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INTRODUCTION AND HISTORY OF ADAPTIVE BEHAVIOR

INTRODUCTION

The construct of adaptive behavior is defined as the independent performance of daily activities that are required for personal and social sufficiency (Sparrow, Cicchetti, & Saulnier, 2016). This is qualitatively different from intelligence, which is conceptualized more as a repertoire of skills that is innate or acquired over time. This book provides a comprehensive overview of profiles of adaptive behavior seen across neurodevelopmental disorders. Though there are many distinct or complex and multiplex causes for neurodevelopmental complications that result in extremely heterogeneous presentations, the delays or deficits in practical, "real-life" skills are the common thread throughout these disorders. Moreover, positive outcome is often associated with adaptive functioning and, as such, interventions to target adaptive behavior can be successful in an individual's ability to attain levels of independence in life.

DON'T FORGET

If cognition or IQ is an individual's repertoire of skills or capacity to perform a given behavior, adaptive behavior is an individual's independent performance of the behavior when life demands it.

THE BIRTH OF ADAPTIVE BEHAVIOR

When measures of cognitive ability were introduced in the early 1900s, the classification of intellectual disability (ID) relied solely on the assessment of intelligence quotient (IQ). Henry Herbert Goddard was one of the first to bring comprehensive intelligence tests to the United States when he translated

and modified the Binet Intelligence Scale that was developed in France by Alfred Binet (Zenderland, 2001). Goddard's version, the Binet and Simon Tests of Intellectual Capacity, was published in 1908. At the time, Goddard was working as the research director at the Training School for Feeble-Minded Girls and Boys in Vineland, New Jersey, seeking ways to accurately assess children with IDs. The Vineland Training School was dedicated to the study of ID and, thus, defining and measuring intelligence became a strong focus.

Goddard defined feeble-mindedness as mental deficits originating at birth or early in development that resulted in an individual's incapacity for functioning independently in society (Goddard, 1914). The following labels were designated based on levels of cognitive impairment:

- *Idiot* designated a person with a mental age up to 2 years
- *Imbecile* designated a 3–7 years mental age
- *Morons* designated a 7–12 years mental age (though still designating cognitive delay, these individuals were not regarded as "defective" or "incapable of learning")

Goddard, similar to many of his time, believed in the heritable nature of feeble-mindedness, publishing a book about a family with mental retardation that crossed generations (Goddard, 1912). The notion that cognitive impairment was inherited reinforced the eugenics movement—one of selective breeding and sterilization in an attempt to eliminate undesired traits and maximize desired ones. This resulted in the institutionalization, sterilization, and limited immigration of many individuals with ID in the United States so as to increase the average IQ. These practices would not be fully eradicated until the 1960s and, thus, intelligence tests remained at the forefront of identifying the cognitively inferior, including children (Reilly, 1987). Despite the controversy surrounding his early involvement in the eugenics movement, Goddard is considered one of the founders of intelligence testing in our country and, in some regards, of the field of clinical psychology (Gelb, 1999).

During Goddard's tenure at the Vineland Training School, he had an assistant named Edgar Doll. Doll had recently received his bachelor's degree from Cornell University and began working with Goddard as a clinical psychologist. Doll believed that level of impairment was dependent on one's limited ability to meet designated social expectations, highlighting the necessity of social competence for functional independence (Doll, 1936). He therefore advocated that social criteria be established against which to measure intelligence. In 1917, Doll

published *Clinical Studies in Feeble-Mindedness* calling for clarification of the definition of intellectual disability.

After spending several years training with Goddard, Doll left the Vineland Training School to obtain his doctorate in psychology at Princeton University. He took a break from graduate school to join the Army during World War I, where he conducted cognitive assessments on army recruits. After leaving the Army and completing his doctorate at Princeton in 1920, Doll directed the Division of Classification and Education in the New Jersey State Department of Institutions and Agencies, where he assessed prisoners up for parole. Doll's experiences working with army recruits and prisoners revealed similar IQ levels between the groups. This was against the thinking at the time that criminality was caused by mental retardation (Doll, 1941). Doll's research debunking the theory that prisoners were "mentally deficient" was seminal to the field. However, this work would become overshadowed by Doll's subsequent focus on adaptive behavior.

