One

OVERVIEW OF INFANT, TODDLER, AND PRESCHOOL ASSESSMENT[1]

An ounce of prevention is worth a pound of cure.
Benjamin Franklin

It is important to have a context from which to understand the focus of this volume, which is infant, toddler, and preschool assessment. As such, we begin this volume with the rationale for and importance of early childhood assessment followed by a brief history of infant, toddler, and preschool assessment using several sources of information, including Alfonso et al. (2022), Alfonso, Bracken, et al. (2020), Alfonso, Engler, et al. (2020, 2024), Alfonso, Ruby, et al. (2020), Black and Matula (2000), Goodman (1990), Kelley and Surbeck (2007), and Nagle et al. (2020). Additionally, Sattler (2018) has a very useful summary of the historical milestones in intellectual and developmental assessment.

The interested reader is encouraged to review these sources as well as others, including Chapters 3 and 6 in this volume, to gain a thorough understanding of the history of infant, toddler, and preschool assessment. We begin the chapter by providing a rationale for the importance of early childhood assessment and intervention. Then we provide information on relevant law and advocacy for the assessment of young children. At the end of the chapter, we provide a brief annotated bibliography and a list of early childhood

[1] Portions of this chapter were adapted or reproduced with permission from Alfonso et al. (2022). *Essentials of Bayley-4 assessment*. John Wiley & Sons.

Essentials of Assessing Infants, Toddlers, and Preschoolers, First Edition.
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resources for further learning. Finally, the Appendix summarizes infant, toddler, and preschool measures by domain and age as a resource for practitioners working with young children. Throughout this volume, we use various terms relevant to the assessment of young children. See Rapid Reference 1.1 for a definition of the most relevant terms.

Rapid Reference 1.1 Key Definitions

Assessment	The process of gathering data to inform decision-making
Evaluation	The interpretation of assessment data to inform decision-making
Measure/Test	A specific assessment tool used for an evaluation of a young child

RATIONALE FOR AND IMPORTANCE OF EARLY CHILDHOOD ASSESSMENT AND INTERVENTION

In this section, we discuss the rationale for and importance of early childhood assessment, highlighting the following: (1) nurturing the youngest of the species, (2) incidence and prevalence of early childhood disorders, (3) effectiveness of early childhood education and intervention, and (4) the use of technology in the delivery of early childhood health services. Although space limitations preclude a lengthy discussion of these topics, our goal is to provide enough scientifically based knowledge so the reader understands the need for and benefits of early childhood assessment and intervention.

Nurturing the Youngest of the Species

Most, if not all animals, in the animal kingdom protect and nurture the youngest of their species, at least until they can care for themselves. Popular television shows such as *Earth Odyssey* (2019-present), *Wild Child* (2021-present), Jack Hanna's *Into the Wild* (2007-2020), and many others fascinate children and adults alike as they learn about survival in the wild and how young animals are raised by their adult parents. In 2005, the movie *March of the Penguins* was released to critical acclaim, and

we learned how adult male and female emperor penguins share the responsibility of raising their young.

Despite some evidence to the contrary, such as mass shootings of children in the United States and war-torn countries where children are inexplicable casualties, adult male and female human beings (i.e., *homo sapiens*) nurture their children with great care and love at least until age 18 years when they become legal adults. Indeed, *homo sapiens* are members of the animal kingdom and as such, share many of the characteristics of other animals. For example, the famous zoologist Desmond Morris wrote extensively in *The Naked Ape* (1967) on how *homo sapiens* are like other great apes (i.e., primates) in their care for the young. Most of us are also familiar with another ethologist, Jane Goodall, who studied chimpanzees' social and family interactions for more than six decades.

The work of several psychologists such as John Bowlby (e.g., 1988), Mary Ainsworth et al. (e.g., 1978), and Harry Harlow (e.g., 1958), to name a few, influenced our thinking of attachment, the parent–child bond, and the importance of healthy early child development for success later in life. Although some researchers and scholars question the influence of or need for parents in children's lives (e.g., Harris, 2000), most believe that parents (or at least loving, nurturing adults) are important influences in a young child's life (see, e.g., Bronfenbrenner, 1977, 1986; Bronfenbrenner & Morris, 2006; Collins et al., 2000; Davis-Kean et al., 2021; National Academies of Sciences, Engineering, and Medicine, 2016; Wilder, 2014).

In addition to parents or primary caregivers, there are many other influences on young children's development sometimes referred to as spheres of influence. Some of these spheres include friendships (e.g., Harris, 2000), extended family members such as grandparents (e.g., Mayer, 2002), immediate physical context (e.g., Evans, 2021), environmental factors such as national and world climate change and toxins (e.g., Koger et al., 2005; Vergunst & Berry, 2022), and socioeconomics including financial and other resources (e.g., Aber et al., 1997; Aboud & Yousafzai, 2015; Brooks-Gunn & Duncan, 1997; Chen, 2012; Evans, 2004; Evans & Cassells, 2014; Evans & Kim, 2013; Evans et al., 2013; Fernald et al., 2009; Frankenhuis & Nettle, 2020; Maholmes & King, 2012; McLoyd, 1998; The World Bank, 2015). Later in this chapter, we address the importance of early childhood assessment and intervention as they relate to some of the influences stated here.

