based welfare solutions—for women and the low skilled have also eroded (Lichter et al 1994).

***Inequality emerges across diverse groups***

The diverse segments of American society experience poverty and prosperity differently. As we have become more heterogenous as a society, economic inequality has grown: between the rich and the poor, more educated and less educated, blacks and whites, married-couple and single-parent families, native-borns and immigrants, city dwellers and suburbanites (Danziger & Gottschalk 1993, Levy 1995, Karoly 1994). Children of all races are more likely to be poor than the average person and the average elderly person.

A 1995 study (Lichter & Landale 1995) sought to determine the extent to which economic well-being of Latino vs. non-Latino White children was

affected by parental work patterns and family living arrangements, revealing that the growing inequality among historically disadvantaged racial and ethnic minorities resides in the fact that earnings from work are often insufficient to raise the family above the poverty threshold. Limited human capital, racial discrimination in job opportunities and pay and gender wage inequality diminish the ability of single mothers to support their children. The implication is that policies that address the problem of low wages among working parents are needed to realize significant reductions in child poverty.

### **Predictions**

- Without significant reductions in racial inequality, changing demographic compositions imply future increases in proportions of children who are poor.
- Without economic assimilation of ethnic immigrants (or reduced immigration), increases in the child poverty rate will occur.
- Without reductions in the inequality of men's and women's earnings (giving rise to large economic disparities between children across family types), we will continue to see increases in poor children.
- Without significant reductions in economic inequality across diverse groups, growing heterogeneity in the population implies a growing population of poor children.

### **ETIOLOGY OF CHANGING CHILD POVERTY AND INEQUALITY**

Why have income poverty (an absolute dimension) and economic inequality (a relative dimension) increased among families with children over the last two decades? Changes in family structure, patterns of employment and public assistance have been identified, but agreement is lacking on the relative importance of these factors and, by extension, their possible solutions.

#### **Changing family structure and size**

A growing share of American children live with a single mother, with poverty rates for this group remaining high over the last 30 years at nearly 50%. (Bane & Ellwood 1989). A widely held view argues that if a greater share of children live in single-parent households today, then a greater proportion of children will be poor. Research studies substantiate this view: Virtually all the rise in poverty for families with children between 1970-86 was due to growth in single-parent families (Duncan 1992); roughly 50% of increases in poverty since 1980 are attributed to changes in family composition (Eggebeen & Lichter 1991); and 70% of the annual variation

in the child poverty rate between 1966 and 1993 was due to the proportion of families with children headed by unwed mothers (Rodgers 1996).

Critics of this view believe such analyses "blame the victim (women)" for the rise in child poverty (Baca Zinn 1989, Hernandez 1993, Luker 1996). The implication of these analyses is that if the mothers of children living in female-headed families had stayed married or become married, their children would have the same rates of poverty as children currently living in married couple families. But critics point to studies that show 25% of white single mothers and 75% of black single mothers experiencing poverty before they became single mothers (Bane 1986), and suggest that rising economic hardship may, in fact, be responsible for the breakdown in the family rather than rising female headship.

The child poverty problem today also begins in an area with no clear economic cause—the rise of nonmarital fertility among young mothers. Poverty rates among children of unmarried mothers are substantially higher than among children of either married or divorced parents (Bianchi 1993). Unmarried mothers typically are younger (and have younger children which makes maternal employment difficult and child care expensive), have less education and job-related skills, and are much less likely to receive income assistance from the noncustodial father.

But the rise in childhood poverty rates actually has less to do with fertility behavior among the poor than it has to do with declining and low fertility among the nonpoor population. Nearly 25% of the rise in child poverty between 1978-87 resulted from increasing differentials in the mean number of children living in poor and nonpoor families (Eggebeen & Lichter 1991). The reduction in child poverty rates experienced in the 1960s was largely due to the decline in fertility in the United States overall at that time (Gottschalk & Danziger 1994). In fact, if fertility rates had remained unchanged we would have seen a rise in child poverty rates of only 7 and 3 percentage points for blacks and whites, respectively. Although a rise in fertility among the nonpoor would reduce measured poverty rates, it would do little to help the 14 million poor children in America today.

### **Changing parental work and earnings**

Emphasis on family change should not divert attention from the effect that parental earning capacities can have on children's poverty and economic inequality. Although poverty among children living with two full-time working parents is almost non-existent (Hernandez 1993, Hogan & Lichter 1995), it does not mean that moving all non-working parents (with different education and skills than working parents) into the labor force will eliminate child poverty (Lichter & Gardner 1996-97). Child poverty rates appear to be relatively insensitive to modest increases in parental employment. In fact, very large increases in employment—especially full-time maternal employment—are required to substantially lower the rate of poverty among children. Thus, changing the employment rates will not

necessarily result in a long-term change in children's economic circumstances.

Additional implications of maternal employment that relate to working conditions, advancement opportunities and family stressors must be considered. Studies on the positive benefits of maternal employment on children's cognitive and emotional development suggest that many factors come into play: number of hours worked, job complexity, childcare availability, whether maternal employment is voluntary, whether work activities are supported by the husband, and children's age, gender and personality traits. (Parcel & Menaghan 1994) Whether results of existing literature can be generalized to welfare mothers and their children is not known, nor do we know if welfare-to-work creates new stressors. (Zaslow & Emig 1997)

***Finding work that pays***

Child poverty is less a problem of finding work than it is a problem of finding work that pays a non-poverty wage. Poverty rates among workers actually increased during the 1980s (Blank 1996), during a time when an increasing share of the poor were working. Transformation from high-wage manufacturing jobs to low-wage service jobs, declining unionization and cheap international labor have reduced wage-earning capacities among the poor. A substantial decline in the minimum wage relative to the average wage of all workers places a "two parent with one child" household supported by a minimum wage worker well below the current poverty threshold.

The role of parental work and its effect on childhood poverty must be kept in proper perspective. While it is highly desirable to promote parental work for reasons that extend beyond short-term well-being—socializing children regarding appropriate adult role models, for example—we must be cautious about either downplaying or exaggerating its effect on child poverty. The solution to the poverty problem resides both in encouraging parental work and in creating jobs that actually provide for the basic material needs of families and children.

While more education is viewed as the best solution to this problem, it is worth noting that declining school dropout rates and increased educational levels during the 1980s were matched with increases in child poverty. This reflects the changing demographic composition of the poor, and suggests that the rise in child poverty cannot be attributed to significant declines in human capital, job skills or the work efforts of parents. Policies that stress macroeconomic growth may offer only limited benefits to poor children whose local economic conditions are only modestly associated with their poverty status (Friedman & Lichter 1997, Landale & Lichter 1997).

Other factors also require consideration. The tendency for the highly educated to marry one another has increased over time, and we've seen a

greater rise in maternal employment among women married to high-earning males than among women married to low earners. These combined factors have the potential to increase both family income inequality and the disparities between married couples with two workers and one worker (Cancian et al 1994). And growing income inequality is especially evident among families headed by single mothers (Karoly 1994).

### **Changing public assistance and government policy**

Debate continues about whether too much or too little government intervention contributes to the relative decline in children's economic status. A new emphasis on behavioral poverty—poverty presumed to stem from the bad decisions and values of parents—argues that government cash assistance programs like AFDC indirectly encourage nonmarital fertility and divorce and undermine the traditional family (Murray 1984).

Most of the evidence, however, suggests that such policies play a modest role in family formation processes (Moffit 1992). The family income of children living with a single mother who worked full-time in 1986 was \$6,817, compared with \$6,284 among children living with a non-working single mother (Bane & Ellwood 1989). While welfare as an option is nearly as attractive as very low-wage work, the question remains as to whether it is high welfare or low earnings that provides the more important disincentive to work.