In 1925, Doll returned to the Vineland Training School as the director of research where he remained through 1949. The practice of defining cognitive impairment on a single measure had become highly controversial, as had the theories of what caused ID (Brockley, 1999). Although some professionals such as Doll believed ID to be a genetically based and constitutional condition that resulted in social deficiencies, others argued that it was more developmental in nature arising from impaired social competence (Reschly, Myers, Hartel, & National Research Council, 2002). Evidence arose that not all individuals with ID had parents with cognitive impairment and it was discovered that ID could actually result from a host of non-genetically related factors, such as disease, physical trauma, poverty, and so on, placing into question the heritability of ID. These discoveries helped contribute to the demise of the eugenics theory and encouraged more sympathetic views toward the intellectually disabled.

Doll was a pioneer in developing the construct of adaptive behavior and emphasizing the need for assessing adaptive functioning in addition to IQ when diagnosing ID. Doll's definition for what was then called *mental deficiency* evolved over time. In his earlier work, Doll described a threefold criterion for diagnosing mental deficiency: "social incompetence, due to low intelligence, which has been developmentally arrested" (Doll, 1936, p. 429). Yet, he would later expand on this definition to include the following six criteria: (1) social incompetence, (2) mental subnormality, (3) developmental arrest, (4) obtains at maturity, (5) constitutional origin, and (6) essentially incurable (Doll, 1941, 1953).

Rapid Reference 1.1

Doll's Criteria for Mental Deficiency

- Social incompetence
- Mental subnormality
- Developmental arrest
- Obtains at maturity
- Constitutional origin
- Essentially incurable

Although some of Doll's proposed criteria for mental deficiency were controversial for his time (e.g., that mental deficiency was constitutional and incurable), several of his principles have sustained generations and still hold true in our contemporary definitions of ID. In fact, it was in one of his earliest works, *Clinical Studies in Feeble-Mindedness,* that Doll wrote about the criteria for intellectual disability: "social inefficiency is at present prerequisite, and is the most important practical manifestation of the condition" (Doll, 1917, p. 23). He stipulated that although all people with cognitive impairment were socially incompetent to some degree, not all people who were socially incompetent were "feeble-minded."

CAUTION

Despite early theories that intellectual deficiencies were innate and incurable, current views of cognition are more forgiving in that intelligence levels can improve with intervention.

Doll was instrumental in highlighting the role of social competence in intelligence. He believed that social competence was a universal human attribute, but one that was challenging to measure. He struggled with the barriers that prevented a universal definition of social competence and took strides to identify the behaviors that defined personal responsibility and independence across all individuals who were not influenced by factors such as race, geographic location, culture, or sex. These behaviors were, however, age-based in that one's repertoire of adaptive skills expanded with age. He ultimately defined social competence as the ability to demonstrate personal independence and social responsibility in

everyday contexts, stating that "in short, social competence may be defined as a functional composite of human traits which subserves social usefulness as reflected in self-sufficiency and in service to others" (Doll, 1953, p. 2).

With an increased focus on self-sufficiency and social competence for functional independence, Doll developed the first standardized assessment of adaptive behavior. The Vineland Social Maturity Scale (Vineland SMS) was named for the location of the training school and was published by American Guidance Services (AGS) in 1935 (the comprehensive manual to accompany the scale was not published until 1953) (Doll, 1953). The Vineland SMS was a 117-item instrument that assessed social competence in addition to a broad range of practical skills via a third-party interview with, for example, a parent, caregiver, or teacher. It would be the most widely used measure of adaptive behavior for decades to follow (see Chapter 2 for a more detailed description of the Vineland SMS).