Before we turn to the incidence and prevalence of early childhood disorders, it is worth noting the mounting evidence contrary to John Locke's concept of

the young child as a *blank slate* (1690/1947). Today we know and every year we learn more about the capabilities of infants, toddlers, and preschoolers (see, e.g., Feldman, 2019 and Pinker, 2002). Once thought of as organisms upon which the world shapes and influences them in a unidirectional manner, we have learned how capable these youngest members of the species are as well as how they shape and influence adults in their lives. For example, de Barbaro and Fausey (2022) described a study that involved infants wearing audio recorders, accelerometers, and cameras to capture their experiences in everyday life. These researchers concluded that "The striking heterogeneity of experiences—the fact that there is no meaningfully 'representative' hour of a day, instance of a category, interaction context, or infant—inspires next steps in theory and practice that embrace the complex, dynamic, and multiple pathways of human development" (p. 28).

DON'T FORGET 1.1

In addition to parents or primary caregivers, there are many other influences on young children's development, sometimes referred to as spheres of influence.

Indeed, human development is complex and dynamic and includes multiple pathways. Recent research in fields of study such as biology, cognitive science, medical physics, neuroanatomy, neuropsychology, obstetrics, and others indicate this clearly (e.g., Adolph, 2019; Aylward, 2020; Cesario et al., 2020; DiPietro, 2000; Glynn & Sandman, 2011; Lee et al., 2018; Perone et al., 2021; Reid & Dunn, 2021; Romeo et al. 2018; UNICEF, 2017). It is incumbent upon early childhood practitioners to engage in professional development activities such as attending conferences, viewing webinars, reading articles in a variety of fields, and consulting with other professionals to remain abreast of the myriad advances we know about young children's capabilities and the influences on early childhood development. We turn now to the incidence and prevalence of early childhood disorders and disability categories.

Incidence and Prevalence of Early Childhood Disorders and Disability Categories

There are dozens, if not hundreds, of early childhood disorders depending on what source or diagnostic/classification system the practitioner uses. The three most common diagnostic/classification systems are the *Individuals with*

Disabilities Education Improvement Act (IDEA, 2004)[2], the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision* (DSM-5, TR; American Psychiatric Association [APA], 2022), and *International Classification of Diseases, Tenth Edition* (IDC-10; World Health Organization [WHO], 2016). Practitioners working in early childhood educational settings use IDEA as their classification system or guide when determining eligibility for early intervention or special education services because it is tied to government early intervention funding and other resources and is the model to be used in public education settings. That said, there is almost no one-to-one correspondence between disability categories found in IDEA and disorders found in the DSM-5-TR or ICD-10.

CAUTION 1.1

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As such, we discuss the disability categories found in Parts B and C of IDEA. These disability categories or types are applicable to children ages 3–5 years (Part B) and children ages birth to 2 years (Part C)[3]. Rapid Reference 1.2 includes the 13 disability categories for individuals ages 3–21 years (which, of course, includes children ages 3–5 years). It is important to note that states also have the option of classifying a young child, including those between 3 and 5 years, as a child with a developmental delay rather than using the discreet disability categories found in Rapid Reference 1.2 (Danaher, 2011). Although this modification to IDEA was well-received in the early childhood community, it made the task of counting children under the 13 disability categories very challenging. Moreover, unlike preschool children with disabilities served in Part B of IDEA, children in early intervention (Part C) are not classified by their disability category or type. They are classified as having an established condition or developmental delay (McWilliam, 2016).

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[2] Throughout this volume, we refer to the *Individuals with Disabilities Education Improvement Act* of 2004 as IDEA since this acronym has persisted in within schools and in the literature.

[3] Chapter 5 addresses other classifying conditions or disorders that could fall under one of the IDEA classification conditions. For example, young children with Down Syndrome have an intellectual disability and would most likely be served under the classification of *intellectual disability* in IDEA.

Boyle et al. (2011) determined the prevalence of developmental disabilities in children in the United States and in selected populations from 1997 to 2008. Although they included individuals between ages 3 and 17, they concluded that the prevalence of any developmental disability increased from 12.84% to 15.04% over the 12-year period. Autism, attention deficit hyperactivity disorder, and other developmental delays increased, whereas hearing loss showed a significant decline. These trends were found in all sociodemographic subgroups, except for autism in non-Hispanic black children.