### ***If work is the answer, then work must pay***

Policies should be directed at making work pay. Children of parents who play by the rules should be able to enjoy a minimally adequate standard of living. Enhancing the earnings potential of poor mothers is one policy option (Corbett 1993), but job training programs have met with only partial success (Sawhill 1988), suffering from administrative problems and serious underfunding. The Job Opportunities and Basic Skills (JOBS) provision of the 1988 Family Support Act—criticized because of the limited employment opportunities and low wage rates of low-income mothers—sought to move poor single mothers into the paid labor force to reduce their dependence on welfare income. In the short term work earnings reduce the likelihood of family poverty. In the long term reduced reliance on welfare income weakens the intergenerational cycle of dependency.

Effects of government policies may have more direct effects on the well-being of American children as well. Work-fare legislation requires poor mothers to be economically self-sufficient through paid employment while also remaining responsive to the needs of their children (Kornbluh 1991), but provisions built into the Family Support Act were often inadequate (Naples 1991). The average AFDC and food stamp benefit level for a mother with two children and no earnings declined from \$10,169 to \$7,471 between 1972 and 1991 in constant dollars (Haveman & Wolfe 1993), thus declining benefit levels contributed directly to the economic well-being of poor children.

### ***Consider other interventions***

The declining helpful effects of assistance programs suggest other methods of government intervention should be considered, among them raising the minimum wage, expanding the Earned Income Tax Credit for families with workers, and subsidizing high-quality child care. Although it is not clear whether these efforts will slow the rise in income inequality (Danziger & Gottschalk 1994), it is likely that those children at the bottom of the income distribution would be helped if work was available—a likelihood upon which we must base our hopes, but one which also raises additional questions.

### **Questions must be asked to direct policy discussions**

TANF has changed the lives of poor children, and few disagree with the goals of reducing dependency on welfare and promoting self sufficiency. But questions remain. Will the program's time-limit and work-requirement provisions pull our socially and economically disadvantaged children out of poverty's grip? What must we learn about the direct and indirect effects of workfare programs in order to direct future policy discussions?

### ***Parental work***

Can parental work provide direct improvements in the well-being of America's poor children?

- Will the "end of welfare" increase or decrease child poverty and other forms of economic and social deprivation (Eggebeen & Lichter 1991; Harris 1996; Meyer & Cancian 1998)?
- What new adversities will poor children face when their mothers are removed from the program or cycle in and out of TANF?

### ***Child development***

Will child development benefit indirectly from parental work? Does it benefit the cognitive and emotional well-being of poor children or create additional stressors? Our understanding is limited; we know little about how parental work-related skills and human capital instill positive values and aspirations.

- Will exposure to positive working parental role models encourage development of positive work ethic?
- Will parental work provide structure and meaning to family life and provide a better link to community sources of social support?
- Will investments in job training or schooling increase women's competence and self-esteem to indirectly benefit children?

- How will alternative child care arrangements required of working mothers affect the lives of their children? Will federal monies for child care and other state initiatives provide for high-quality center-based child care?

***Family and community relationships***

What are the indirect consequences for children's family and community relationships?

- Will we see work-related migration among poor mothers that uproots children? ... and a corresponding loss of social support? Or will children benefit from relocation to better neighborhood environments?

- How will relationships between noncustodial fathers and their poor children be affected? Will father involvement negatively or positively affect their emotional and cognitive development? (King 1994)

- Will a new dependence on marriage or marriage-like relationships replace women's past dependency on welfare? Will this expose poor children to new "risks" to healthy development when relationships are abusive or unhealthy?

**Conclusion**

Literature on the role government plays in ameliorating child poverty is highly polarized, with emphases on different causes that imply different political agendas and policy solutions. Monocausal explanations, unfortunately, overlook the fact that causes of poverty differ for different groups of children. Until we adopt a multifaceted approach that builds strong families, promotes work and higher wages, and supports family and pro-work policies (including welfare policies), poverty rates will not be lowered among children.

Despite the thousands of studies that have been published on the topic of poverty (Sawhill 1988), the rate of child poverty is at a 30-year high, and there is a greater income gap between rich and poor children than ever before (Lichter & Eggebeen 1993, Fisher et al 1996). Whether it is the inadequacies of the research, limitations in the efficacy of social policy, or the changing nature of poverty's causes that has limited progress is open to debate. What is clear is that research has not been translated into policies that benefit poor children.

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# The NICHD Study of Early Child Care

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## **About the NICHD Study of Early Child Care**

The NICHD Study of Early Child Care is the most comprehensive child care study conducted to date to determine how variations in child care are related to children's development. In 1991, a team of NICHD-supported researchers enrolled 1,364 children in the study and have now followed most of them through the first seven years of their lives. Over the past two years, the research team has presented its findings on the relationship between child care and children's development through the age of three and will continue to analyze the information they have gathered from the 10 child care study sites across the U.S.

## **Child Care in the United States**

Child care is becoming a fact of life for many American families. As increasing numbers of women enter and remain in the work force after pregnancy, and more are single parents, more families are relying on non-maternal care for their infants and children. In 1975, 39% of mothers with children under six years of age worked outside the home; today, 62% of mothers do so (Bureau of Labor Statistics). Since most of these mothers return to work in their child's first three to five months of life, their children spend much of their early lives in a variety of child care situations.

In the wake of this increasing use of early child care, parents, psychologists, and policy makers began questioning the relationship between early child care and children's development, asking fundamental questions about the effects of early child care. Some child care experts have argued that child care poses risks for infants because healthy development requires care giving by a single person. Yet others have said that children may thrive in child care—of high quality. Some contend that child care arrangements do not affect development—unless the care is of very poor quality.

These differing views about the relationship between early child care and children's development have been argued for many years, but no one team or investigator had, until now, examined a large diverse group of children prospectively from birth to find out how variations in family characteristics, in child characteristics, and in child care characteristics influence developmental outcomes in the same children over several years.

Aware of the growing use of child care and the increasing public and congressional concern about this issue, the National Institute of Child Health and Human Development (NICHD), National Institutes of Health, U.S. Department of Health and Human Services, set out to develop a comprehensive, longitudinal study about the relationship between the child care experience of children and their development over time. In 1989, the NICHD issued a request for applications (RFA), inviting the scientific community to participate with NICHD in a multi-site cooperative research endeavor, now known as the NICHD Study of Early Child Care. **The goal of the study: to answer the many questions about the relationship between child care experiences and characteristics—and children's developmental outcomes.** Child care characteristics include the age of entry into care, quantity of care, stability of care, quality of care, and type of care; other aspects of child care, such as the provider's education and training, the adult to child ratio, group size, safety and health issues, were also included. After a thorough scientific review of the applications, the NICHD selected a research team located at universities across the U.S. and at the NICHD, together providing multiple perspectives on and interests in child care research. This team of researchers worked cooperatively to design and implement the study and, in 1991, enrolled a very diverse sample of children and their families at 10 locations across the U.S.

Scientific decisions regarding the implementation of the study were made by the Steering Committee of the NICHD Study of Early Child Care. The committee includes the researchers from the data collection sites at the universities across the country, the NICHD Project Scientist/Scientific Coordinator, as well as the directors of the data coordinating and analysis centers. The Steering Committee is chaired by an independent developmental psychologist, who is not one of the study investigators. An ad hoc Advisory Panel was also created to review the research plan and implementation.

The NICHD Study of Early Child Care is the most comprehensive child care study conducted to date in the U.S. and is characterized by a complex and detailed study design that takes into account **many variables**, including characteristics of the child care and the family environment. Researchers are **assessing children's development using multiple methods** (trained observers, interviews, questionnaires and testing) and measuring many **facets of children's development** (social, emotional, intellectual, language development, behavior problems and adjustment, and physical health). Finally, researchers are following the children, measuring their development at frequent intervals during their first seven years of life.