ADAPTIVE BEHAVIOR IN THE DEFINITION OF INTELLECTUAL DISABILITY

With the publication of the American Association on Mental Deficiency (AAMD) *Manual on Terminology and Classification* (5th ed.) in 1959, adaptive behavior was formally included in the definition of *mental retardation* (Heber, 1959). Definitions in all prior AAMD publications dating back to 1921 focused solely on cognitive impairment. Heber's definition in the sixth edition of the AAMD manual (Heber, 1961), however, included the stipulation that in addition to adaptive deficits, the "subaverage general intellectual functioning" (which specified an IQ cutoff of one or more standard deviations below the mean) had to originate in the developmental period, prior to age 16. Heber was the first to introduce a three-factor structure of adaptive behavior skills. These included *practical* skills (activities of daily living), *conceptual* skills (concepts of learning, e.g., reading, writing, language, arithmetic skills), and *social* skills (interpersonal and play skills, social problem-solving, rule-following). Yet, this specific factor structure would not be operationalized into the definition of intellectual disability until 2002. Concurrent to the AAMD fifth edition, the first edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-I)* would be published in 1952 by the American Psychiatric Association (APA, 1952). However, it would not be until the second edition (*DSM-II*) was published in 1968 that the criteria for mental retardation included adaptive impairment (APA, 1968).

In the seventh edition definition of AAMD (Grossman, 1973), the IQ cutoff changed to two standard deviations below the mean, and the age limit for

the "developmental period" was raised from 16 to 18 years. This significantly decreased the expected prevalence of ID from 16% to the 1% to 2% of the general population that we see today (Richards, Brady, & Taylor, 2015). However, in order to advocate for those individuals with IQs above the cutoff who still had significant adaptive deficits, Grossman later modified the definition to allow for "clinical judgment" to be considered in the eighth edition (Grossman, 1977). For instance, a highly experienced clinician could make a diagnosis of ID in the case of, for example, an individual with a borderline IQ (between 70 and 85) who, based on available data, had adaptive deficits that impeded the individual's ability to function independently in the absence of supports (Grossman, 1977; Richards et al., 2015). In a 1983 publication, Grossman modified the age of onset of ID to be conception rather than birth so as to capture prenatal etiologies (Grossman, 1983).

In 1975, the US Congress enacted the Education for All Handicapped Children Act (which evolved into the Individual with Disabilities Education Act; IDEA, 2004) requiring federally funded public schools to provide free and appropriate education to children with physical and mental disabilities (P.L. 94-142). This law reaffirmed the need to conduct standardized tests of adaptive behavior in addition to cognition, especially as states across the United States began to mandate both assessments. Adaptive behavior assessments also became instrumental for intervention planning and placing individuals in the most appropriate or "least-restrictive" environment for educational, residential, and community programming. This movement led AGS to update the Vineland SMS, which resulted in the publication of the original Vineland Adaptive Behavior Scales in 1984 (Vineland ABS; Sparrow, Balla, & Cicchetti, 1984). By the 1970s and 1980s, numerous adaptive behavior instruments were developed, with the most prominent measures being the Vineland ABS, AAMD's Adaptive Behavior Scale (Nihira, Foster, Shellhaas, & Leland, 1974), the Woodcock-Johnson Scales of Independent Behavior (Bruininks, Woodcock, Weatherman, & Hill, 1985) and eventually the Adaptive Behavior Assessment System (Harrison & Oakland, 2000). See Chapter 3 for more detailed descriptions of the most commonly used measures of adaptive behavior.

DON'T FORGET

With the introduction of P.L. 94-142, standardized measures of cognition and adaptive behavior became standard for eligibility assessments for students with disabilities.