Rapid Reference 1.2 Thirteen IDEA Disability Categories Applicable for Children Ages 3–5 Years

- Deaf Blindness
- Traumatic Brain Injury
- Visual Impairment
- Emotional Disturbance
- Orthopedic Impairment
- Multiple Disabilities
- Hearing Impairment
- Specific Learning Disability
- Intellectual Disability
- Other Health Impairment
- Autism
- Developmental Delay
- Speech or Language Impairment

The United States Department of Education (USDOE) provided data on the number of 3–5-year-old children with disabilities served under IDEA, Part B, from 2010 to 2018 (USDOE, 2020b). For example, in 2010, nearly 179,000 3-year-olds were served, while in the same year, nearly 263,000 and 297,000 4 and 5-year-olds, respectively, were served. Seven years later in 2018, the respective numbers were 192,000, 283,000, and 339,000. As can

be seen in these numbers, more children at each age were served in 2018 than in 2010. In 2018–2019, 6.75% of 3–5-year-olds in the United States were served under Part B of IDEA. An additional percentage of interest in 2018–2019 is that 8.43% of students with disabilities, aged 3 through 5, were English Learners. Rapid Reference 1.3 includes the 13 disability categories for individuals ages 3–5 years along with the corresponding number of children served in each category for the year 2018–2019.

Rapid Reference 1.3 Thirteen IDEA Disability Categories Applicable to Children Ages 3–5 Years and Number of Children Served in Each Category in 2018–2019

- Deaf Blindness – 181
- Traumatic Brain Injury – 1,158
- Visual Impairment – 2,697
- Emotional Disturbance – 2,882
- Orthopedic Impairment – 5,111
- Multiple Disabilities – 7,702
- Hearing Impairment – 8,865
- Specific Learning Disability – 8,909
- Intellectual Disability – 13,369
- Other Health Impairment – 26,104
- Autism – 92,990
- Developmental Delay – 307,335
- Speech or Language Impairment – 337,707

Source: Adapted from U.S. Department of Education, EDFacts Data Warehouse (EDW): "IDEA Part B Child Count and Educational Environments Collection," 2018–2019. http://go.usa.gov/xdp4T.

According to the USDOE Office of Special Education Programs, the number of children receiving services under Part C of IDEA rose from 194,000 in 2010 to more than 400,000 in 2022 (USDOE, 2020a). The amount of money in millions of dollars rose from 117 in 1991 to

nearly 500 in 2022. Finally, the amount of dollars per child increased from 603 in 1991 to more than 1200 in 2022 (ECTA, 2024). These data indicate clearly that the USDOE recognizes young children (birth to 2 years) at risk for developmental delay and is allocating much-needed financial resources to support their success. It is important to note, however, that these data reflect the number of children receiving services. Some researchers indicate there are many more children in this age range who are eligible for services, but for many reasons, are not receiving them (e.g., Barger et al., 2018; Rosenberg et al., 2008; Twardzik et al., 2017).

CAUTION 1.2

There are many more young children (birth to 2 years) who are eligible for services, but for many reasons, are not receiving them.

If we believe as a species that we should be caring for our young and that the number of young children (birth to 5 years) eligible for early childhood intervention services is increasing each year due, in part, to the child find element in IDEA, it seems reasonable to ask if early childhood education and intervention are effective. We turn to this topic next but offer here a resounding answer of *yes* as the data in support of the effectiveness of early childhood education and intervention are nearly indisputable.

Effectiveness of Early Childhood Education and Early Intervention

There are few guarantees in life and perhaps even fewer facts or truths in psychology or education. However, in the past several decades research via a myriad of studies has demonstrated the benefits of early childhood education and early intervention (Alfonso, Ruby, et al., 2020; Avellar et al., 2013; Guralnick, 1997; Hebbeler et al., 2007; Hughes & Quinn, 2020; Karoly et al., 2001, 2005; Raines et al., 2020; Ramey & Ramey, 1998, 2004; Ramey et al., 2014; Redden et al., 1999, 2001; Schweinhart & Weikart, 1998; Trohanis, 2008; Zigler & Muenchow, 1992). For example, there is substantial agreement that high-quality early intervention programs for vulnerable infants and toddlers can reduce the incidence of future problems in their learning, behavior, and health status and that intervention is likely to be more effective and less costly when it is provided earlier in life rather than later (Center on the Developing Child at Harvard University, 2008, 2010; National Early Childhood Technical Assistance Center, 2011). Moreover,

these facts or truths seem to resonate with individuals from all walks of life, political parties, and professions who engage in working with young children (e.g., Division for Early Childhood [DEC] of the Council for Exceptional Children, 2014; National Association for the Education of Young Children [NAEYC], 2020; National Association of School Psychologists, 2015; Public Laws 99–457, 101–476, 105-17, and 108–446).

Bann et al. (2016) demonstrated that early intervention altered trajectories of cognitive development among children from disadvantaged backgrounds. That is, children from low-resource families receiving a home-based intervention focused on motor, social, and language development, had 36-month cognitive development scores statistically indistinguishable from those of children from high-resource families. Litt et al. (2018) found that early intervention services improved school-age functional outcomes among neonatal intensive care unit graduates, and Noyes-Grosser et al. (2018) demonstrated that children with autism spectrum disorder showed reduced maladaptive behaviors and improved social and communication skills and some also made progress on IDEA Part C child outcome indicators. In addition, families of children with autism spectrum disorder reported that early intervention helped them achieve many outcomes identified as important to them.

