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The promise and purpose of early care and education

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Abstract
Early care and education (ECE) evolved around two goals: allowing parents of young children to work (the *purpose*) and promoting early childhood development (the *promise*). An extensive body of research has examined how ECE promotes child development. A much sparser body of research has studied how ECE access affects families' economic and psychological well-being, particularly from a developmental perspective. These imbalanced literatures have created an incomplete picture of the role of ECE in developmental science, and this gap in knowledge limits the extent to which both the purpose and the promise of ECE can be fulfilled. In this article, we argue that developmental researchers should pay more attention to the parent and family outcomes, processes, and mechanisms that depend on stable, high-quality care (the purpose), and how these downstream cascades influence child development in the short and long term (the promise). While these issues are international, in this article, we focus on the development of and research on ECE in the United States to illustrate how the focus on both the purpose and promise of ECE could expand policies and research in the area.

Keywords
child development, early care and education, family well-being

Over the past century, parents and federal, state, and local governments in the United States have increasingly invested in early care and education (ECE). These investments have evolved around two goals: allowing parents of young children to work and promoting early childhood development. An extensive body of research has examined how ECE promotes child development; we term this the *promise of ECE*. This literature demonstrates that ECE programs can have short- and long-term impacts on development (Yoshikawa et al., 2016). At the same time, developmentalists have historically paid less attention to the first goal, which we term the *purpose of ECE*. We argue that developmental theory predicts that factors linked to ECE, such as greater financial resources, affect families' economic and psychological well-being, which in turn affect children's development.

Abbreviations: CCDF, Child Care and Development Fund; ECE, early care and education.

The current state of ECE evolved from two disparate traditions in the United States (Scarr & Weinberg, 1986), and from the intersection of gender, race, and social class in societal views of maternal employment. The day nursery movement originated in Europe and arose from concerns about the young children of employed mothers with low incomes, especially immigrants and women of color, who often relied on extended family members for child care. In the 1800s, churches and private philanthropies in New England developed day nurseries to care for poor urban children while their mothers worked (Saracho, 2021). The nurseries originally provided custodial care and focused primarily on hygiene and nutrition, but increased their educational focus over time (Saracho, 2021). These programs expanded during the Great Depression in response to demand and to employ unemployed teachers through federal subsidies (Michel, 1999). They were expanded during World

War II to provide subsidized care so women with low and middle incomes could work to support war efforts, but they ended after the war due to beliefs that fathers, but not White mothers, should work outside the home (Michel, 1999). Racialized views of maternal employment meant that women of color were expected to continue working, and thus children of color continued to need child care (Michel, 1999). Families again became responsible for finding and paying for the child care that permitted parents to work.

After World War II, the nursery school model continued to expand for middle- and upper-class—and primarily White—mothers seeking to enhance their young children's development based on growing research on the benefits of early learning (Liebovich, 2016). These efforts focused on providing children with enrichment activities in part-day settings supported by parent fees, with no attention to providing care to support employment.

During the past 50 years, both the need for ECE and our understanding of early child development have evolved and grown tremendously. Employment has risen dramatically among mothers of young children which, in turn, has led to marked increases in the numbers of young children receiving routine nonparental care (Cascio, 2021). Parents were expected to find and pay for this care, with some government support through child care tax deductions (Michel, 1999). Beginning with Head Start as part of the War on Poverty, educational enrichment programs for young children in families with low incomes were funded by the federal government to teach children the cognitive and social skills needed to succeed in school (Office of Head Start, 2021). Publicly funded programs now include Early Head Start and state and local prekindergarten programs. Although the aims across the child care and early education sectors differ, current discussions of the two are commonly combined under the same umbrella given shared funding streams, program locations, children and families served, and state and local governance models (Chaudry & Datta, 2017).

Thus, it is not surprising that academic research has focused on either how ECE programs affect children's development or how they support maternal employment. Very few studies have examined both types of outcomes within the framework of developmental theories. In this article, we argue that developmentalists' focus on the direct child-l evel impacts of ECE has left a void in our empirical understanding of the original purpose of ECE, and the ways in which the lives and livelihoods of families with young children revolve around access to ECE.

