

# The Quality of Early Child Care and Children's Development

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**ABSTRACT**—*The past half-century saw dramatic changes in families that altered the daily experiences of many young children. As more mothers of young children entered the labor force, increasing numbers of young children spent substantial hours in various child-care settings. These changes gave rise to a large body of research on the impact of the quality of early child care on children's development. However, a full understanding of the role of the quality of early child care requires consideration of the interplay among child care, family, workplace, and society. This article places what we know about the quality of early child care and children's development in this larger ecological context, and suggests directions for future research and practice.*

**KEYWORDS**—*child care; maternal employment; child development; child-care services*

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The past half-century saw dramatic changes in families that altered the daily experiences of many young children. In 1970, only 24% of mothers with a young child (birth through age 3) were in the labor force; by 2000, this figure had risen to 57%. This growth in maternal employment was accompanied by changes in children's daily experiences. By 2000, 80% of children under the age of 6 were in some form of nonparental care, spending an average of 40 hours a week in such care (National Research Council and Institute of Medicine, 2003).

Research on children's experiences saw a parallel change that was equally dramatic. Early research in the field focused primarily on the question of whether child care (or maternal employment) per se was good or bad for children; current research asks questions about the relation between children's development and variations in the quality and quantity of child care that they experience. The field also now recognizes varying types of child care, including center-based care, licensed or regulated home-based care by nonrelatives (family-child-care homes), and other home-based care, such as care by relatives or in-home sitters. There have been methodological advances as well. Early research was more likely to study small samples and examine correlations between child care and children's outcomes at a single point in time; current research is more likely to involve large samples at multiple sites, to use experimental or quasi-experimental designs, and to follow participants over time.

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Perhaps the most important advance in child-care research has been theoretical. Early research tended to study the effects of child care in isolation from other significant aspects of children's lives. Current research is more likely to be grounded in ecological systems theory, which considers children's development in the context of the child-care system as well as the family system, and recognizes the links between these systems and the larger society.

In this article, I focus on one segment of current research on early child care—the links between the quality of child care and children's development—drawing on ecological systems theory to provide an overview of recent advances and to suggest directions for future research.

## ECOLOGICAL SYSTEMS THEORY AND EARLY CHILD CARE

Ecological systems theory places child development in an ecological perspective, in which an individual's experience is nested within interconnected systems (Bronfenbrenner, 1989). *Microsystems*, such as families or child-care settings, are characterized by face-to-face connections among individuals. *Mesosystems* consist of two or more microsystems and the linkages or processes that combine or connect them. These mesosystems exist within the larger context of the *exosystem*, those settings in which the child does not directly participate but that influence the lives of parents and other adults in the child's world, such as a parent's workplace, educational institutions that train child-care teachers and providers, and government agencies that set regulations for child-care facilities or establish welfare-reform policies. The mesosystems and exosystems operate within the context of a *macrosystem* of societal and cultural beliefs and practices. Note that these systems are not static, but may change over time.

### The Mesosystem of Family $\leftrightarrow$ Child Care

Children inhabit both families and child-care microsystems, and these systems are linked. Parents select particular types of child care, of varying quality, for children of different ages—and these decisions vary with family structure, parental characteristics, geographical location, and other factors. Singer, Fuller, Keiley, and Wolf (1998) argued that child-care researchers must consider these *selection effects* if they are to accurately model the impact of child care on children's development over time.<sup>1</sup>

Through their selection of particular child-care arrangements, parents have an indirect impact on their children's development (in

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<sup>1</sup>*Selection effects* refers to the effects of family-level and community-level factors on decisions about the selection of child care.

addition to their direct impact within the family system). But this linkage between the family system and child-care system operates in both directions: The child-care system can also influence the family system. For example, Ahnert, Rickert, and Lamb (2000) described a particular mesosystem characterized by shared care; in this mesosystem, mothers adapted their interactions with their toddlers in response to the toddlers' experiences in child care.