The ninth edition of the American Association of Mental Retardation manual (AAMR, 1992) included substantial changes to the definition of ID. First, it listed specified areas of adaptive deficit that were required for a diagnosis (Luckasson et al., 1992). Though Heber wrote about the three-factor structure of adaptive behavior skills in 1959 (i.e., practical, conceptual, and social areas of adaptive delay), subsequent definitions retained the broader (and thus more abstract) construct. This made it very challenging to research and identify what specific adaptive behaviors to prioritize and target in educational, treatment, and vocational programs to optimize outcome. It would take more than 30 years for the definition of ID to include specific adaptive skills that needed to be delayed or deficient to merit a diagnosis. The ninth edition did just this, specifying the following 10 areas of adaptive deficit: *Communication, Self-Care, Home Living, Social Skills, Community Use, Self-Direction, Health and Safety, Functional Academics, Leisure,* and *Work* (AAMR, 1992). By this point in time, standardized measures had been developed to formally assess adaptive behavior and many broke down the construct into specific domain areas. However, the Adaptive Behavior Assessment System, Second Edition (Harrison & Oakland, 2003) would be the first to include these 10 specific areas that were introduced in the AAMR ninth edition definition.

Rapid Reference 1.2

Areas of Adaptive Deficit in the AAMR (Ninth Edition)

- Communication
- Self-Care
- Home Living
- Social Skills
- Community Use
- Self-direction
- Health and Safety
- Functional Academics
- Leisure
- Work

The second major change to the definition of ID in the AAMR ninth edition was the elimination of the levels of cognitive impairment in place of levels of

support needed for intervention (Richards et al., 2015). The *mild, moderate, severe,* and *profound* levels that specified respective ranges of IQ would be replaced with *intermittent, limited, extensive,* and *pervasive* supports. The focus became less on how intelligence levels affected functioning and more on the intensity of supports needed for an individual to be functional. This change would not be incorporated into the *DSM* criteria (and truly set into clinical practice) until the publication of the fifth edition (APA, 2013).

Finally, the ninth edition of the AAMR manual would be the first time that ID was conceptualized as a transient condition and one that could be the product of an interaction between an individual's current state and his or her environment (AAMR, 1992). This debunked Doll's description that ID was of constitutional origin and expanded the range of possible causes from congenital (e.g., chromosomal disorders) to peri- and postnatal medical complications (e.g., cerebral palsy, hypoxia, trauma) to environmental influences (e.g., malnutrition, infectious disease, toxins). The notion that ID could also be transient was a paradigm shift from the previous theories in which IQ was innate and unchangeable. In fact, given that the majority of individuals with ID have only mild intellectual impairment (Richards et al., 2015), interventions that directly affect individuals, their family, and their environment can certainly result in improved cognitive functioning and, consequently, elimination of the diagnostic label. Thus, IQ was no longer considered as inherently stable as was earlier presumed.

The 10th edition of the AAMR manual (2002) would introduce Heber's three-factor structure for adaptive skills in the areas of practical, conceptual, and social skills, but it would not be until 2013 for these to be included in the *DSM-5* (APA, 2013). Both definitions specified that adaptive deficits must fall approximately two standard deviations below the mean. An important addition to the AAMR 10th edition was also the inclusion of assumptions for clinicians to consider when making a diagnosis of ID. These included considering the individual's community, culture, individual profile of strengths and weaknesses, supports needed for intervention, and potential for improvement when provided with these necessary supports (AAMR, 2002). These assumptions were in line with the protections in evaluative procedures that were included in law P.L. 94–142 outlining safeguards for evaluating children within the school system.