Currently, the researchers are analyzing the information they have collected to determine the relationship between child care and children's development, taking into account not only the child care environment, but also the home and family, as well as individual differences among children.

### ***What Questions Will the NICHD Study of Early Child Care Answer?***

A major way this study contributes to our understanding of the relationship between child care and children's development is by moving beyond the global questions about 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. More specifically, researchers are evaluating the relationship between child care and children's cognitive and language development, children's relationship with their mothers, and their self-control, compliance and problem behaviors, as well as peer relations and physical health.

### ***The Study will Answer These Questions:***

- Which **family characteristics** influence how early children are placed in care, how many hours they spend in care, how many care arrangements they are experiencing over time, and the quality of care they receive?
- What is the relationship between the aspects of child care that are **possible to regulate** and the quality of care children receive in child care?
- Is the **family influence** on children's development diminished when children are in extensive child care—as compared to being cared for exclusively by their mothers?
- Is the **average number of hours** that children spend in child care associated with their psychological development or their physical health?
- Is the **quality** of the child care experience associated with the psychological or health development of children?
- Are past experiences in child care predictive of later psychological or health outcomes?
- Is the age of entry into care, the number of care arrangements, or the type of care associated with children's psychological development or their physical health?
- Is the relationship between child care and children's development different for disadvantaged and/or for minority children?
- Are there certain time periods in children's lives in which child care experiences are more important for their psychological or health development?

### ***The Children and Families Enrolled in the Study: Who are They?***

A total of 1,364 children and their families from diverse economic and ethnic backgrounds across the United States were enrolled in the study beginning in 1991. Recruited from 10 locations throughout the country, the families vary in socioeconomic background, race, and family structure. About 76% of the families are white of non-Hispanic origin, nearly 13% of families are black, 6% are of Hispanic origin, 1% are Asian/Pacific Islanders/American Indians, and 4% are other minorities, mirroring the United States population overall. This diversity allows the research team to investigate the possibility that children from different ethnic backgrounds may be affected in different ways by the different characteristics of child care.

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. About 10% of the mothers had less than a 12<sup>th</sup> 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).

In terms of socioeconomic status, 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. About 20% of the study participants were receiving public assistance.

### ***What Type of Child Care Was Used by Study Participants?***

In the study, parents—rather than the researchers—selected the type and timing of child care that their children received, and, in fact, families were enrolled in the study without regard to their plans for child care. Children were placed in a wide variety of child care settings: care by fathers, other relatives, in-home care givers, child care home providers, and center-based care. These child care situations varied, from a formally trained nanny caring for a single child to a center-based program with a group of children. Close to half of the infants were cared for by a relative when they first entered care, but there was a discernible shift towards reliance on child care centers and family day care homes during the course of, as well as after, the first year of life.

Just as there was no attempt by the study to control or select for type of care, there was no attempt to control or select for quality of care. Quality was measured in several ways and was highly variable, but because there is no study that has assessed quality of child care on a national basis, there is no way to judge precisely how representative the care in this study is of child care nationally.

In this study, researchers are asking about the unique contribution that child care characteristics and experiences make to children's development—above and beyond the contributions made by the family and child characteristics.

### ***What Information about Child Care, the Family, and the Child did Researchers Consider?***

The research team collected and studied many different types of information about many characteristics of the children and their environment. The researchers assessed the child care characteristics, such as the adult to child ratio, the group size, and the child care experience of each child, including the quality of care and number of hours spent in care, the age of entry into care, as well as the number of different child care settings a child entered simultaneously and over time. Family characteristics were also assessed, including the family's economic situation, family structure (single parent vs. partnered parent), and maternal vocabulary (a proxy for intelligence). Other family variables included in the analyses were the mother's education, her psychological adjustment (as measured by a questionnaire) and her child rearing attitudes, the quality of mother-child interaction, and the extent to which the home environment contributed to the optimal development of children. Various aspects of individual children, such as their gender and their temperament, were also considered.

In this study, researchers are asking about the unique contribution that child care characteristics and experiences make to children's development—above and beyond the contributions made by the family and child characteristics. Previous studies have established that, in general, the quality of care children get in the family environment is very similar to the quality they receive in child care. Therefore, the research team focused on determining the added contribution of child care to children's development.

Because the data were analyzed many different ways to answer the many different research questions about children's development, not every variable was included in each analysis; for each summary of findings reported below, the list of relevant variables used is noted.

### ***The NICHD Study of Early Child Care: What Have We Learned?***

Using multiple sources of information (parents, child care providers, trained observers and testers), the research team collected detailed information about the family environment, the child care environment, and children's development, as well as their physical growth and health status over their first seven years.

Several articles about the study have been published to date in scientific journals, listed in the bibliography (appended). Other findings have been presented at scientific meetings and are now being prepared for publication. These articles, co-authored by the research team of the NICHD Study of Early Child Care, cover a wide range of research questions.

The research findings can be grouped into four main categories. The first set of descriptive findings paints a picture of the care that children in the NICHD study are receiving. This includes a look at the "regulable" characteristics of care, such as the adult to child ratio, the patterns of care used during the first year of life, and child care for children in poverty. Other categories include the role of family for children in child care, child care and its relationship to children's development, and child care and children's relationship with their mothers. Within these categories are findings related to the extent to which child care experiences are associated with different developmental outcomes

for low income children, as compared to more affluent children, and for minority children, as compared to white, non-Hispanic children. There are also comparisons of current and past child care experiences as predictors of children's performance or mother-child interaction.

## **FINDINGS FROM THE NICHD STUDY OF EARLY CHILD CARE (SPRING 1998)**

### **1 A Description of Child Care in the NICHD Study**

#### **The History of Child Care Experiences Across the First Year of Life**

The number of hours children spent in care varied. On average, each child in care received 33 hours of care per week, but this varied with ethnicity of the child and the family. White non-Hispanics averaged the fewest hours of care and black non-Hispanics the most; white Hispanics and others fell in between.

In general, most infants experienced more than one type of child care arrangement during the first year. When they first entered care, close to half of the infants were cared for either by a father/partner or grandparent, just over 20% were placed in a child care home, and only 8% were placed in center care. Most infants were placed in care prior to 4 months of age.

Overall, the findings indicate a very high reliance on infant care, with very early entry into care. Most infants spent the first year of their lives not in center care, but in less formal care arrangements.

### **2 Does Poverty Predict the Child Care Experience?**

Nearly 35 percent of the families and children included in the study were living in poverty or near-poverty. Poverty was defined using the income-to-needs ratio, a standard measure of a family's economic situation (U.S. Department of Commerce). This is computed by taking the family income, exclusive of federal aid, and dividing this by the federal poverty threshold for that family (the federal poverty line for a family of four in 1991 was \$13,924). Of the families in the study, 16.7% had an income-to-needs ratio below 1.0, and 18.4% had an income to needs ration between 1.0 and 1.99.

The research team asked if poverty during the child's first year of life was a predictor of age of entry into care, type of care experienced, and quantity or quality of care used. Families and children in poverty (income-to-needs ratio 1.0) were compared to those families and children in near-poverty (income-to-needs ration of 1.0-1.99) or more affluent families, to determine if poverty determined the characteristics of the child care used.

With regard to the age of entry into care, 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. The research team hypothesized that this early entry into care is due to the fact that extensive maternal employment may be required to pull the family out of poverty. Infants from families who were consistently poor and receiving public assistance over 15 months were less likely to enter care early or to be in any care at 15 months of age.

Families living in poverty were less likely to use any child care than other families, but if they did, they used just as many hours of care as children from other income groups. 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. These families also tended to experience persistent poverty.

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 from families living in poverty who attended center care received better quality care—comparable to the center care received by affluent children. Children in near-poverty (income to needs ratio between 1.00-1.99) 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.