Two early childhood programs or projects deserve special mention here: The High/Scope Perry Preschool Project (Schweinhart et al., 2005; Weikart, 1967, 1970) and The Carolina Abecedarian Project/Approach (Ramey & Campbell, 1984; Ramey & Ramey, 1999; Ramey et al., 1976, 1981, 1985, 2012, 2014). The High/Scope Perry Preschool Project was a scientific experiment in Ypsilanti, Michigan, for young children to help them avoid school failure and many other challenges. It identified the short- and long-term effects of a high-quality preschool education program for young children living in poverty from 1962 through 1967. One hundred twenty-three African American children were determined to be at high risk for school failure as indicated by socioeconomic and standardized assessment measures. Fifty-eight were assigned to a program group that received a high-quality preschool program at ages 3 and 4 years, and 65 of them were assigned to another group that received no preschool program. All children were randomly assigned and as such, most scholars and researchers believe it was the children's preschool experience that explained the group differences in education, income, crime, family relationships, and health. That is, the experimental group (those children who received the preschool program) outperformed the control group (those children who did not receive the preschool program)

on each of these variables. The children (now adults) have been followed for decades with a missing data rate of only 6% across all measures.

The Carolina Abecedarian Project was like the High/Scope Perry Preschool Project in that its aim was to alter the life trajectory of young children from low-resource environments by providing them with high-quality early education. One hundred eleven infants from low-resource families participated with 57 receiving high-quality early childhood education and 54 receiving supports (e.g., social services, health care), but no high-quality education. Specifically, in the Carolina Abecedarian Project.

"Control groups of children who did not receive the Abecedarian Approach received the same levels of support as the educationally treated children for additional health care, free and unlimited nutritional supports, and active social work services to the families, as well as timely referrals when any problems were detected or suspected. Because the control groups received these multiple supports, the research findings provided a strong basis for concluding that it was the educational features of the Abecedarian Approach that produced the documented differences between the children in the experimental groups and the comparison groups . . ." (Ramey et al., 2014, p. 441).

As with the High/Scope Perry Preschool Project, there have been several follow-up studies with the original Carolina Abecedarian Project participants into adulthood. Once again, those children (now adults) who received the high-quality early childhood educational experience demonstrated significant differences (i.e., higher or better) in cognitive functioning, academic skills, educational attainment, employment, parenthood, and social adjustment (Campbell & Ramey, 1994; Campbell et al., 2001, 2002). According to Ramey et al. (2014),

"The issue of efficacy of early childhood education for high-risk children is settled. Yes, we can prevent a great deal of developmental delay. For us, the most pressing questions in early childhood education now become: (1) comparative efficacy of different early childhood programs, (2) differential response to treatment, (3) scale-up of effective programs, and (4) standards for programs aimed at preventing developmental delay. It feels good to move beyond the efficacy issue that dominated thinking about early childhood education for half a century" (p. 468).

DON'T FORGET 1.2

The data in support of the effectiveness of early childhood education and intervention are nearly indisputable.

The importance of early childhood education and early intervention as explicated above, together with major advances in prenatal care, pediatric medicine, neuropsychology, and neuroimaging, have highlighted the need for reliable and valid assessment of infants, toddlers, and preschoolers (e.g., Aylward, 2010, 2020; Brito, Fifer et al., 2019; Kelley & Surbeck, 2007; McCloskey et al., 2020; Snow & Van Hemel, 2008). Many scholars, researchers, practitioners, and organizations believe there are several purposes of infant, toddler, and preschool assessment. For example, Nagle et al. (2020) integrated other sources such as NAEYC, DEC, and individual scholarly works to summarize the major purposes, which they state are the following: (1) screening, (2) diagnosis and eligibility determination, (3) individual program planning and monitoring, and (4) program evaluation.

Typical domains of development requiring assessment include cognitive abilities and processes, motor skills, speech and language skills, social–emotional behavior, and adaptive behavior (Alfonso, Bracken, et al., 2020; Alfonso, Engler, et al., 2020; Bellman et al., 2013; Brassard & Boehm, 2007; NAEYC, 2020; Snow & Van Hemel 2008). Additional assessment domains include intrauterine (prenatal and perinatal), physical, parenting, parenting stress, and play. Play is particularly important to assess as there is ample evidence regarding the benefits of play on the young child's developing brain, social interactions, and cognitive functioning (e.g., Kelly-Vance & Ryalls, 2020).