DEVELOPMENTAL THEORY AND ECE'S PURPOSE AND PROMISE

A central tenet of developmental theories is that the lives of parents and of children are inextricably connected (Sabol et al., 2021). Ecological, interactionist, and life course theories describe how the well-being of parents affects the child, and the well-being of the child affects parents, and that this tightly woven dyad implies that changes in one generation are likely to lead to changes in the other (Bronfenbrenner & Morris, 2006; Elder, 1998; Sameroff, 2010). These developmental theories provide a framework for understanding how young children's early development depends on their primary caregivers, especially parents, and how the caregivers' social network, community, and culture influence their overall well-being and caregiving practices (Harding et al., 2015). For example, the interactionist and family stress models focus on how factors such as financial difficulties induce stress in parents that adversely affects their well-being and how they interact with their children (Elder et al., 1985).

Ecological models also acknowledge how factors and experiences in one system, such as parents' work environments, influence individuals within that system, such as coworkers, and in other systems, like the home environment. Furthermore, these models argue that effects are bidirectional, with children affecting their parents and parents affecting their children (Belsky, 1984). Sociobiology theories extend developmental theories by describing how interactions, experiences, and environments affect the child's genome, with certain genes showing greater responsiveness in terms of DNA methylation under stressful contextual circumstances (Meaney, 2010). Each of the major developmental theories contributes frameworks that can be used to further our understanding of both the purpose and the promise of ECE.

Developmental theories also suggest that ECE can affect child development directly and indirectly (Gassman-Pines & Hill, 2013). Figure 1 displays the hypothesized pathways through which ECE can affect family well-being. The dotted pathways describe how access to stable ECE could influence parent and child outcomes. The dotted pathways in the top half of the figure describe how access to stable ECE allows parents to work or obtain further education or training. Being employed or pursuing additional education should increase families' financial security and decrease parents' and families' stress. This in turn may raise parents' responsiveness and their ability to provide for their children. Conversely, maternal employment can increase family stress, especially if mothers feel guilty about leaving their child, face heavier workloads as a result of work and family responsibilities, or have low-wage jobs with nonstandard or rotating work hours. This model would then predict that increased stress could impair child development to the extent that this stress makes it more difficult for parents to provide responsive and stimulating interactions with their children.

One of the dotted pathways in the Figure 1 describes how the quality of ECE directly affects children's development and the other dotted pathways describe how access to ECE could affect children's development through impacts on parents. Theoretically, access to high-quality ECE should provide children with experiences that

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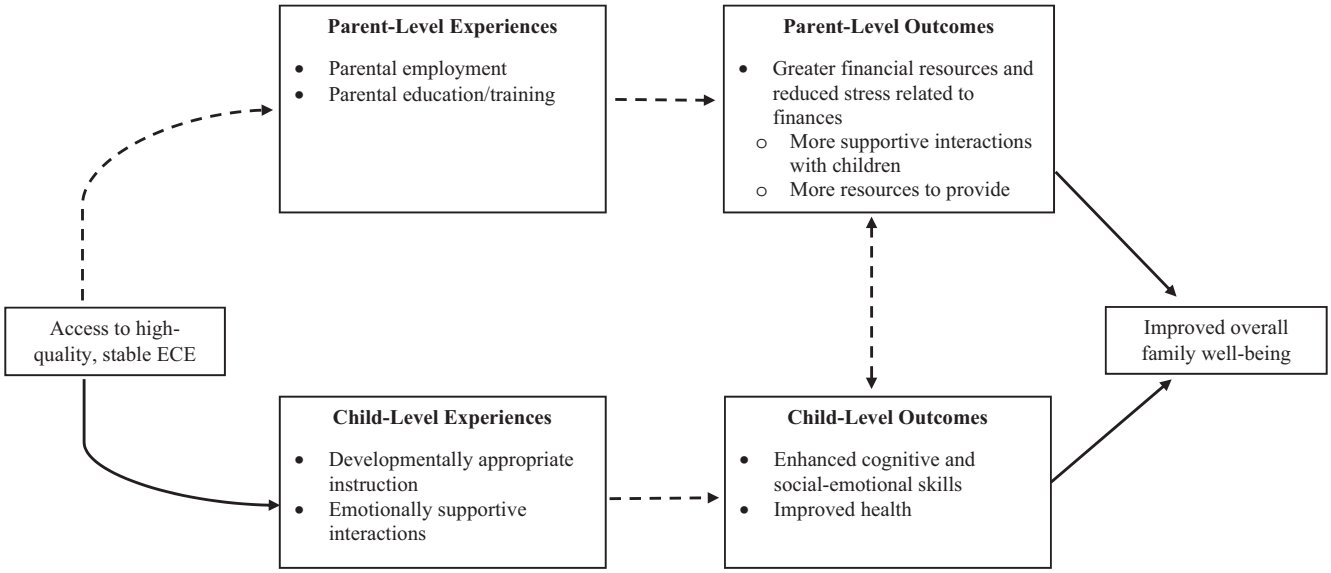