In sum, partly because in the first year of life most infants are not in center care, infants from poor and near-poor families are more likely to receive relatively lower quality care.

### **3 Child Care Characteristics that Comprise High Quality of Care**

The research team studied the different child care settings to determine those characteristics that contributed to positive care giving, and thus, high quality care. Positive care giving is measured by observing and documenting the frequency of interaction, and then rating the quality of the interaction. The child care settings were also measured both in terms of their "regulable" characteristics, or guidelines recommended by governments, such as group size,

child-adult ratio, and physical environment; and of the care giver's characteristics, such as formal education, specialized training, child care experience, and beliefs about child rearing.

The research team found that child care situations with safer, cleaner, more stimulating physical environments and smaller group sizes, lower child-adult ratios, and care givers who allowed children to express their feelings and took their views into account, also had care givers who were observed to provide more sensitive, responsive, and cognitively stimulating care—quality of care that was expected to be associated with better developmental outcomes for children.

## **4** *The Role of the Family*

### **Demographic and Family Characteristics: Do They Predict the Type of Care Used?**

One of the objectives of the study was to determine the extent to which demographic and family variables predict the type of care that is used by each family. The research team examined three sets of variables, including demographic characteristics (ethnicity, maternal education, and family structure), economic characteristics (maternal and nonmaternal income) and family quality characteristics (maternal attitudes and beliefs and the quality of the home environment) to determine their relationship to the age of entry, and type, quantity and quality of care.

Family economics accounted primarily for both the amount, the age of entry into care and type and quality of care infants received. 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 child 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.

Beyond the economic factors (maternal and family income), mothers who believed that their children would do well when they were employed chose to begin child care in infancy and to use more care. Those who thought their employment posed risks to their child tended to choose informal family-based or in-home care; those mothers who thought employment posed low risks to their child were more likely to use formal care in child care centers or homes.

## **5** *Family Influences on Children in Extensive Child Care and on Children in Nearly Exclusive Care by their Mother*

Another objective of the study was to compare the influence of family on children's development for children both in nearly exclusive care by their mother (less than 10 hours of child care per week) and children in extensive child care (more than 30 hours of child care per week).

Family characteristics, including the family income and the mother's education, were strong predictors of children's outcomes—for both those children in nearly exclusive maternal care, and those children in extensive child care. These findings suggest that the influence of families on children's development is not significantly reduced or changed by extensive, nonparental care.

## **6** *Child Care and the Mother-Child Relationship*

### **The Relationship between Child Care and Mother-Child Attachment**

The research team examined several child care variables, including the amount of care, the age of entry into care, and the type of care, to determine how these factors were related to infants' attachment to their mothers. Attachment is the sense of trust the infant has in his or her mother.

The research team found that child care in and of itself neither adversely affects nor promotes the security of infants' attachment to their mothers at the 15-month-age point. Researchers measured infants' attachment to their mothers using a standard 30-minute procedure of separating and reuniting the mother and child.

Certain child care conditions, in combination with certain home environments, did increase the probability that infants would be insecurely attached to their mothers. Infants who received either poor quality of care, more than 10 hours per week of care, or were in more than one child care setting in the first 15 months of life, were more likely to be insecurely attached, only if their mothers were lower in sensitivity. For example, when both the mothers and the child care providers fell in the bottom 25% of the sample in terms of providing sensitive care to the child, the

likelihood that the children would be securely attached was only 45%, in contrast to those with more sensitive mothers and care givers, among whom 62% were securely attached.

## **7 Child Care and the Quality of the Mother-Child Interaction**

In addition to analyzing children's attachment to their mothers, the research team also studied the relationship between child care and the mother-child interaction, or interchanges between the mother and child. Maternal behaviors that were studied pertained to mothers' sensitivity, positive involvement and negativity. Children's behaviors were observed to assess their involvement. Researchers analyzed child care quality, quantity and family characteristics (maternal education and income) to determine their relationship to the mother-child interaction when the children were 6, 15, 24, and 36 months of age.

Mother-child interaction was evaluated by videotaping mother and child together during play and at home and observing the mother's behavior toward the child to see how attentive, responsive, positively affectionate or restrictive the mother was when faced with multiple competing tasks (i.e., monitoring child, talking with interviewer).

Researchers found that the quality and amount of child care had a small but statistically significant relationship to the quality of the mother-child interaction. An increased amount of child care was modestly associated with less sensitive and less engaged mother-child interactions. Throughout the first three years of the children's lives, spending more hours in nonmaternal care was associated with somewhat less positive behaviors of the mother toward the child. Toddlers in longer hours of child care were slightly less engaged with their mothers.

The association that was found between the full history of the quantity of care and mother-child interaction led the research team to ask if the quantity of care in the earlier time periods was associated with subsequent qualities of mother-child interaction. The researchers found that more hours of care in the first 6 months of life were associated with lower maternal sensitivity and lower child positive engagement at 36 months. However, a combination of family and home characteristics, including income, maternal education, two parent family status, maternal separation anxiety, and maternal depression, predicted the quality of mother-child interaction more than the children's experiences in child care.

Higher quality child care (positive provider-child interaction) modestly predicted greater involvement and sensitivity by the mother (at 15 and 36 months) and greater positive engagement of the child with the mother (at 36 months). Low-income mothers using full-time higher quality care had higher positive involvement at 6 months than low-income mothers not using care or those using lower-quality full-time care.

## **8 Child Care Characteristics and Children's Developmental Outcomes**

### **Child Care and Compliance, Self-Control, and Problem Behavior**

Child care characteristics (quality, quantity, age of entry into care, type and stability) and family characteristics were studied to determine how they were related to children's self-control, compliance and problem behavior. Researchers found that characteristics of the family—particularly the sensitivity of the mother—were stronger predictors of children's behavior than was their child care experience.

Researchers determined that such child care characteristics were, at best, modest predictors of children's problem behavior compliance and self-control. Child care quality was the most consistent predictor of children's behavior. Children in care receiving more sensitive and responsive attention had fewer caregiver-reported problems at ages two and three.

Although more hours in care during the first two years predicted greater caregiver-reported problems at age two, these effects disappeared by age three. 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.

**Summary Table of Findings, Child Care and Children's Development**

Attachment	Parent-Child Relationships	Cooperation	Problem Behaviors	Cognitive Development and School Readiness	Language Development
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Quality	•	•		+	+	+
Amount	•	•		•		
Type			•	•	+	+
Stability	•		•			

\* Results after taking into account all family and child variables.  
+ Consistent effects      • Effects under some conditions

## 9 **Child Care and Children's Cognitive and Language Development in the First Three Years of Life**

Another main goal of the study was to determine if child care characteristics (quality, number of hours in care, type-stability) predict children's cognitive and language development, as well as school readiness. Children's cognitive development and school readiness were measured using standardized tests; language development was assessed using standardized tests and maternal reports. Quality child care was defined as positive care giving and language stimulation--how often care givers spoke to children, asked questions, and responded to children's questions.

The quality of child care over the first three years of life is consistently but modestly associated with children's cognitive and language 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 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.

However, again, the combination of family income, maternal vocabulary, home environment, and maternal cognitive stimulation were stronger predictors of children's cognitive development at 15, 24, and 36 months of age and of language development at 36 months.

In terms of cognitive and language development, researchers found no benefit for children in exclusive care by their mother. Among children in care for more than 10 hours per week, those in center care, and to a lesser extent, those in child care homes, performed better on cognitive and language measures than children in other types of care, when the quality of the care giver-child interaction was taken into account. Child care experiences did not predict differently the cognitive, language or school readiness level of children from varying income groups or ethnic backgrounds.

## 10 **Characteristics of Child Care That Can Be Regulated and Child Development**

Another objective of the study was to determine the relationship between the "regulable" aspects of child care centers and children's development. The center care regulable aspects included in the analysis were the child-staff ratio, the group size, teacher training, and teacher education, as recommended by professional organizations of educators, pediatricians and public health professionals.