Many domains of functioning are assessed with developmental measures such as the Bayley Scales of Infant and Toddler Development, Fourth Edition (Bayley–4; Bayley & Aylward, 2019). For example, Alfonso et al. (2022) state that the Bayley–4 may be used for the following purposes: (1) to identify children with developmental delay, (2) research related to individual program planning and monitoring and program evaluation, and (3) to monitor a child's developmental progress. The Appendix provides a summary of infant, toddler, and preschool measures by domain and age as a resource for practitioners working with young children. The last topic in this section is the burgeoning use of technology in the delivery of early childhood health services.

DON'T FORGET 1.3

Typical domains of development requiring assessment include cognitive abilities and processes, motor skills, speech and language skills, social–emotional behavior, and adaptive behavior.

Use of Technology in the Delivery of Early Childhood Health Services

Given the need to provide early childhood assessment and intervention services to young children as soon as possible, especially for those living in rural areas, the use of technology is becoming an efficient and effective means of delivering these services. For example, Meadan and Daczewitz (2015) described internet-based intervention training for parents of young children with disabilities as a promising service-delivery model. Indeed, although the COVID-19 pandemic had a profound effect on the use of technology in the delivery of early childhood services, including assessment and intervention, teleassessment, telepractice, and telehealth were occurring at least a decade prior or even earlier. For example, Behl et al. (2010) wrote about tele-intervention as the wave of the future that was already in use with children and families where a child had hearing loss. In addition, these authors stated, "Many agencies within the United States are using telehealth practices to conduct hearing evaluations on infants who do not pass their newborn hearing screening test" (p. 28). Several years later, Behl et al. (2017) demonstrated the effectiveness of telepractice as a method of delivering early intervention services to families of infants and toddlers who are deaf or hard of hearing. Baharav and Reiser (2010) discussed the use of telepractice in parent training in early autism. They noted several benefits, including treatment effectiveness, adaptability to technology, and client satisfaction with the service.

Still prior to COVID-19, the state of Colorado began allowing the use of telehealth as an option for providers to conduct sessions with children and their caregivers in their Part C early intervention programming (Cole et al., 2019). Sutherland et al. (2018) reported a summary of studies of 284 individuals, ages 19 months to adult, with autism spectrum disorder who received a variety of telehealth services. Their results suggested "that services delivered via telehealth were equivalent to services delivered face to face, and superior to comparison groups without telehealth sessions" (p. 324). There have been studies and reports on the delivery of telehealth services for individuals across the lifespan, including young children, that took place during COVID-19. For example, Andrews et al. (2020) conducted an integrative review of 18 studies that examined health care providers' and patient satisfaction with telehealth services during COVID-19. They found high levels of satisfaction for patients and health care providers,

and many were willing to continue telehealth after the pandemic. In Ore's (2021) review on the effectiveness of telehealth for children with autism spectrum disorder during COVID-19, he concluded, "Evidence from the review indicates that telehealth can be an alternative to face-to-face cognitive assessment. Telehealth may present a feasible and reliable approach to the assessment of language for children with autism spectrum disorders in some circumstances as a primary or adjunct service model" (p. 3).

The interested practitioner may find additional publications worth reading as this section simply touched upon the evidence indicating that telehealth is an effective delivery model for early childhood services. For example, the American Academy of Pediatrics (2020) discusses what is pediatric telehealth, Frye et al. (2022) discusses the implementation of telehealth during COVID-19 as well as implications for providing behavioral health services to pediatric patients, and Atiles et al. (2021) reports on challenges faced by international early childhood professionals during COVID-19. Chapter 7 of this volume expands the discussion of the use of technology in the delivery of early childhood services. Now we turn to a brief history of infant, toddler, and preschool assessment.

BRIEF HISTORY OF INFANT, TODDLER, AND PRESCHOOL ASSESSMENT

Although it may seem that early childhood assessment has been a common practice for centuries, it is only about 200 years old (Kelley & Surbeck, 2007). Influences on early childhood assessment include dozens of individuals, but a few are worth mentioning by name. For example, the precursor to early childhood assessment and developmental psychology may be attributed to the naturalistic observations of Johann Heinrich Pestalozzi in the 18th century and G. Stanley Hall, who is regarded as the father of developmental psychology and was the first president of the American Psychological Association (APA; Black & Matula, 2000). In the latter part of the 19th century, Sir Francis Galton, a cousin to Charles Darwin, constructed "tests of memory, motor, and sensory functions to differentiate between high and low achievers" (Kelley & Surbeck, 2007, p. 4). As a result, Galton became known as the father of mental testing.

Perhaps the most famous early contributor to the practice of early childhood assessment, especially the assessment of mental ability or intelligence,

was Alfred Binet, who with Theodore Simon, created the Binet-Simon Scale for measuring the intelligence of school children (Binet & Simon, 1905). It was translated to English from French by Henry Goddard (a student of G. Stanley Hall), who also believed in the importance of early diagnosis, systematic testing, and special placements for school-aged students who evidenced learning difficulties (Kelley & Surbeck, 2007). The Binet-Simon Scale became the template for most, if not all, intelligence, and cognitive batteries to the present day.