FIGURE 1 Hypothesized pathways from early care and education (ECE) to parent, child, and family well-being. *Note*: Dotted lines are hypothesized paths of indirect effects and mediators of ECE on outcomes that are of interest in developmental science. Solid lines on the right of the figure are proposed direct pathways from parent and child outcomes to family well-being.

promote their development, which in turn might evoke more stimulating and responsive interactions with parents. In contrast, access to low-quality ECE results in experiences that may impair development, especially social skills, which might elicit more punitive and harsh parenting (Gassman-Pines & Hill, 2013).

Very few studies have examined the indirect pathway (the dotted lines in Figure 1) from access to stable ECE through parents' experiences to children's outcomes. Most empirical research on parental employment has focused on parents alone and is based on economic and not developmental perspectives. Yet, most developmental research on ECE limits its focus on the impact of ECE on the child and to a lesser degree, on parenting, but does not thoroughly consider the effects of ECE on parents' employment specifically or the family system in general. A major exception is the dual developmental science framework (Sabol et al., 2021), which explicitly integrates these two direct pathways of ECE. The authors argue that the most effective way to address opportunity gaps in the United States is to provide programs that can improve educational outcomes (and employment, for parents) for both children and their parents with low incomes, often called two-g eneration programs (Chase-Lansdale & Brooks-Gunn, 2014).

RESEARCH FINDINGS ON THE PROMISE OF ECE

Scientific advances have led to evidence that early childhood is a critical period of rapid brain development that lays the foundation for subsequent learning and development, and that stimulating early experiences at this time are essential for lifelong success (National Academies of Sciences, Engineering, and Medicine, 2019; Shonkoff, 2010). The realization that intelligence and skills were malleable, and not fixed, led to the creation of Head Start in 1965, the original two-generation program, as a way to address lifelong poverty. The Perry Preschool and Abecedarian experiments and other early intervention studies from the 1960s and 1970s demonstrated that for (primarily Black) children from families with low incomes, high-quality ECE could lead to higher levels of education, employment, and health as adults (Campbell et al., 2012; Heckman et al., 2010). Subsequently, less rigorous studies suggested that infant ECE did not impair infant-mother attachment and that ECE quality improved cognitive and academic skills, and perhaps social skills (Burchinal et al., 2015).

Research on these programs contributed to policy decisions to scale up programs, especially for children from families with low incomes. Head Start, which began as a multiweek summer program, now serves 947,000 families at a cost of $9 billion (Administration for Children and Families, 2021b). The Child Care and Development Fund (CCDF) Block Grant subsidizes ECE for more than 2 million children birth to 13 years to support parents with low incomes while they work or seek additional education. CCDF originally provided funds for any care, but now has some focus on providing access to higher-quality care, at an annual cost of $10.5 billion (Administration for Children and Families, 2021a; Johnson & Ryan, 2015). State prekindergarten programs, beginning in the 1980s in a handful of states, currently serve 34% of all 4-year-olds across 44 states at a cost of $10.4 billion (Friedman-Krauss et al., 2021).

Extensive research has examined the promise of contemporary ECE programs. The most rigorous studies document modest to large short-term impacts for specific

ECE literacy, math, and social–emotional learning curricula and for the effects of Head Start and prekindergarten programs on early language and academic skills (Burchinal et al., 2015; Phillips et al., 2017). Less rigorous studies describe associations between type, quality, and quantity of care and children's early development, documenting relatively consistent modest to moderate positive associations between ECE quality and children's language and academic development, and inconsistent, modest negative associations between amount of ECE and teacher ratings of social skills (Burchinal et al., 2015).

Longitudinal studies of ECE quality (e.g., Vandell et al., 2016) and evaluations of older ECE programs provide some evidence of long-t erm impacts (Duncan & Magnuson, 2013). However, evaluations of more recent programs, while documenting immediate impacts, show substantial fadeout with either no or very modest long-t erm positive impacts (Duncan & Magnuson, 2013; Phillips & Pre-Kindergarten Task Force, 2017), and negative impacts for one program, Tennessee Voluntary Pre-K (Durkin et al., 2022). Although many hypotheses for fadeout have been proposed, maintaining early impacts may require more support from both schools and parents. Thus far, the focus has been on the level of support in the elementary schools (Bailey et al., 2020), not at home.