The research team found that most child care center classes did not meet all four recommended guidelines for child-staff ratios, group sizes, teacher training, and teacher education. Children in centers that met more guidelines had better language comprehension and school readiness. They also had fewer behavior problems at 24 and 36 months. Children in classes that met none of the guidelines fell below average in their performance on these tests.

## SUMMARY

### **Early Child Care Experiences for Children do Matter**

The NICHD Study of Early Child Care has enrolled more than 1,300 children and followed most of them through the first seven years of their lives to determine how variations in child care are related to their development. Scientific papers to date focus on the children's first three years of life. 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. The families were representative of the U.S. population as a whole on many demographic features.

In the NICHD study, and in the families across the nation, the quality of the family circumstances and family environment strongly predict care they choose for their children. Therefore, the research team focused on determining the unique contribution of child care to the development of children, over and above the important and

well-recognized association between family characteristics and circumstances and children's developmental outcomes.

The findings from this study will provide some answers to the many questions about child care. We now have a picture of what child care looks like for many American families—a snapshot of how often and how early children are placed in care, as well as the type of child care arrangements many families use today. The researchers have also looked at the relationship between family characteristics and children's development for children in extensive child care—and those in nearly exclusive maternal care. They have assessed whether family characteristics predict the child care experience their infants and toddlers receive. Finally, the researchers have examined the child care

characteristics and their relationship to children's intellectual development, language development, and school readiness, as well as the association between child care characteristics and the mother-child relationship.

The research team looked for the added—or subtracted—value of child care to children's development, above and beyond the contribution made by the family and individual child characteristics. In general, family characteristics and the quality of the mother's relationship with the child were stronger predictors of children's development than child care factors. This held true for families whether their children were in extensive child care or cared for primarily by their mothers.

Researchers found that some child care characteristics or experiences do contribute, though only slightly, to children's development, as can be seen in the Summary Table of Findings to date (p. 18) from the NICHD Study of Early Child Care. The observed effects of child care were generally modest in size, but not insignificant.

***Higher quality care was found to be related to:***

- Better mother-child relationships
- Lower probability of insecure attachment in infants of mothers low in sensitivity
- Fewer reports of children's problem behaviors
- Higher cognitive performance of children in child care
- Higher children's language ability
- Higher level of school readiness

***The converse is also true. Lower quality care predicted:***

- Less harmonious mother-child relationships
- A higher probability of insecure mother-child attachment of mothers who are already low in sensitivity to their children
- More problem behaviors, lower cognitive and language ability and lower school readiness scores

***Higher quantity of care or a history of more hours in child care was associated with:***

- Less harmonious mother-child interaction
- More reported problem behaviors when the children were two years old
- Higher probability of insecure attachment in infants of mothers low in sensitivity

***Lower quantity of care is associated with:***

- Better outcomes for mother-child interaction
- Lower probability of insecure attachment of infants of mothers low in sensitivity
- Fewer problem behaviors at 24 months

Center care is associated with better cognitive and language outcomes and a higher level of school readiness, as compared to outcomes in other settings with comparable quality of care. Group care is associated with fewer reports of problem behavior at age three.

Instability of care, as measured by the number of entries into new care arrangements, was found to be associated with higher probability of insecure attachment in infancy if mothers were not providing sensitive and responsive care.

Most of the children in the study are now turning seven years old and are in the first grade. Researchers will continue to analyze the data over the next several years, releasing additional research findings at professional meetings and in scientific journals, to answer some of the remaining questions about the relationship between child care and children's development.

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# The NICHD Study of Early Child Care

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# What Is Quality in Early Care and Education?

**Susan Kontos**

This paper summarizes results from a 1994 study of quality in home-based child care settings. *The Study of Children in Family Child Care and Relative Care* looked at 820 randomly selected mothers and 225 of their children in the homes of 226 providers in three communities that participated in Family-to-Family Child care training programs: San Fernando/Los Angeles, California; Dallas/Fort Worth, Texas; and Charlotte, North Carolina.

Thirty-three percent of mothers with children under 5 years old use in-home care. For 61% of these mothers the provider they use is not related, while 39% use relatives. This study examined three distinct groups of providers offering care in the home: regulated family child care providers, nonregulated family child care providers, and nonregulated relatives who provide care.

The quality of care offered by these providers is of critical importance in light of growing recognition that early child care experiences comprise a child's education before conventional schooling (Galinsky and Friedman 1993), blurring the distinction between child care and early education.

This study addressed a number of crucially important policy questions:

- How is quality in family child care defined by parents and providers?
- What differentiates high- and low-quality care?
- What differences are found among regulated, nonregulated and relative providers?
- What do children experience in family child care and relative care?
- How satisfied are parents?

## **Sampling procedures**

Four sampling methods were used to obtain and interview mothers: random digit dialing to telephone exchanges with higher-than-average proportions of low-income and minority families; commercially available lists of families with young children; birth records; and provider referrals.

Two sampling methods were used to select providers: Direct selection from licensing lists and responses to newspaper advertisements; and referrals from the sample of mothers.

For each mother whose provider agreed to participate, one child was selected for observation.

### **Data collection and measures**

Interviews with mothers were conducted over the telephone and lasted approximately 30 minutes. Measures used in the interviews included questions about certain features of child care as related to perceived quality, as well as the importance of these features and respondents' satisfaction with them. Overall satisfaction with child care was also measured.

Interviews and observations with providers were conducted by observers (primarily graduate students or early childhood educators) who received one week of extensive training prior to meeting with and observing providers in their homes. The observation period lasted for two to three hours with the timing designed to cover a period when the target child was awake and engaging in typical daily activities. Self-report assessments were filled out by the providers.

Measures used in the provider interviews, observations and self-report assessments included business and safety practices; children's activities; three measures of process quality; structural quality; and the providers' perceptions of quality.

### **Definitions of quality**

Determining what constitutes quality in family child care has been difficult amid the variety offered. This study suggests that, despite ethnic and income differences, parents and providers agree about what is most essential in defining quality: a safe environment, good communication between parent and provider, and a warm and attentive relationship between the provider and child. These measures of quality were positively related to children's development across ethnic lines and among the three types of providers studied.

Results of the study reveal that parents and providers are correct in emphasizing the importance of a warm and attentive relationship, and validate the measured quality indicators used to ascertain quality. Children are more likely to be securely attached to providers who are sensitive (warm). Children are more likely to play with objects and engage in more complex play when providers are responsive (attentive). Children are also more likely to be securely attached to providers who, as a measure of global quality, offer good or adequate (neither growth-enhancing nor harmful to growth) custodial care.

### **Levels of quality**

Although it is widely argued that no national child care problem exists because parents are generally very satisfied with their child care, this study showed otherwise.

### ***Low global quality ratings***

Few homes in the study—only 9%—received "good quality" ratings. Thirty-five percent received global quality scores in the inadequate range, leaving 56% rated as adequate, strongly suggesting that quality can be improved.

### ***Choice is limited***

Although mothers report being satisfied, 62% percent had looked for other alternatives. Sixty-five percent of those looking found no other acceptable options, and 25% expressed a preference for other arrangements. If other care was available, 28% of the mothers in the study would use it.

### ***How providers are selected***

Although they frequently mentioned trust in providers or their personality and expertise as selection criteria, mothers almost never mentioned formal credentials such as education and licensure high on their list of what constitutes quality care, instead relying on factors such as safety and the provider's communication. Research has shown that parents always report high levels of satisfaction with quality even when no relationship to quality is observed by researchers (Cryer & Burchinal 1997; Shinn, Galinsky and Gulcur 1990).