With the 11th edition of the manual, the organization had changed its name to the American Association on Intellectual and Developmental Disabilities, with this change eliminating the term *mental retardation* in favor of *intellectual disability* from the diagnostic category (Schalock et al., 2010). Also in 2010, the federal government enacted P.L. 111–256 (Rosa's Law), which changed terminology throughout all laws from *mental retardation* to *intellectual disability.*

The subsequent publications of the *DSM-III* in 1980 (APA, 1980), the *DSM-III-R* in 1987 (APA, 1987), the *DSM-IV* in 1994 (APA, 1994), the *DSM-IV-TR* in 2000 (APA, 2000), and the *DSM-5* in 2013 (APA, 2013) would similarly revise the nomenclature and diagnostic criteria for ID on the level of cognitive impairment (i.e., one or two standard deviations below the mean or a specified IQ cutoff of, e.g., 70–80), on the areas of adaptive deficits, and on the specification of the developmental period (i.e., below the age of 16 or 18 or without a specified age). Nevertheless, this three-part structure defining ID based on cognitive and adaptive impairment originating during early development has endured the test of time and remains the structure of our current diagnostic criteria. Table 1.1 provides an overview of the history of definitions of ID.

PRINCIPLES OF ADAPTIVE BEHAVIOR

Modern principles of adaptive functioning that reflect Doll's original narratives are outlined as follows (Sparrow et al., 2016): (1) Adaptive behavior is age-related, (2) adaptive behavior is defined by the expectations of others within a social context, (3) adaptive behavior is modifiable, and (4) adaptive behavior is defined by typical performance not ability.

Rapid Reference 1.3

Principles of Adaptive Behavior

- Adaptive behavior is age-related.
- Adaptive behavior is defined by the expectations of others within a social context.
- Adaptive behavior is modifiable.
- Adaptive behavior is defined by typical performance not ability.

First, adaptive behavior is *age-related* because expectations change over time (i.e., what is important for a preschooler is not the same for an adult) and individuals can accumulate a larger and more complex repertoire of skills as they age. Second, adaptive behavior is evaluated within a *social context* because the world in which we live is inherently a social one. This is why it is so important that a parent, caregiver, and teacher assess for the behaviors in naturalistic contexts rather than

Table 1.1 Time Line of Definitions of Intellectual Disability That Include Adaptive Behavior

Year	Author	Definition
1941	Doll	**Mental Deficiency:** "Social incompetence, due to mental subnormality, which has been developmentally arrested, which obtains at maturity, is of constitutional origin, and is essentially incurable"
1952	APA (*DSM-I*)	**Mental Deficiency:** • Mild: IQ of approximately 70–85 • Moderate: IQ of about 50–70 • Severe: IQ below 50
1957	AAMD Committee on Nomenclature	
1959	AAMD (*Manual on Terminology and Classification* [5th ed.]) (Heber)	**Mental Retardation:** "Subaverage general intellectual functioning" that originates during the developmental period and is associated with impairment in adaptive behavior
1961	AAMD (*Manual on Terminology and Classification* [6th ed.]) (Heber)	**Mental Retardation:** Specified that "subaverage intellectual functioning" was one or more standard deviations below the mean (IQ of 85 or below)
1968	APA (*DSM-II*)	**Mental Retardation:** "Subnormal general intellectual functioning originating in the developmental period and associated with impairment of either learning and social adjustment or maturation, or both." • Borderline: IQ = 68–85 • Mild: IQ = 52–67 • Moderate: IQ = 36–51 • Severe: IQ = 20–35 • Profound: IQ = < 20
1973	AAMD (*Manual on Terminology and Classification* [7th ed.]) (Grossman)	**Mental Retardation:** "Significantly subaverage general intellectual functioning" (at least two standard deviations below the mean; IQ of 70 or below) with deficits in adaptive behavior and manifested during the developmental period (designated as birth to 18 years)

Table 1.1 (*Continued*)