### The Exosystem

The family  $\leftarrow$   $\rightarrow$  child-care mesosystem operates within the larger context of the exosystem of parental employment—one of the primary functions of child care is to enable parents, particularly mothers, to work outside the home. Historically, the child-care system has developed in response to characteristics of parents' employment. For instance, the current child-care system includes child-care centers, which tend to have operating hours that match those of parents who are working weekdays, as well as family-child-care homes and kith-and-kin care, which are more likely to meet the needs of parents who are working evenings, weekends, or variable hours. However, in industries that operate around the clock, particularly those with highly skilled workers such as hospitals, we are more likely to see on-site child-care centers, sick-child care,<sup>2</sup> and other accommodations to parents' employment needs.

Another important aspect of the exosystem is government policies and regulations that affect both the demand for child care (such as welfare-reform efforts that require low-income mothers to seek employment) and the affordability of child care. Although the United States provides some child-care subsidies for families, many low- and moderate-income families do not have effective access to subsidies.<sup>3</sup> Given the links between the quality of care and the cost of care, it is not surprising that children in low-income families who are not in the higher-quality, government-subsidized programs tend to receive lower-quality child care than children in middle-income families (cf. Phillips, Voran, Kisker, Howes, & Whitebook, 1994). In this way, the exosystem of government policies and regulations provides an important context for the operation of the family  $\leftarrow$   $\rightarrow$  child-care mesosystem.

## THE QUALITY OF EARLY CHILD CARE AND CHILDREN'S DEVELOPMENT

Using ecological systems theory as a framework, I turn now to the question of the relation between the quality of early child care and children's development. I begin with a discussion of the concept of quality, and then move on to an overview of what researchers currently know about the role of the quality of early child care in children's lives.

### What Is Quality?

The underlying assumption of all definitions of quality is that a high-quality early-child-care setting is one that supports optimal learning

<sup>2</sup>Sick-child care consists of backup child-care arrangements for children who are mildly ill and cannot go to their regular child care or school, but do not require full-time parental care.

<sup>3</sup>Middle-income families may receive subsidies through the child-care deductions in the federal tax code and through employers' Dependent Care Assistance Plans that allow eligible families to pay for child care with pretax dollars. Low-income families may receive subsidies through federal Head Start programs or through state-administered Transitional Assistance for Needy Families (TANF) programs, as well as other state and local programs.

and development. However, quality has been measured in a variety of ways across different studies. Measures of child-care quality can be categorized as either structural or process indicators. Structural characteristics include the child:staff ratio (the number of children per teacher or provider), the group size (number of children in the setting), and the education and specialized training of teachers, providers, or directors. The features of structural quality can be regulated, and most states set minimum standards for at least some aspects of structural quality, at least in center-based care. Studies that assess structural quality are most useful in evaluating the impact of features that can be regulated.

Although understanding the links between structural indicators of quality and children's development is important, we also need to understand the mechanisms by which structural quality affects children's development, which requires examining what actually happens in the early-care setting (i.e., the process). How do adults and children interact? What materials are available for the children, and how do adults support children's use of those materials? Process quality refers to the nature of the care that children experience—the warmth, sensitivity, and responsiveness of the caregivers; the emotional tone of the setting; the activities available to children; the developmental appropriateness of activities; and the learning opportunities available to children. Unlike the features of structural quality, process quality is not subject to state or local regulations, and it is harder to measure. One of the more commonly used measures, the Early Childhood Environment Rating Scale (ECERS; Harms, Clifford, & Cryer, 1998), assesses multiple aspects of process quality. Such multidimensional process measures tell us much more about the quality of care that children receive than do structural measures alone.

### Structural Indicators of Quality and Children's Development

What do we know about the links between the structural indicators of quality in early child care and children's development? The research to date has found that better ratios (fewer children per adult) and more education or training for teachers are associated with higher language, cognitive, and social skills of the children cared for (National Research Council and Institute of Medicine, 2003). However, many of the studies that have examined structural indicators have employed small samples (fewer than 100 children) or have not considered selection effects in their analyses, so studies that do not have these limitations are of particular importance. In an interesting study that assessed the links between structural quality, process quality, and children's outcomes, the NICHD Early Child Care Research Network (2002) found that the relation between caregiver training and child:staff ratio, on the one hand, and children's cognitive and social competence, on the other hand, was mediated by process quality—that is, higher levels of caregiver training and lower ratios of children to adults in child-care settings were associated with higher levels of process quality, which were, in turn, associated with children's greater cognitive and social competence.