### ***Family income and ethnicity effects***

In a 1997 study we sought to clarify recent research suggestions that low-income families using family child care and relative care were using lower quality care than their higher-income counterparts (Kontos et al 1997). Using a subsample from the study upon which this paper is based, researchers in this rigorous study used interviews and three-hour observation sessions to examine provider behavior, children's activities and characteristics of the environment for 186 African American, European American and Latino children (average age = 26 months) and their child care providers.

More similarities than differences were found in children's experiences in family child care and relative care across income groups, although some variance was found based on income and ethnicity. Income-level differences in provider behavior and income and ethnic differences in activities were found, suggesting that the ecology of child care environments for very-low-income and minority children may vary in important ways from children of White and moderate- or upper-income families.

Low-income Latino families were found to rely on care that was significantly lower in quality than African American and European

American families with similar incomes, and were most likely to be cared for by a nonregulated relative, reflecting findings of previous research that Latina mothers took issue with norms and values reflected in child-care center practices (Fuller, Holloway, Rambaud & Eggers-Pierola 1995). Although care by a relative is likely to increase confidence in congruence with family norms and values, and is less expensive than home- or center-based alternatives, research has shown that relative care is more likely to be inadequate in quality (Kontos et al 1994). The tendency of Latino families to rely on relative care may explain the measure of lower quality care that was experienced when compared with other ethnic groups.

Children from low-income Latino families being cared for by relatives were also less likely to be provided with learning activities than were European American children being cared for by regulated nonrelatives.

The three income groups experienced a stark contrast in child-care environments, with nearly three-quarters of very-low-income families receiving care that was inadequate in quality—in fact, no child in the very-low-income group was in good quality care. In contrast 43% of low-income and only 13% of moderate-income families received inadequate care. And providers of children from very-low-income families were less sensitive in their interactions, reducing the likelihood that children would form secure attachments or experience development-enhancing opportunities.

### **Predictors of quality**

One of the most revealing findings of this study relates to intentionality on the part of the provider. This intentionality is represented in providers who have a commitment to caring for children, who pursue opportunities for continued learning, and who seek the company of other providers in an effort to learn from them. Home-care environments that offer children higher-quality, warmer and more attentive care create opportunities for learning experiences that contribute to better growth and development.

Characteristics of the predictors of quality in child care go together. Providers who have one of the measured characteristics are likely to have the others. Providers are more likely to be rated as sensitive, observed as responsive, and rated as having high global quality scores when they show a commitment to working with children; pursue continuing education opportunities; engage in planning; seek the company of peers; are regulated; have larger groups and higher adult to child ratios; and charge higher rates and follow standard business and safety practices.

Highlights of what the study revealed about each of these predictors follows, along with findings from other studies and research that illuminate implications for public policies and programs.

### **Quality found in a commitment to taking care of children**

Providers who are intentional in their approach to caregiving are more sensitive, more responsive, and offer better-quality care. One feature of this intentionality is their commitment to taking care of children.

This commitment was measured by asking providers for their primary reason for becoming a provider, their perceptions of their work and their commitment to their jobs. Providers who are caring for children from a sense of obligation tend to be adult-focused (to help out mothers) rather than child-focused (to be with children) and do not perform as well in the measured quality indicator categories.

Current policy relevance is found in the fact that some states push welfare recipients to convince others—friends, neighbors and relatives—to care for their children as they return to work, or to become child care providers themselves. The data are unequivocal—providers offer better care when they want to be providers. Welfare-to-work participants should be screened for interest and commitment. Public policy measures that, in effect, create providers out of individuals who are not committed to taking care of children do not create quality in child care.

One further implication of this finding on commitment is that both business and government should support providers who want to offer care through reimbursements, training opportunities and public recognition. Consideration should also be given to subsidizing quality child care for low-income parents who are returning to work.

Additionally, public and private investments in child care consumer education and advocacy would allow parents to access information on child care options and to pursue improvement in available options.

### **Professional development yields sensitivity**

Another feature of intentionality is found in providers who seek out opportunities to learn more about child care and child development. This professional preparation yields providers who are more likely to be sensitive and responsive.

Fears that training will in some way diminish the caring, nurturing relationship fundamental to quality child care have become an assumption often heard in public policy debates. Yet providers with more formal education were rated as more sensitive and less detached, and were observed as more responsive.

An awareness of how children grow and learn yields an ability to provide developmentally appropriate levels of care. Training can also stimulate new ideas and provide renewed motivation. Years of experience in the child care field will not necessarily translate to the greater sensitivity that is a

hallmark of quality; improvement in care comes from training, not experience.

### **Effects of training**

A 1996 study to determine the effects of training on the quality of care offered by providers examined the outcomes of 130 family child care providers (Kontos, Howes, & Galinsky 1996). These providers had enrolled in the 15- to 25-hour Family-to-Family training offered at three sites around the country, and were examined against a comparison group of 112 regulated providers in the same communities who were not involved in the training.

Each Family-to-Family training project is unique, but common components of training—such as topics to be covered—were required at each site. These topics include business practices; local regulations; health, safety and nutrition; child development and age-appropriate activities; environments to promote learning; guidance and discipline; special needs children; parent-provider relationships; professional development and community resources; diversity issues; and personal and family development.

Results revealed that training did increase global quality in two out of three sites (the site showing no change had high pre-training global quality scores), although process quality (focusing on the provider's interactions with children) was not affected. This may be reflective of the difficulty of changing patterns of behavior or it may a result of limited observation data.

The significance of the global quality improvements is tempered by the fact that the improvements were extremely small in an absolute sense. It does demonstrate, however, that statistically significant changes in quality may not be observably significant to either child care professionals or parents. But it is important to the extent that improvements in the providers' business and safety practices can contribute to provider longevity and to making family child care financially viable, since changes in these types of practices can result in financial benefits to the providers.

The overall modest impact of the training suggests that it may not be rigorous enough, and that its impact may have been affected by the emphasis on the classroom component (that reaches greater numbers of providers) over the more expensive coaching that can occur during home visits (Galinsky, Howes & Kontos 1995). Although classroom topics provide important information, previous research suggests that frequent home visits are a critical component of successful training (Kontos 1994).

Professional development initiatives would do well to correct the imbalance between classroom and coaching components in family child care training. This would require greater funding, and a new perspective

that measures training success in terms of enhanced quality rather than of numbers of providers involved.

### **Planning ahead for quality experiences and activities**

Little is known about the experiences of children in family child care. We do know that caring for and educating children in family child care is more than simply "watching" them, it requires thinking ahead about what they are going to do and planning for their involvement, an aspect of intentionality. These activities that require planning do not always need to be structured; but providers who are intentional about planning a variety of experiences that can contribute to developmental progress, social skills and school readiness for the children in their care are more likely to be rated as sensitive and observed as more responsive.

### **Involvement with other providers offers support and enrichment**

Providers who seek the company of peers appear to be seeking more than merely social support; contact with other providers offers opportunities to learn from them—another indication of intentionality.

Providers do not often have the opportunity to be with other adults during the hours they offer care, and informally report feeling isolated from other adult contacts. Those who report more involvement with the family child care community through membership in associations or participation in programs are rated as more sensitive and responsive.

The implication is that national, state and local associations that involve providers in social support and technical assistance networks can improve quality of care.

### **Regulation does yield quality, and important implications**

Providers and mothers both rate regulation at the bottom of a list of quality factors (17th and 18th, respectively, out of 19 factors), yet regulated providers are actually rated as more sensitive and observed to be offering more responsive care than nonregulated or relative caregivers.

This study reveals that regulated care is consistent with the aspects of quality—warmth and attention to the child—that providers and parents value, and points to the fact that being regulated adds to the perception that taking care of children is important work. Efforts on the part of states and businesses to bring family child care providers into the regulatory system, and to ensure that the system helps improve the quality of care can provide an important bridge on the road to high-quality child care.