RESEARCH FINDINGS ON THE PURPOSE OF ECE

Surprisingly, little research has been done on how access to ECE affects families from a developmental perspective, but economists have examined impacts on maternal employment and family well-being. Rates of maternal employment rose when families were offered subsidized ECE in the United States (Herbst, 2017; Tekin, 2005), Canada (Baker et al., 2008), and low-i ncome countries (Evans et al., 2021). Similarly, a review of the literature on ECE and parental employment (Morrissey, 2017) found that as child-care costs decreased, parental employment increased. Access to subsidized ECE led to improved financial well-b eing and mental health for women in low-i ncome countries (Evans et al., 2021), but higher rates of more hostile, less consistent parenting in Quebec (Baker et al., 2008). The lack of affordable and accessible ECE extends further than employment, and has been linked with lower fertility rates and delayed childbirth (Tavernise et al., 2021).

The COVID-1 9 pandemic brought to the fore the purpose of ECE, highlighting how much more research is needed to understand the ways ECE relates to family functioning. Instantly, entire societies desperately needed caregiving for children so parents—particularly mothers—c ould remain employed. The pandemic contributed to a substantially greater drop in employment for women than for men, despite historic trends of the opposite during recessions (Albanesi & Kim, 2021). Indeed, even as more in-person workplaces open, women lag behind men in returning to work, in large part because of caregiving responsibilities (Power, 2020). Increased turnover and labor shortages due, in part, to linking caregiver wages to parent fees, have reduced ECE availability, further limiting parental, especially maternal, employment (Albanesi & Kim, 2021). Although child care access and affordability are perennial issues, the pandemic led to widespread acknowledgment that families and the economy cannot function without ECE for young children (Weiland et al., 2021).

RESEARCH FINDINGS ON BOTH THE PROMISE AND THE PURPOSE OF ECE

Most developmental research that focuses on both parent and child outcomes has involved evaluations of two-generation programs (Sabol et al., 2021; Sommer et al., 2018). Head Start is the most prominent two-generation policy initiative, with a major focus on improving parenting and providing high-quality child care, nutrition, and health surveillance, but with very limited direct parent supports. Analyses of data from the Head Start Impact Study, the most comprehensive and rigorous evaluation of the program, found that parents of children attending the program advanced their education (Sabol & Chase-Lansdale, 2015). The growth in maternal education led to increases in academic performance in first grade for children who attended Head Start, providing some evidence of longer-t erm impacts at an age when the short-term impacts of Head Start had disappeared overall (Harding, 2015).

A separate set of studies extended the welfare-to-work models to develop two-generation programs that focus on services for both parents and children from families with low incomes (Hamilton, 2002). Some welfare-to-work interventions showed short- but not long-term success by offering education and employment for parents. Programs sometimes included ECE for children as a work support but not as a means to promote child development. Their lack of success is due to many factors, including lack of attention to ECE access and quality (Chase-Lansdale & Brooks-Gunn, 2014; Sabol et al., 2021).

Newer two-generation programs take a more family-based approach, ensuring that operating hours of ECE programs match parents' working hours, parents receive training in jobs that are in demand in the community, and parents are supported through coaching. Studies of the CareerAdvance two-generation program (Head Start paired with career training in the healthcare sector), which serves families with very low incomes, found increased maternal employment in that sector, higher levels of parents' psychological well-being, and improved academic and regulatory skills among several subgroups of children (Sommer et al., 2018). These model programs are small in scale and their evaluations have focused on families with very low incomes.

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EXTENDING ECE RESEARCH TO EXAMINE THE POTENTIAL IMPACTS ON CHILDREN AND THEIR FAMILIES

In summary, developmental theories argue that ECE directly affects both children and their families, yet most developmental research has examined ECE impacts on children's outcomes without considering how access to ECE changes parental employment and well-being. A few promising but limited programs focus on providing education for both parents and children to address intergenerational poverty. Almost no research has examined how typical or business-as-usual ECE experiences that do not include enhanced family services affect both parents and children from low- and middle-class families, and the extent to which those impacts have bidirectional effects on family well-being.

Developmental researchers should consider both the purpose and the promise of ECE by paying greater attention to how ECE access, stability, and quality affect parent and family outcomes, processes, and mechanisms, and how these downstream cascades influence short- and long-t erm child development, as shown in Figure 1. Indeed, the extent to which ECE has intermediate or long-term effects on children may be a function of ECE's impacts on parents and the family system through ECE access, affordability, and quality. Next, we make recommendations for practice, policy, and research.