Year	Author	Definition
1977	AAMD (*Manual on Terminology and Classification* [8th ed.]) (Grossman)	**Mental Retardation:** This update included individuals with borderline intelligence (IQ 70–80) to be classified as having MR and potentially eligible for services.
1980	APA (*DSM-III*)	**Mental Retardation:** "Significantly subnormal intellectual ability (IQ 70 or below) that leads to deficits in functioning. Levels of mild, moderate, severe, and profound are intended to correspond to an individual's capability for adaptive functioning to the degree to which training will result in independent functioning."
1987	APA (*DSM-III-Revision*)	**Mental Retardation:** The diagnosis of MR was moved from Axis I to Axis II (Personality Disorders and Developmental Disorders—including Mental Retardation and Borderline Intellectual Functioning)
1992	AAMR (*Manual on Terminology and Classification* [9th ed.])	**Mental Retardation:** This update included specifications of deficits in at least two areas of adaptive behavior, including communication, self-care, home living, social skills, self-direction, health and safety, functional academics, leisure, and work.
1994 and 2000	APA (*DSM-IV* and *DSM-IV-Text Revision*)	**Mental Retardation:** Axis II changed its name to Personality Disorders and Mental Retardation. Adaptive behavior deficits in at least two of the following areas: communication, self-care, home living, social-interpersonal skills, use of community resources, self-direction, functional academic skills, work, leisure, health, and safety. Overall IQ falling below two standard deviations from the mean (with a stipulation about confidence intervals on standardized assessments ranging from, e.g., 65–75 and, thus, allowing for variability). Onset prior to the age of 18.

(*continued*)

Table 1.1 (*Continued*)

Year	Author	Definition
		Levels of MR: Borderline: IQ range 71–84 Mild: IQ range 50/55–approximately 70 Moderate: IQ range 35/40–50/55 Severe: IQ range 20/25–35/40 Profound: IQ range below 20/25 Option for Severity Unspecified
2002	AAMR (*Manual on Terminology and Classification* [10th ed.])	**Mental Retardation:** Specification of adaptive deficits falling two or more standard deviations below the mean in conceptual, social, or practical adaptive skills, or overall level of adaptive behavior falling two or more standard deviations below the mean
2010	American Association on Intellectual and Developmental Disabilities (AAIDD) (*Intellectual Disability: Definition, Classification, and Systems of Supports* [11th ed.]) (Schalock et al.)	**Intellectual Disability:** "A disability characterized by significant limitations both in intellectual functioning and in adaptive behavior as expressed in conceptual, social, and practical adaptive skills. This disability originates before age 18."
2013	APA (*DSM-5*)	**Intellectual Disability (Intellectual Developmental Disorder):** "A disorder with onset during the developmental period that includes both intellectual and adaptive functioning deficits in conceptual, social, and practical domains." Removal of a specified IQ score. Deficits in intellectual functioning need to be confirmed by "both clinical assessment and individualized, standardized intelligence testing." Severity levels matched specifically to adaptive behavior domains rather than IQ score ranges. Removal of specified age of onset; back to "during the developmental period."

try to probe for the behaviors within a contrived, less-naturalistic (i.e., clinical) setting. Third, adaptive behavior is *modifiable* in that levels of functioning can deteriorate or improve over time for a variety of reasons. For instance, changes in the environment can affect adaptive functioning (e.g., moving to a different culture-geographical location, adoption or foster care, hospitalization, imprisonment, etc.), as can traumatic life events (e.g., physical or emotional abuse and neglect). Moreover, treatment and intervention (or lack thereof) can certainly result in changes in adaptive behavior. This is in contrast to intelligence, which is considered more stable over time and less influenced by the effects of intervention. Finally, adaptive behavior is defined by *typical performance,* not ability. If cognition is viewed as an individual's ability or repertoire of skills (what the person "can do"), adaptive behavior is the independent functional application of those skills to daily contexts and routines (what the individual "does do"). Thus, adaptive skills are those that an individual does when expected on a daily basis without prompts, supports, or reminders and *not* merely what an individual can do or is capable of doing. This last tenant is a critical issue in autism spectrum disorder in which there is often a discrepancy between an individual's cognition or capacity and his or her adaptive functioning by nature of the social disability.

CAUTION

Adaptive skills are defined by what an individual does do with independence and not what an individual is capable of doing but doesn't.