Although the finding that relatives who are unregulated are perceived as less sensitive and responsive is surprising, we realize the study does not take into account crucial aspects of relative care that center on cultural

grounding and unique family expressions of love and caring that were not measured.

However, an additional finding that 60% of the relatives became providers for adult-focused reasons points to the possibility that a sense of obligation rather than commitment could affect the level of sensitivity and responsiveness to children. Furthermore, almost two-thirds of the relative providers live in poverty, with little social support.

Children cared for in these circumstances, and under other difficulties such as poverty and social isolation, may not receive the warmth and attention that is known to affect their growth and development in positive ways.

The implications once again point to the fact that providers offer better quality care when they want to be providers.

### **Higher ratios and group size represent higher preparedness**

Some research on group size and number of children per adult indicates that slightly larger groups and slightly higher ratios in family child care are better (Dunn 1993). Consistent with that literature, this study also showed that providers with slightly larger groups are more likely to be sensitive, and that larger group sizes and slightly higher numbers of children per adult yielded higher global quality scores (i.e., 6 children as compared to 2 or 3).

This should not be interpreted to mean that larger groups and high ratios are to be sought or even accepted in the quest for quality. No provider in this study was caring for more than three infants; larger groups were comprised of older children only. This finding speaks more to the fact that providers who care for more children and higher ratios are more likely to have had more formal education and child care training, thus they are better prepared to offer quality care and to be more intentional in their approach.

### **Conformance**

Since requirements for licensing varied by state, providers were examined in relation to their state's threshold of required regulation (i.e., the number of non-related children in care above which a provider must be licensed). Results revealed that 81% of the nonregulated providers were illegally caring for more children than the state allowed nonregulated providers, but were caring for only 2.6 children, on average, compared to 5.8 children, on average, for regulated providers. This was a surprising finding since it has been generally thought that nonregulated providers were caring for more children than the maximum allowed by the state for regulated providers. Eighty-three percent of all providers were in conformance with their state regulations for group size, adult-child ratio, and number of infants. Being in conformance with these three features of state regulations was less predictive of quality than being regulated.

Nonconformance typically meant a slightly higher number of children than allowed by state regulation. Had this study been done in states that allow larger groups of children (such as Indiana), nonconformance may have been associated with lower levels of quality.

### **Compensation and quality**

Higher quality child care is offered by providers charging higher rates and following standard business and safety practices. As with center care, where staff compensation is linked to the quality of care and education children receive (Whitebook, Howes, and Phillips 1990), this study revealed a strong association between what providers earn and the quality they deliver.

Regulated workers (who are more likely to be trained and intentional in their child care practices) are more likely to comply with tax laws, declare their earnings, deduct their expenses and provide Social Security numbers so parents can participate in federal subsidies, claim tax credits and participate in employer assistance plans. And providers who offer better care are more likely to follow standard safety practices.

Results of the 1996 Family-to-Family training study referenced earlier revealed that providers who dropped out of the training were less experienced and used fewer business and safety practices than those who completed it.

### **Parent fees**

Costs for child care offered by providers in this study were low, with a median cost of \$50 per week. The majority of parents report that they would be willing to pay more, even though current costs represent a substantial portion of income for many of the families. Nevertheless, very few of the families receive help with child care payments. It would appear, in fact, that many providers subsidize the child care they offer by the low amount they charge. Additionally, the rates charged for family care appear to be strongly related to intentionality in providing high-quality care.

A willingness on the parents' part to pay more is not the solution to child care problems. Lower-income families use providers who charge lower fees, and receive correspondingly lower-quality care; they cannot afford to pay more. The implication is that additional sources of revenue and quality improvement initiatives are especially needed for low-income families.

Concerns about quality available to low-income children have increased following a number of studies that document the prevalence of poor-quality childcare. Low-income parents are forced to seek inexpensive or free child-care arrangements that offer the flexibility their low-wage jobs and lack of resources require. Relative care, family child care and multiple child care arrangements result (Phillips 1995). Low income families are less likely to

rely on center-based care and more likely to rely on grandparents (Hofferth 1995).

Low income families relying on family or relative care may be receiving lower quality care than higher income families (Kisker, Hofferth, Phillips & Farquhar 1991; Kontos 1994; Phillips 1995), while the small percentage of low income families using center-based care are receiving child care of comparable quality experienced by higher income families. Evidence also exists that a smaller proportion of families using home-based care are receiving child care subsidies compared to families using center-based care.

Although the quality of care offered by center- and home-based care is similar, low income families who choose home-based care with no subsidy may have greater difficulty finding the same quality as families who choose center-based care.

Because better-quality care is received by parents who are able to pay more, the implication is that government and business should consider undertaking efforts directed toward helping families pay for child care.

### **Conclusion**

*The Study of Children in Family Child Care and Relative Care* sought to shed light on what constitutes quality care and areas of concern. The following recommendations are reprinted from the study's findings.

- No public policies at the federal or state level should push or require people to care for children if they do not want to be providers.
- There should be public and private investments in childcare consumer education and advocacy.
- Government and business should fund high-quality family child care training initiatives.
- Family child care providers should have access to resources that help them anticipate and create learning experiences for the children.
- National, state and local associations should be developed and supported to involve providers in social support and technical assistance networks.
- States and businesses should undertake efforts to bring family child care providers into the regulatory system and ensure that the regulatory system helps providers improve the quality of care they offer.

- Government and business should undertake efforts to help families pay for child care.
- Studies of various public and private efforts to improve the quality of regulated, nonregulated, and relative care should be conducted.

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# An Assessment of Full-Day Kindergarten

James Elicker

This paper describes a research-based evaluation of a newly implemented full-day kindergarten program within a Midwestern school system that emphasized developmentally appropriate programming. Program evaluation over a two-year period included documentation of process and outcomes viewed from multiple perspectives

## **Significant transformations in kindergarten**

Dramatic changes have taken place in kindergarten education in the United States in the last 25 years. Publicly funded kindergarten programs for 5-year-olds were implemented for the first time in the 1960s and 1970s (Day 1988, Olsen & Zigler 1989, Sava 1987). These were primarily part-day programs modeled after traditional nursery schools that emphasized play, socialization and transition from home to school (Connell 1989, Day 1988, Educational Research Service 1986).

But US kindergarten programs underwent significant transformations by 1990, becoming more academic and skill-oriented. Play and socialization took a back seat to preparing for increasingly rigorous first-grade curricula (Gullo 1990, Sava 1987, Shepard & Smith 1988), and the kindergarten's typical day was packed with tightly-scheduled reading and writing instruction, math lessons and other structured learning activities (Day 1988, Walsh 1989).

The nineties also saw growth in full- or all-day kindergarten programs. Although not a new concept—full-day programs have been offered, particularly in rural areas, since Margarete Schurz opened the first Froebelian kindergarten in 1857 in Wisconsin—only about 13% of the nation's 5-year-olds were enrolled in such programs in 1970. But by 1993 this proportion had grown to approximately 45% (US Census 1993) with over half of the nation's kindergarten teachers teaching full-day classes (Rothenberg 1995).

## **Multiple reasons underlie increase in participation**

There are several reasons for the increasing number of full-day programs. More than 60% of mothers with children under 6 are now in the work force (Children's Defense Fund 1996), and many find that the traditional half-day program is not in line with their complex schedules and child care needs (Gullo 1990). And many teachers find it difficult to meet the demands of increasingly rigorous curricula within the 2 1/2- to 3-hour half-day programs. Additional criticism of the highly structured, academic half-day programs has been made by early childhood advocates who come down heavily on the time-pressured large group instruction, individual desk

work and segmented academic daily routines (Elkind 1987, Sava 1987, Shepard & Smith 1988, Walsh 1989).