The child study movement of the early 1900s, which saw a proliferation of funding, studies, and assessments of school-aged children focusing on intelligence, memory, perception, emotion, personality, and motivation, influenced early childhood psychologists to begin paying attention to infants, toddlers, and preschoolers (Black & Matula, 2000; Kelley & Surbeck, 2007). Among the most famous and influential early childhood (infant) psychologists was Arnold Gesell, who was also a pediatrician by training. Some refer to him as the grandfather of infant assessment (Goodman, 1990). According to Black and Matula (2000), Gesell, who was greatly influenced by Charles Darwin, "compiled a schedule of tasks for infants 4, 6, 9, 12, and 18 months of age and 2, 3, 4, and 5 years of age" (Gesell, 1925, p. 3). These Developmental Schedules continued to be used for decades in various circles, especially by medical personnel (Goodman, 1990), and influenced the first infant intelligence tests such as the Cattell Infant Intelligence Scale (Cattell, 1940), Griffiths Mental Development Scale for Testing Babies from Birth to Two Years (Griffiths, 1951), and Bayley Scales of Infant Development (Bayley, 1969). Black and Matula (2000) state, "These early assessments were designed to catalog an infant's level of development at various ages and to establish normative data" (p. 4). Unfortunately, they did not predict future functioning as many thought they would, which called into question their utility (Goodman, 1990).

In the past 50 years, several factors or variables have influenced the importance of early childhood assessment as well as the proliferation of measures or instruments to accomplish the task of reliable and valid assessment. Perhaps the most salient are the following cited by Black and Matula (2000): (1) many premature and medically vulnerable infants are surviving, which typically necessitates assessment, (2) infant assessments are needed to determine if infants are developing at an expected rate or evidencing a developmental delay, (3) whether young children meet the criteria for early

intervention services, and (4) whether early intervention is effective in improving their rate of development. Additional factors that continue to influence the importance of early childhood assessment are law and advocacy that are discussed next.

DON'T FORGET 1.4

In the past 50 years, several factors or variables have influenced the importance of early childhood assessment as well as the proliferation of measures or instruments to accomplish the task of reliable and valid assessment.

LAW AND ADVOCACY

Earlier in this chapter, we discussed the effectiveness of early childhood education and intervention as an important rationale for early childhood assessment and corresponding intervention. Concomitant with the body of evidence in support of early childhood education and assessment is the increasingly greater focus of legislation and policy on assessing young children (Alfonso et al., 2024). Typically, practitioners assess young children suspected of having a developmental delay or a specific disorder (e.g., autism and intellectual disability). However, there is ample enthusiasm around universal pre-k, full-day kindergarten, and early childhood screening as means of prevention and promotion of success in the early grades.

Early Childhood Assessment and Intervention Public Laws

In 1986, Congress passed the 1986 amendment (PL 99–457) to the Education for all Handicapped Children Act (PL 94–142, 1975). This law extended downward the rights and provisions of school-aged children with disabilities to children from 3 to 5 years of age, as well as infants and toddlers who were at risk for developmental delay. When Congress reauthorized PL 94–142 in 1990, it renamed it the Individuals with Disabilities Education Act (IDEA) known as PL 108–446. It was again reauthorized in 2004 as the Individuals with Disabilities Education Improvement Act, but it continues to be known as IDEA. As stated earlier in this chapter Part B, Section 619 of IDEA includes amendments such as ensuring free and appropriate special education services for preschoolers aged 3–5 years and allows individual states to use a broad definition of disability for children 3–9 years of age using the term "developmental delay" to identify a child who is experiencing delays in

one or more areas of development. Areas of delay include physical, cognitive, communication, social or emotional, and/or adaptive behavior domains.

Part C of IDEA included incentives for states to develop and provide comprehensive early intervention services for infants and toddlers with disabilities and their families. These young children demonstrate developmental delays or have diagnosed conditions with a high probability of resulting in developmental delay (Alfonso et al., 2024). The IDEA also included more language and emphasis on transitional services from Part C to Part B and a focus on scientifically based academic and behavioral interventions, including early literacy interventions (Alfonso et al., 2024; McBride et al., 2011; McWilliam, 2016). Part C also mandated a multidisciplinary assessment of the infant or toddler's strengths and weaknesses as well as family-directed assessment, "or an understanding of the resources, priorities, and concerns of the family as well as the identification of the supports and services necessary in order to help the family meet the developmental needs of the infant and toddler" (Alfonso et al., 2024).

Early childhood practitioners also engage in assessment to ensure academic success, even when there is no suspected developmental delay or diagnosable condition. For example, in 2015, the No Child Left Behind Act (NCLB; PL 107–110) was replaced by the Every Student Succeeds Act (ESSA) or PL 114-95. The purpose of the ESSA was to expand access to high-quality early learning so that every child begins kindergarten ready to learn and "to provide all children significant opportunity to receive a fair, equitable, and high-quality education, and to close educational achievement gaps" (Sec. 1001) (Alfonso et al., 2024). ESSA includes funds dedicated to improving the coordination, quality, and access to early childhood education. As such, school or academic readiness once again became familiar terms in the education law, and advocacy literatures. Concomitantly, there has been an increase in publicly funded preschool programs and assessment has been used to demonstrate accountability for various programs (Alfonso et al., 2024; Alfonso, Ruby, et al., 2020).