With respect to ECE policy and practice, greater attention is needed to ensure that ECE settings are addressing the need for care while parents work and attend school, especially in publicly funded programs. Ideally, ECE programs should provide full-day care (i.e., 8–9 hours/day) to facilitate parents' employment. Most community-based ECE programs, paid for by parent fees and combined with other sources like CCDF subsidies, revolve around this purpose and provide full-day care because that is what parents need. In contrast, most publicly funded programs are part-day or operate during school hours only, with limited options for before- and after-school care, and with transitions that may be developmentally inappropriate for young children.

Enrollment in these programs is likely constrained by the lack of services that match parents' working hours, especially among the many (30 of 62) prekindergarten programs in states and localities that offer only part-time care (Friedman-Krauss et al., 2021). While some publicly funded programs blend funding (e.g., 3 hours of pre-K + 3 hours of Head Start + 3 hours of CCDF services; Chaudry & Datta, 2017), Head Start and most prekindergarten programs consider school schedules (e.g., 8 a.m. to 3 p.m.) as a full-day program. Thus, parents working traditional 9-to-5 jobs must scramble to find afternoon care when their children attend these programs. Neither community nor publicly funded programs typically provide coverage for parents working evening or weekend shifts or parents who have irregular schedules. This reality underscores the importance of determining how ECE can influence parent-level experiences, which may affect parents', children's, and families' well-being.

Developmental scientists should expand the scope of their research agendas in terms of hypotheses, data collection, and analyses to examine the direct effects of ECE programs on children *and* their parents, indirect impacts on family systems, and bidirectional relations of parents and children enrolled in ECE. Interdisciplinary teams, including psychologists, educators, economists, sociologists, and health professionals, have made major contributions to ECE research (Burchinal et al., 2015), and it is important to continue this tradition to ensure that the depth of theory and measurement are paired with methodological rigor. Through routine data collection, researchers should continue documenting the quality of ECE experiences, expanding their work to include the extent to which the services facilitate parents' employment and families' well-being. Building on the work of others (Sabol et al., 2021), we suggest incorporating the elements shown in Table 1 to routine data collection in ECE research studies. This is not an exhaustive list, and we anticipate researchers will add elements to future

TABLE 1 Possible data elements to include in studies of early care and education (ECE) and family well-being

Topic	Data elements
Dimensions of ECE setting	• Hours of operation in regular settings and in wraparound programs, including offering nontraditional hours of care • Quality of care received using multiple indicators, including direct observations • Capacity (e.g., quality, staffing, activities/curriculum) of wraparound programs • Parents' satisfaction with hours of program • Number of teacher work days • Opportunities for direct family engagement and access/referral to direct family supports and services
Dimensions of family processes and well-being	• Parental preferences regarding parents' employment and type and hours of ECE • Parents' employment hours and occupation • Parents' additional education or training opportunities received • Parents' well-being (e.g., stress levels, depression, anxiety, happiness, perceived social supports available) • Parenting behaviors, including cognitively stimulating activities, and emotional support provided to children

studies to investigate bidirectional relations more comprehensively based on developmental theories.

Finally, methodological considerations for such a research agenda include identifying the analytic methods that can examine longitudinal bidirectional associations and indirect pathways. For example, children with more advanced academic or social skills acquired through child care may need more advanced scaffolding for learning, and parents who are less stressed financially may be able to spend more time with and money on their children. Also, researchers should ensure that study designs involve sufficient numbers of ECE settings and children and their families to support using such analytic methods. Determining bidirectional, longitudinal associations is an ambitious but necessary goal to understand more fully how ECE experiences can fulfill the original purpose and promise of care (Sabol et al., 2021).

CONCLUSION

Both child care and early childhood education have a long history in the policies that drive what we now call ECE. Traditionally, parents purchased community-based ECE to work or attend school, whereas publicly funded ECE was designed to promote school-entry skills primarily for socially disadvantaged children. Both aims are supported through different systems that function for different purposes, but their complex and increasingly interrelated funding strategies often support the same child care providers.

Developmental theories and empirical studies suggest that ECE can promote parental well-being through stable employment and enhanced financial resources, in addition to child development through enriching experiences in the ECE setting, and indirect bidirectional impacts between child and family well-being. Developmental researchers are well suited to thoroughly investigate and document the direct and indirect impacts of ECE on both parents and children. Results from such studies can be used to inform a policy environment in which both aims are pursued with equal importance.

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