These concerns raised a call for more developmentally appropriate programming, more integrated curriculum approaches, more child-initiated activity, and more attention to curriculum content beyond "the three Rs" (Bredekamp 1987, National Association of State Boards of Education 1988).

Additionally there is evidence that children experience more stress in developmentally inappropriate programs when compared to children in programs judged to be developmentally appropriate (Burts, Hart, Charlesworth, Fleege, Mosley & Thomasson 1992). Advocates also suggest that developmentally appropriate full-day kindergarten programs may reduce stress and improve outcomes for children who now experience two or three school or child care placements each day by offering consistent, high-quality environments of care and education (Day 1988). The potential exists for a program to be more child-centered, because it allows teachers and children to explore topics in depth (Rothenberg 1995), and thus provide the opportunity for children to have more positive expectations for themselves in school (Stipek, Feiler, Daniels and Milburn 1995).

### **Controversy calls for research**

Proponents of full-day kindergarten cite opportunities offered by a longer day, such as better assessment of children's educational needs, more time for individualized instruction, more developmentally appropriate curriculum, less stress for teachers and children, and child care relief for working parents.

Critics express concern that already inappropriate curriculum approaches may be emphasized, that 5-year-olds will become overly tired, that children will miss important learning experiences at home, and that public schools are not in the business of providing "custodial" child care for 5-year-olds.

Research to date has not resolved these issues. Two goals of this comprehensive full-day kindergarten evaluation were: (1) Documenting both program processes and program outcomes, and (2) Examining specific issues raised by proponents and critics from an ecological perspective, assessing daily experiences, the impact of the program on teachers and parents, and relationships between school and home. Adopting these multiple perspectives provided data useful for assessing program impact, for program improvement, and for program replication (Fuller et al 1997, Powell 1994).

### **Evaluation objectives and methods**

Research questions developed to satisfy the evaluation goals included:

- How do children in both programs spend their time each day?
- How are teachers affected by full-day kindergarten?
- How do parents perceive the full-day program?
- Are children's academic outcomes affected?
- Will program effects increase (over a two-year implementation period) in the second year?

The study was conducted using a sample of 179 typically developing kindergarten children (69 full-day and 110 half-day) within one program in a middle-class Midwestern community. The study group included 12 separate classes (four full-day and eight half-day) that were observed over a two year period. Randomly selected families were offered the option of full day kindergarten; only 17% refused and these vacancies were filled by additional randomly selected students.

### **Collection of data**

Children's classroom activities were quantified using the *Early Childhood Classroom Observation System* (ECCOS) to document participation in teacher-directed, child-initiated or other learning activities; level of engagement in these activities; and affect. This allowed a profile to be constructed of typical child activity throughout the day for each classroom. Additionally, parent and teacher perspectives on classroom activities were collected through surveys and interviews.

### ***Classroom activity categories***

Teacher-directed activities, defined as those activities initiated and structured by the teacher, included four categories: (1) Large group-active—children in groups of 10 or more were observed either talking or doing more than 50% of the observed time. (2) Large group-listening—children in groups of 10 or more were observed either talking or doing less than 50% of the observed time. (3) Small group activity—two to 10 children in a group led and structured by teacher. (4) Individual work—children working individually at teacher-specified tasks.

Activities observed as being child-initiated were process-oriented, routinely available activities that were both selected and structured by the child. These included both indoor and outdoor free play, learning centers, cooperative learning, and individual creative activities.

Additional observed activity categories included rest, snack, meal and transition times.

### ***Assessing children's engagement in activities***

Four categories of engagement were quantified. Children who had focused their attention and were actively talking or doing something fell into the "active-engaged" category. The "listening-engaged" category included children who had focused their attention on the activity and were listening, paying attention or watching. Children whose attention was wandering, or who appeared to be daydreaming, unoccupied or engaged in an

inappropriate activity were categorized as "not engaged." Finally, a child who was active but appeared to lack attention focus or show disorganized behavior fell within the "disorganized" category.

#### ***Documenting children's affect***

Children's emotional displays during activities were divided into three categories. Those observed to be happy, excited, very content, or very interested had "positive affect." The "neutral affect" category included children who appeared calm, mildly interested, placid or resting. Children who seemed angry, sad, bored, frightened, upset, depressed, perturbed, rejected, or worried were documented as experiencing "negative affect."

#### ***Perspectives gathered from teachers and parents***

A series of four confidential interviews and surveys was conducted over the two-year implementation period for each teacher to document their perceptions of the advantages and disadvantages of full- and half-day programs. Recurring, open-ended questions allowed teachers to express their opinions, perceptions and recommendations for improvement of both the full- and half-day kindergarten programs. Coded by topic to identify themes, these data were used to create a comprehensive list of advantages and disadvantages of the full-day program, including all teachers' perspectives, and to document changes in perspectives from the first to second year.

Parents filled out questionnaires to rate satisfaction with their child's learning experience in each academic area, their satisfaction with the schedule, problems faced by their child, and perceptions of their child's readiness for first grade. They were also encouraged to share additional comments and recommendations.

#### **Findings document higher levels of satisfaction, flexibility and developmentally appropriate activities**

Observations of children's classroom activities revealed several positive features of the full-day program. Children in the full-day classrooms were not only initiating more learning activity, they were receiving more one-to-one instruction and spending proportionately less time in teacher-directed groups. Comparisons of first- and second-year classroom observation data showed that differences between full- and half-day programs became even stronger in the second year. The emphasis on these classroom processes is consistent with recommendations for developmentally appropriate practices (Bredekamp 1987, Bredekamp & Copple 1997).

#### ***Teachers' views***

Children in full-day programs were perceived by their teachers as better able to initiate and engage flexibly in a variety of classroom activities. Teachers attributed the benefits found in more individualized interactions, more individualized planning and more integrative curriculum planning to the smaller number of children taught each day, and increased contact time.

Both full- and half-day teachers believed the full-day program eased the transition to first grade. They thought the extra time offered more flexibility and opportunity to do activities during free choice times. A perception of the full-day classes as being less stressful and frustrating was attributed to the additional time available to develop interests, and for children to engage in social and creative activities.

Finally, teachers perceived that more appropriate challenges for children at all developmental levels were offered with the full-day schedule. Children with developmental delays or at risk for school problems had more time for completion of projects and needed socialization. Advanced students were afforded more time to complete increasingly challenging long-term projects.

#### ***Parents' views***

Full-day parents perceived similar benefits. The less-hurried atmosphere of full-day kindergarten was regarded as an opportunity for the teacher to get to know their children better. This longer contact with the teacher gave their children more time to explore, learn and acquire new skills, and to develop socially.

While predominantly positive, half-day parents' comments did present a mixed evaluation. The half-day schedule allowed some children a better opportunity to adjust, and enabled parents to balance education outside the home with quality time in the home. But many half-day parents thought the day was too short to meet their child's needs or that it presented child care problems.

#### ***Academic performance***

Slightly greater progress in kindergarten and higher levels of first-grade readiness were indicated in academic outcomes of full-day children at the end of the kindergarten year.

The full-day group's progress at the end of the second year of the full-day program was significantly greater in four of the five developmental report card areas: literacy, math, general learning skills and social skills.

Possible biases inherent in having teachers provide the short-term outcome data require that additional analyses of the children's social adjustment and academic outcomes in first and second grade be examined to establish any long-term benefits of full-day kindergarten.

#### **Conclusion**

The multiple perspectives of evaluation used in this study lead us to conclude that participation in the full-day kindergarten program provided an enjoyable and developmentally appropriate experience for many children in the economically stable, middle-class community examined, in fact yielding both academic and developmental advantages over the half-day program. No evidence for any detrimental effects was found in the

evaluated implementation. Applying the broad evaluation approach of this study in future studies with more diverse populations and philosophies can help delineate the benefits and costs of full-day kindergarten in other populations.

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