Head Start and Early Head Start

We would be remiss if we did not write about two of the most important and successful early childhood programs of the past nearly 60 and 30 years, respectfully. These programs are Head Start (which, in some ways, is the

precursor to the federal legislation described above) and Early Head Start. In short, these programs were/are designed to provide high-quality early childhood education and care that have a positive impact on young children's, especially those from low-income households, cognitive, language, and social development (Raines et al., 2020).

The roots of Head Start[4] date back to 1965 when President Lyndon B. Johnson declared the war on poverty. Drs. Robert Cooke and Edward Zigler were instrumental in launching Head Start, which established performance standards in 1975 and began offering full-day and full-year services in 1998. In 2007, the Improving Head Start for School Readiness Act was reauthorized. Several provisions were included in this act to ensure the delivery of high-quality early childhood education and care. In the years that followed, additional changes were made to Head Start and Early Head Start, including the Designation Renewal System and revised Program Performance Standards. The Head Start Program serves more than 1 million children and families each year and since 1965 has served more than 36 million children and families. It is administered by the Administration for Children and Families in the Department of Health and Human Services. An excellent review of the history of many early childhood laws is provided by Raines et al. (2020). McBride et al. (2011) cover special education laws including those that address infants, toddlers, and preschoolers.

SUMMARY

Although early childhood assessment is a relatively new activity for practitioners, it is essential for several reasons as explicated in this chapter. These reasons include nurturing the youngest of the species, the ever-increasing incidence and prevalence of early childhood disorders, the effectiveness of early childhood education and intervention, and the burgeoning use of technology in the delivery of early childhood health services. Early intervention for young children has shown to be a critical tool to ensure that young children at risk for developmental disabilities, medical disorders, and poverty live healthy and productive lives. Despite ideological, economic, political, and other challenges, the USDOE continues to increase funding for early childhood education and intervention. The remaining chapters in this volume provide in-depth

[4] Retrieved from: https://www.acf.hhs.gov/ohs/about/history-head-start and https://eclkc.ohs.acf.hhs.gov/about-us/article/head-start-timeline

information on the unique considerations when assessing young children, responsible assessment of young children, the developmental domains to assess and why, low-frequency disorders in young children, linking assessment to intervention, and the future of early childhood assessment.

TEST YOURSELF

1. **When considering early childhood development, which of the following factors does evidence suggest is influential?**
   (a) Caregivers or parents
   (b) Extended family
   (c) Physical context
   (d) All of the above
2. **Since 2010, the incidence of early childhood disorders has:**
   (a) Remained stable
   (b) Decreased
   (c) Increased
   (d) Not been measured
3. **Based on data from 2018–2019, which IDEA disability category includes the highest number of children served?**
   (a) Deaf Blindness
   (b) Speech or Language Impairment
   (c) Developmental Delay
   (d) Intellectual Disability
4. **Evidence for early childhood education and intervention indicates the following:**
   (a) It does not promote positive outcomes
   (b) It is more costly than waiting to intervene in adulthood
   (c) It produces negligible outcomes compared to control groups in most studies
   (d) It promotes an array of positive outcomes across developmental domains
5. **Domains typically assessed in early childhood include:**
   (a) Cognitive functioning
   (b) Social–emotional functioning
   (c) Speech and language skills
   (d) All of the above

6. **Potential benefits of telehealth or teleassessment include:**
   (a) Increased access to rural communities
   (b) More efficient and accessible service delivery
   (c) A and B
   (d) None of the above
7. **The following statements are true regarding technology in the delivery of early childhood services except:**
   (a) Should fully supplant the use of in-person early childhood services
   (b) Has been utilized for more than two decades
   (c) Can be an effective service delivery model for clients with autism spectrum disorder
   (d) May be integrated within early intervention programming
8. **Who is regarded as the father of developmental psychology?**
   (a) Alfred Binet
   (b) G. Stanley Hall
   (c) Nancy Bayley
   (d) Arnold Gesell
9. **Which two programs represent the importance and success of early childhood education programs?**
   (a) Head Start
   (b) Early Head Start
   (c) A and B
   (d) None of the above
10. **Which component of IDEA incentivizes states to develop early intervention services for children with disabilities?**
    (a) Part C
    (b) Every Student Succeeds Act (ESSA)
    (c) Part B
    (d) None of the above

Answers: 1. d; 2. c; 3. b; 4. d; 5. d; 6. c; 7. a; 8. b; 9. c; 10. a

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ANNOTATED BIBLIOGRAPHY

Alfonso, V. C., Bracken, B. A., & Nagle, R. J. (Eds.). (2020). *Psychoeducational assessment of preschool children* (5th ed). Routledge

The fifth edition of this seminal edited text on the assessment of preschoolers focuses on theory, research, and application. Chapters were written by expert researchers and practitioners who emphasized the importance of ecological assessment. Practitioners can gain

in-depth knowledge about the assessment of cognitive, language, motor, social–emotional, play, and many other domains of functioning.