SUMMARY

The history of intellectual disability is fraught with controversies over the taxonomy and theories of causality. However, the nomenclature of adaptive behavior has remained surprisingly consistent in comparison. The current *DSM-5* and AAIDD definitions carry forth Doll's original descriptions of functional social, conceptual, and daily living skills. Moreover, the *DSM-5* severity levels for the diagnosis of ID are tied directly to levels of functional, adaptive independence. This exemplifies the importance of measuring adaptive behavior not merely for diagnostic purposes but also for determining appropriate treatment and intervention strategies for educational, community, daily living, and occupational purposes.

With this book, we hope to provide a comprehensive account of adaptive behavior profiles in neurodevelopmental disorders across the life span. Similar to

Doll's view of social competence, we believe that adaptive behavior is the universal thread that ties together functional outcome for individuals with all neurodevelopmental disorders. As such, the goal of the book is to provide the reader with knowledge about the current state of adaptive behavior assessments, profiles of functioning, and optimizing outcome into adulthood. In Chapter 1, we provided the framework for how we define adaptive behavior as well as the fascinating history behind its inception. Chapter 2 provides the reader with information on important constructs in understanding and selecting the best measure of adaptive behavior to meet the needs of the person being assessed. Chapter 3 describes a variety of adaptive behavior measures that are used to assess adaptive behavior. Chapters 4, 5, and 6 then discuss profiles of adaptive behavior across a wide range of disabilities and disorders—from intellectual disabilities and autism spectrum disorder, which offer the largest body of literature on adaptive behavior profiles, to less common genetic syndromes as well as other developmental disorders. Chapter 7 discusses adaptive behavior profiles in adults and the complicating factors when assessing adults. In Chapter 8, the current status of treatments and interventions are discussed. Finally, Chapter 9 ties assessments and treatments together by providing some case studies with sample reports. Our hope is that this book will be useful for clinicians in training and those just starting in the field, as well as seasoned professionals who are interested in adding a measure of adaptive behavior to their battery or are seeking more information on children with various developmental disabilities and the impact this has on the development of their day-to-day living skills.

TEST YOURSELF

1. **What are the four principles of adaptive behavior?**
2. **Of the following, who is considered to be one of the founders of intelligence testing in the United States?**
   a. Alfred Benet
   b. Henry Herbert Goddard
   c. Edgar Doll
   d. Ivan Pavlov
3. **True or false? Intellectual deficiencies cannot be improved, despite intervention.**
4. **Heber's three factor structure included the following *except*:**
   a. Practical skills
   b. Conceptual skills

c. Motor skills
d. Social skills

5. **True or false? The AAMR ninth edition was updated to reflect level of support needed versus level of cognitive impairment.**
6. **The law that changed terminology from *mental retardation* to *intellectual disability* throughout all laws was called:**
   a. Rosa's Law
   b. Ava's Law
   c. Maddie's Law
   d. Emma's Law
7. **True or false? Adaptive skills are defined by what an individual can do but doesn't do rather than what he or she does independently.**
8. **Which of the following does not measure adaptive behavior skills?**
   a. Vineland ABS
   b. Adaptive Behavior Assessment System
   c. Woodcock-Johnson Scales of Independent Behavior
   d. Mullen Scales of Early Learning
9. **Factors that a clinician should consider about an individual when making a diagnosis of ID include:**
   a. Community
   b. Culture
   c. Strength and weaknesses
   d. All of the above
10. **True or false? According to the *DSM-5,* the most recent version of this manual, ID must originate before age 18.**

Answers: (1) Age-related, defined by the expectations of others within a social context, modifiable, and defined by typical performance not ability; (2) b; (3) False. Intellectual deficiencies can be improved with intervention; (4) c; (5) True; (6) a; (7) False. Adaptive skills are defined by what an individual does independently; (8) d; (9) d; (10) False. The *DSM-5* was updated to remove specified age of onset.