### Process Quality and Children's Development

Among studies published in the past 15 years, those that employed an ecological model<sup>4</sup> consistently found that higher process quality is

<sup>4</sup>The ecological model might be explicitly specified, or implicitly indicated through statistically controlling for key selection effects, such as the effects of family income or education.

related to greater language and cognitive competence, fewer behavior problems, and more social skills, particularly when multidimensional measures of quality, such as the ECERS, are used or quality is assessed at more than one point in time. For example, the Cost, Quality and Child Outcomes Study (Peisner-Feinberg, Burchinal, & Clifford, 2001) found that higher process quality in preschool classrooms predicted fewer behavior problems 1 year later, and predicted higher language and math scores in kindergarten and second grade, although the magnitude of these associations declined over time. This same study also found a link between the child-care and family systems, such that the association between child-care quality and children's school performance was moderated by mothers' education; specifically, the association was stronger for children whose mothers had less education.

### BEYOND SELECTION EFFECTS

I began this article with a discussion of the importance of considering children's development from an ecological systems perspective, which considers the family  $\leftrightarrow$  child-care mesosystem as a context for children's development. Many studies of child care now consider the role of selection effects by statistically controlling for family characteristics. However, other linkages within the mesosystem must also be considered if one is to adequately understand the role of child-care quality in children's development. For instance, aspects of the family system, such as the mother's education or depression, parenting practices, and family income, may have independent effects on children's development. In fact, in a study of 1,100 children, the NICHD Early Child Care Research Network (2001) found that although the quality of early child care consistently predicted socio-emotional and cognitive-linguistic outcomes during the first 3 years of life, family factors were more consistent predictors of children's development than quality of child care, or any other child-care factors examined.

Research on the family  $\leftrightarrow$  child-care mesosystem is familiar territory for many psychologists. However, Bronfenbrenner's ecological systems theory calls attention to other influences on children's development—the exosystem of parental employment and government policy and the macrosystem of societal beliefs about the desirability of maternal employment and the desired outcomes for children. For example, there is a complex interplay between parental employment, government policy, child care, and children's development for low-income families. Government policy and the macrosystem of societal beliefs promote employment for low-income parents. However, low-income parents tend to have less education and fewer marketable skills compared with other parents, and are likely to be employed in sectors of the labor market where jobs are part-time or contingent (temporary), allow little flexibility for managing family demands, and offer few benefits. Work schedules are also likely to include hours outside of the typical Monday-through-Friday daytimes when child-care centers normally operate. Although government subsidies are available to some low-income families, most do not receive subsidies. As a result, children from low-income families are likely to be placed in lower-cost and lower-quality center care or informal care that is itself often of lower quality (cf. Henly & Lyons, 2000). Viewing this “choice” as a selection effect leads one to interpret it as parental preference—but an ecological perspective suggests a different interpretation: Regardless of their individual preferences, low-income

families' choices are constrained by the operation of the exosystem of the workplace and government policy.

### FUTURE DIRECTIONS

Current state-of-the-art research has provided clear evidence that the quality of early child care matters to children's development. Children who attend higher-quality child-care settings have greater language and cognitive competence and greater social competence than children who receive lower-quality child care. However, several studies have documented the prevalence of mediocre or inadequate child care in the United States (National Research Council and Institute of Medicine, 2003, pp. 53–54). In addition, the high-quality care that does exist is not equitably distributed—lower-income children are less likely than higher-income children to have access to it.

The next step is to answer the question: How can we best raise the quality of early child care for all children? Ecological systems theory draws our attention to the importance of placing this question in the context of family processes, parental employment, governmental policies, and societal beliefs and goals when developing theoretical models and models for practice. We must integrate our societal goals of supporting healthy families, economic self-sufficiency, and women's employment with our goals of supporting healthy development and school readiness for children, if we expect to advance research and practice in the area of early-child-care quality and children's development.

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