Alfonso, V. C., & DuPaul, G. J. (Eds.). (2020). *Healthy development in young children: Evidence-based interventions for early education*. American Psychological Association

This edited volume brings together a thorough collection of invited chapters by renowned researchers and practitioners in early childhood assessment, intervention, and advocacy. Topics include, among others, early childhood assessment, preparing children for successful school experiences, and creating learning environment that promote academic and social success and encourage creativity, as well as discussion of policies and laws that affect the health and education of young children. Chapters are also provided on special populations, including those with disabilities, those who come from linguistically and culturally diverse backgrounds, and those living in stressful environments.

Graves, S. L., & Blake, J. J. (2016). *Psychoeducational assessment and intervention for ethnic minority children: Evidence-based approaches*. American Psychological Association

This comprehensive resource is written for those practitioners who are seeking information on the psychoeducational assessment of and interventions for ethnic minority children. Although the book focuses on ethnic minority children of all ages, there is a chapter specifically on early childhood assessment for diverse learners. The volume is suitable for practitioners, researchers, and graduate students.

Grigorenko, E. (2009). *Multicultural psychoeducational assessment*. Springer.

This edited volume includes an examination and discussions of how different cultures measure intelligence and skill as well as why they use the tools they use. In addition, how their assessment methods are changing in the globalizing world is covered. Each contributor discusses how methods of assessment are limited and culture-bound and thus must be revised and adapted to other cultures.

Snow, C., & Van Hemel, S. (2008). *Early childhood assessment: Why, what, and how*. National Academies Press.

This text on assessment provides information about programs developed to enhance the school readiness of all young children, especially those from low-resource environments and communities and youth with disabilities. In addition, this volume affirms that assessments can make important contributions to the improvement of children's well-being when they are well-designed, implemented effectively, developed in the context of systematic planning, and are interpreted and used appropriately. Early Childhood Assessment addresses these characteristics by identifying important outcomes for children from birth to age 5 years and the quality and purposes of different techniques and instruments for developmental assessments.

ONLINE RESOURCES

Center for Response to Intervention in Early Childhood (CRTIEC): http://crtiec.org/. CRTIEC conducts research and provides resources that support application of Response to Intervention (RTI) in Early Childhood Education. In addition, it provides information about progress monitoring, evidence-based interventions, and current programs that implement RTI components in Early Childhood Education.

Division of Early Childhood (DEC): www.dec-sped.org/. The DEC advocates for policies and evidence-based practices that support families and enhance the highest-quality development of young children (0–8 years) who have or are at risk for developmental delays and disabilities.

It is an international membership organization for those who work with young children with disabilities as well as other needs.

Early Learning Guidelines (ELG) Educator Toolkit: www.apa.org/education/k12/early-learning-guidelines. The ELG Educator Toolkit focuses on young children's learning using the domains from the Head Start framework that serve as a guide to early childhood educators seeking national and state resources that are founded on evidence-based practices. The ELG Educator Toolkit locates resources for working with special populations and links to states that received funding from the federal race-to-the-top early learning challenge grants, and are engaging in developing up-and-coming practices for working preschool-age children in early child programs.

National Association for the Education of Young Children (NAEYC): www.naeyc.org/. The NAEYC promotes learning for children from birth through 8 years of age by connecting practice, policy, and research, with the goal of helping the early childhood profession hold high standards and to be recognized as a key aspect of society.

National Association of School Psychologists (NASP): www.nasponline.org/. NASP represents the profession of school psychology by pushing forward effective practices to improve students' learning, behavior, and mental health, and by maintaining essential standards for practice.

National Education Association (NEA): www.nea.org/. The NEA is an organization committed to advancing the cause of public education by recommending free, quality kindergarten programs and mandatory full-day kindergarten. The NEA also advocates for free, quality universal pre-k, pre-k available for disadvantaged families, and dedicated funding for early childhood education.

National Head Start Association (NHSA): www.nhsa.org/. The NHSA is committed to giving every child, regardless of circumstances at birth, an opportunity to succeed in school and in life. The NHSA focuses on early learning innovation and offers a unique whole child/whole family program design with a delivery system that includes local programs, national standards, monitoring, professional development, and family engagement.

Zero to Three: www.zerotothree.org/. Zero to Three's mission is to ensure that all babies and toddlers have a positive start to life and reach their full potential. The organization provides helpful resources, tools, and policies for parents, professionals, and policymakers, taking a unique approach to child development by connecting those who can truly make a difference in the life of a child with the research they need.