Chapter 6

Program Development, Assessment, and Evaluation in Early Childhood Care and Education

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ABSTRACT

Early childhood years are a fundamental period of development in human lifespan. Infant and toddler care programs, early childhood education services, after-school care programs, and parenting programs are foundational in the physical, cognitive, and socioemotional development of children. Development of quality early childhood programs can be realized through consideration of various elements of quality. Early childhood care and education (ECCE) program designers should aim to develop safe, healthy, responsive, engaging, and developmentally appropriate programs. Program curriculum, which takes place at the heart of program development, should also be responsive to children’s needs and interests to construct meaningful, age-appropriate, and play-based learning experiences. Ongoing assessment and evaluation are integral part of quality ECCE program development. Early childhood assessment consists of child-level and program-level assessments. Assessment of children’s developmental outcomes and program environmental characteristics play key roles in the development and evaluation of ECCE programs. Even though there are many available tools of assessment, common features of quality assessments include reliability, validity, purposefulness, and universality. Evaluation of early childhood programs makes use of different methodologies designed to study program process, outcome, impact, and cost-benefit. Development of quality early childhood care and education programs need systematic planning, implementation, and monitoring through the use of quality assessment and evaluation methodologies. This chapter provides a synthesis of the current state of knowledge in program development, assessment, and evaluation in early care and education based on high quality research studies coming from a variety of fields.
INTRODUCTION

Early childhood years offer a tremendous potential for lifelong human development. Development of the brain and the nervous system, which is critical for learning and development, takes place at an immense speed during the first three years of life. Neural connections for sensory, linguistic, and cognitive functions are organized through interactive relationship between genes and early experiences. All domains of development, physical, neural, cognitive, linguistic, personality, social, and emotional development are tied to one another across lifespan development. Plasticity of the brain and the flexibility of development, in general, decrease with age. Therefore, children’s early environments and experiences carry a foundational basis for their later development.

Early care and education provided during early years can have long lasting influences on all domains of human development. Infants and toddlers from low socioeconomic backgrounds who received quality child care were found to have better cognitive, linguistic, and social-emotional development in elementary school and even high school (NICHD Early Child Care Research Network, 2006; Vandell et al., 2010). Longitudinal studies show that children who attend high quality early care and education programs attain better developmental outcomes across their lifespan. In a study where children attending early educational intervention during preschool and primary grades were tracked for their adult life outcomes, they were found to have better academic skill scores, more years of completed education, and lower levels of teen- aged pregnancy and marijuana use in their young adulthood (Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, 2002). In similar projects, a publicly funded early intervention starting in preschool up to 6 years of service was associated with higher levels of educational accomplishment, earnings, health insurance coverage, and socioeconomic status, as well as lower levels of criminal justice and substance use problems in adult years of participating children (Reynolds, Temple, Ou, Arteaga, & White, 2011; Schweinhart et al., 2005).

Quality care and education is instrumental in fostering positive development of not only individuals but also communities and the society at large. Quality early care and education interventions can be used as protective environments for children at high-poverty neighborhoods (Institute of Medicine, 2000). Through its transformative power on children, families, and the communities, early education programs have a potential to support sustainable societal development across the world (Samuelsson & Kaga, 2008). Investments in early childhood care and education are also valuable for reducing conflict and violence in different levels of developmental ecology by promoting citizenship engagement and peace (National Academies of Sciences, Engineering, and Medicine, 2016a).

In order to reap the beneficial outcomes of early care and education, services should be delivered to targeted populations at the right time. Timing, dosage, intensity, and scope of early childhood services must be carefully planned for the best outcomes and impact. The development and evaluation of quality education programs require a detailed and systematic planning, implementation, monitoring, and assessment. Throughout this chapter, science and practice of program development, assessment, and evaluation in early care and education will be reviewed based on key publications in the field. In the next section, definitions of the basic terms will be provided to lay a common ground of reference.

Definitions

Early childhood care and education (ECCE) is an array of services that provide targeted early intervention for the learning and development of children from birth to school-age years (New & Cochran, 2007).